

**CASES:
KNOWLEDGE MANAGEMENT**

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1. Sustainable Agricultural Production and Marketing, Ecuador

(B. Weiskopf/ R. Bode)

1.1. Facing new topics: marketing organic products

The project "User-oriented Strategies of Agricultural Research" (Instituto Nacional de Investigación Agropecuaria/INIAP-GTZ) in its second phase (12/99 - 12/02) concentrated on

- (a) the improvement and increase of technologies and strategies, which facilitate the sustainable use of natural resources and income increase of small and medium sized farmers
- (b) the development of pilot experiences in the agroindustrial field
- (c) linking the actors of the Nacional Agricultural Innovation System (SNIA) and
- (d) connecting them with international research partners.

Due to high demands on international markets and the need to value sustainable resource management economically, the Ecuadorian and German Government agreed at 2001 upon a new component "Certification and marketing of organic products". Together with the a.m. project INIAP-GTZ it will form the new project "Sustainable agricultural production and marketing". The project forms part of the program "Sustain-able Natural Resource Management" - one of two GTZ programs in Ecuador. Its objective is: *"Small and medium sized organic farmers will take advantage of both an improved offer of INIAP, cooperating organizations and farmers network within the framework of an applied, user-oriented agricultural research, as well as of promoted marketing and certification."* Three areas of activities have been identified for the new component of certification and marketing of organic products:

- Political level: the elaboration of a regulatory framework for production, certification and marketing of organic products.
- Local level: the development of technologies for production and marketing of organic, certified products and its implementation in 4 agri supply chains of selected products.
- Interorganizational level: the promotion of networking between the actors in research, production, certification and marketing.

1.2. The agri supply chain approach

To foster quality and efficiency of marketing the agri supply chain approach will be applied. Under this concept we understand the whole of actors and activities related to a product in a given space (from primary production, processing, marketing to consumption), allowing buyers and sellers, normally separated in time and space, to add value on a product, while passing from one member to the next (see fig 1).

The agri supply chain approach is a method to organize information and action, allowing a better understanding among the actors, a constant information flow and improved relationships. Applying this approach we expect:

- to reduce losses during storage and transport,
- to improve quality and security of food products,
- to improve the commercialisation of the products,
- to generate products with high added value,
- to contribute to equity in the distribution of benefits,
- to increase and exchange information and knowledge about markets and innovative technologies along the chain.

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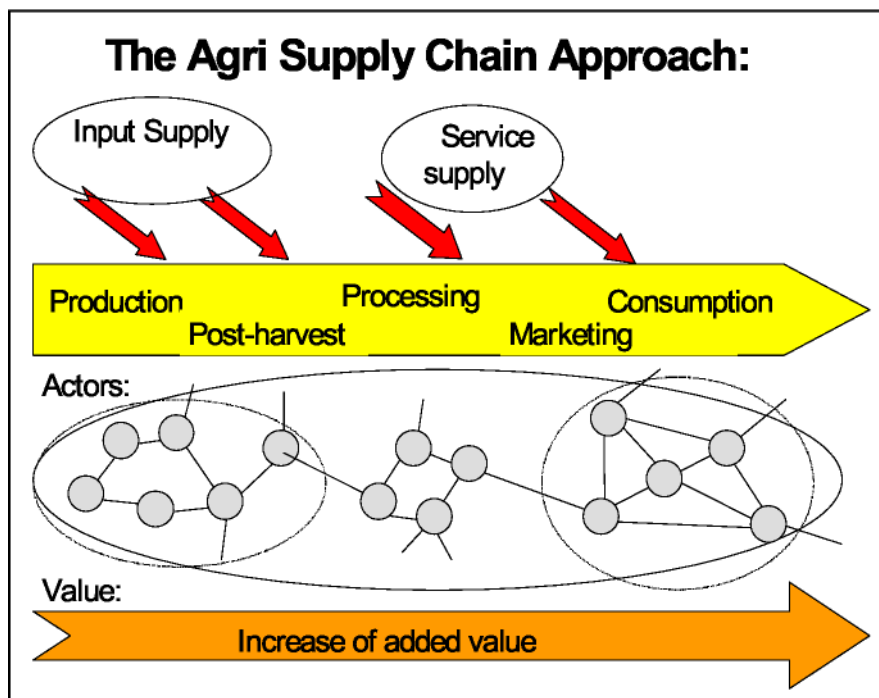


Figure 1: The Agri Supply Chain Approach (Source: NL 8/9, Services for Rural Development, 2002)

Four steps are basic for developing and improving supply chains:

a) Analysis and orientation: Once - on basis of criteria - selected the chain to work on, in a first step one has to characterize the actors, to analyse the operation of the system and to identify roles, interests and competences of each actor.

(b) Definition: Leaving from the analysis' results, one must determine intervention points in the chain, define strategies of intervention in the chain and elaborate a plan of action.

(c) Implementation: To initiate work on chain improvement one must establish a good organization of the chain, e.g. through

- a committee of management, conformed by representatives of actors along the chain,
- a chain leader with the function to coordinate activities and to integrate different components.

It is basic to implement mechanisms to strengthen the dialogue and the arrangement among the different actors, to organize and to carry out training referring to the focus of agri supply chains or other specific topics and to involve the actors in the development of innovations.

(d) Monitoring and evaluation: Finally but not ultimately one has to establish a monitoring and evaluation system in order to adjust the activities to the reality.

It's important to mention that the agri supply chain approach is process oriented: instead of a linear processing of the single steps, the components in a consecutive improvement process are to be adapted whereby the joint learning has a high priority.

The project is still in the initial phase of application of the agri supply chain approach for organic products. Ours first advances are the following:

(a) Selection of supply chains:

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In a first step criteria of selection for the products or chains were established (see fig. 2). According to these criteria 6 products were pre-selected: banana, baby banana, coffee, cacao, quinoa, shrimps.

Figure 2: Criteria for product selection (Source: NL 8/9, Service for Rural Development, 2002)

- **initiated process of organic production and certification,**
- **organized small- and medium-sized farmers,**
- **possibility to favour productive proposals of women,**
- **marketing opportunities,**
- **alliances and contacts in order to facilitate the access to markets and to obtain volumes required in quantity and quality**
- **contribution to the conservation of biodiversity.**

In a first planning workshop with the main actors of the pre-selected chains (see fig. 3) we could (i) value the criteria and pre-selected products and (ii) discuss the potentials and limitations of each product. Main potentials and limitations related to both, the production as well as the marketing of each product, were identified during the discussion; moreover key actors and lines of action to face the problems were defined. Finally (iii) products with greater expectation of impacts for small-sized farmers, especially for women, were selected - the ones that are cacao, coffee, baby banana and quinoa.

Figure 3: Key actors for product selection (Source: NL 8/9, Service for Rural Development, 2002):

- **certification organisations (BCS, Naturland, Biolatina),**
- **representatives of organic farmers organisations (ERPE, BIOCON, PROBIO),**
- **advisors of projects related to organic production and certification (GTZ, IICA, VECO),**
- **National Agricultural Research Institute (INIAP) as representative of the National Innovation System (SNIA),**
- **Corporation for Export and Investment Promotion (CORPEI),**
- **Ecuadorian Service for Agricultural Health (SESA), the responsible governmental unit for the elaboration of organic and certification regulations.**

As next steps - based on an analysis of the current production, processing and marketing situation - product workshops are planned. All relevant actors along the supply chain are involved with the objective to identify and implement priority activities. These activities can cover areas as analyses, organization of farmers groups, quality improvement of the products, marketing and commercialisation, etc. The workshops are the starting points for a joint learning process directed towards a continuous improvement of the supply chain.

(b) Elaboration of a regulatory framework:

At the same time the project supports the Ecuadorian Service for Agricultural Health, SESA in the elaboration of a regulatory framework for organic production and certification. The elaboration process is involving all relevant actors. The act for organic agriculture and the specific regulations should pass yet in this legislative period until end of this year.

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(c) Specific challenges for the incorporation of small sized farmers:

The project with its focus on small-sized farmers and gender-equity has to face various challenges to enlarge the production and commercialisation of organic products of its target group.

- Farmers organizations, in many cases dispersed and with small extensions, are still very weak and often without legal status.
- Pre- and post production logistic (input supply, transport, communication and information, storing centres) is very basic.
- The integration of male and female rural producers in processing and commercialisation to profit from value adding activities is very limited.
- Access to legal and technological information is still limited.
- Many times the lack of liquidity restrains investment.
- Small farmers need alternatives of income in the transition time to organic production.

Nevertheless there is a number of small sized farmers and their families with high potential of successful incorporation into the selected supply chains. Some of these groups of small farmers are already producing certified organic food and/or are in the certification process. Another major future task is the development of new products for the benefits of small farmers. In this context Amazonian fruits are a still under-valued resource. Evaluating the available genetic material, strengthening local institutional capacities, legalizing farmers groups, distributing plants and seeds in order to increase diversification, training of local technical staff, linking communities/farmers groups with development organizations and private companies, etc. are activities already being implemented with different partners in the frame of this project. *Further literature : Burgeois, R. & D. Herrera: Enfoque participativo para el desarrollo de la competitividad de los sistemas agroalimentarios, IICA, 1999. Van Roekel, J. et al Building Agri Supply Chains: Issues and Guidelines. In: A Guide to Developing Agricultural Markets and Agro-Enterprises.*

2. Marketing environmental and social services of tree crop production - the example of coffee (*G. Fleischer*)

Expanding production and raising yields of crops are a priority in many areas of the developing world, especially where there is a notorious shortage of food. However, other farmers are faced with an increasingly difficult situation on agricultural commodity markets. For example, coffee prices in real terms reached a 100-year low in early 2002. One option to escape the treadmill of overcapacity and subsequent price decline is the production of better quality. It is remarkable that besides the product-related quality characteristics (size, shape, taste etc.) increasingly production process-related criteria play an important role. This is met with a growing demand that rewards sustainable production practices. This article looks into the potential for small-scale producers to tap the consumers' willingness to pay for sustainable agriculture.

2.1. How does the market reward sustainable production practices?

Unfortunately, many commodities grown in developing countries are traded as rather homogenous goods with often little or even no price differences for quality. This leads to a vicious cycle of low prices and low quality. However, product and market differentiation should allow producers to capture a higher share of the value-added. This can be achieved by striving for the type of product quality that is desired by the market. Buyers in international markets become increasingly aware that consumers, especially in upscale markets of western countries, want transparency related to the way the product is grown, processed and traded. A growing number of consumers is concerned that their consumption pattern will harm the environment and indirectly promote the disruption of the social fabrics of local communities. They are prepared to reward environmental and social protection by paying moderately higher prices for their daily coffee (Halweil 2002).

All actors in the product chain face the challenge to establish a credible and transparent mechanism that transfers the added consumer value into more income for rural communities. The consumer will ask: How do I know that I get the type of coffee that I am supposed to pay for? So far, the key instrument is certification of the production process on the farm according to a set of environmental and/or social criteria. The most widely recognized standards are Organic, Fair Trade, and Shade-grown (see box 1). In coffee, organic and fair trade achieve already significant market shares. Markets for organic products in Europe show annual growth rates of 20 to 30 %. It is estimated that 10 % of the total coffee area of Mexico is under organic production. In the UK and Switzerland, fair trade coffee has about 6% market share. In the current situation of low prices, premiums for organic and fair trade coffee can be up to 100 %. The organic and fair trade movements tend to converge, as both cover different aspects of genuine sustainability. Additionally, producers find it attractive to add a second label because additional costs of certification are far lower compared to the first step. A third type of standard refers to the impact of the conversion of agroforestry systems into sun-grown, "technified" coffee plantations. Following a dramatic drop in the number of migratory birds in the United States during the last 20 years, many consumers are now prepared to pay a premium for "shade-grown coffee", which provides a better habitat for birds than the so-called "sun coffee". The drastic decline of areas with high tree forests in many Central American countries has turned out to be an obstacle for many birds when going south during the winter in the Northern Hemisphere. Several decades ago, coffee growers were encouraged to cut the forest, convert to sun resistant coffee types and use fertilizers and pesticides. Demand for the traditional coffee grown in agroforestry systems emulating primary forest-like vegetation has gained momentum.

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Figure 1: Environmental and Social Sustainability Standards (Source: NL 8/9, Services for Rural Development, 2002)

Organic production focuses on agronomic practices. The crop is grown without the use of synthetic chemical fertilizers and pesticides using sustainable agriculture methods. While biodiversity aspects are not directly covered, shade trees are important for organic production since the leaf litter fertilizes the production; the trees retain moisture and provide a habitat for the natural enemies of coffee pests. Standards for organic production are issued by the International Federation of Organic Agriculture Movements (IFOAM). However, many developed countries such as the EU and US additionally demand accreditation of the certifying body.

Fair Trade coffee provides an alternative trade model that aims to secure small farmers' role in business. Certified fair trade coffee is exchanged at a guaranteed minimum price, which can be almost twice that for conventional coffee. Rules stipulate healthy working conditions and a living wage for farmers, as well as the financing of community-level development activities by farmer organizations.

Shade-grown coffee is grown under a canopy of shade trees, which provide habitat for migratory birds and other species, enrich and conserve soil and decrease the need for chemical inputs. Source: Fleischer (2002).

2.2. Opportunities for small-scale farmers

In many areas, coffee is grown in a traditional, low-input system under shade. Farmers may ask themselves: If I produce coffee in a traditional agro-forestry system, how can I get the market reward my contributions toward conserving the tropical rain forest tree cover that conserves the soil, protects the global climate and saves bird species? Entering the market for "sustain-able coffees" requires some adaptation of the farm management system to meet the standards, especially for organic certification. For example, chemical pesticide use is ruled out in organic production. Small-scale producers have to be organized to reduce the transaction costs for buyers and the costs of certification. As a group, they need to be committed toward jointly establishing a reputation for delivering a consistently high quality of coffee. Direct links between producer groups and importers are often essential to establish a separated commodity chain, to increase transparency and to assure quality throughout the chain.

Constraints for producers to enter the market for "sustainable coffee" vary from country to country and from region to region. East Africa for example, has significant potential for expanding high quality sustainable coffee production but faces constraints, perhaps more severe in comparison to Central America or Mexico. Those include the weak infrastructure, the lack of reliable market outlets, and inappropriate governance of state authorities. Small-scale producers of coffee face a similar set of entry barriers like those in other high-value export markets. They tend to lack enough information on market opportunities, especially in remote areas. Access to modern communication like the internet may help to close the gap, especially since there is an increase in direct links between producer groups and importers. In many areas, small-scale farmers have been marginalized and bypassed when public services such as education, credit, dissemination of technologies were delivered. Those farmers often lack the basic skills to organize themselves in groups, keep records of production and processing, negotiate contracts with buyers etc. The private sector is increasingly interested to assist in upgrading the institutional capacity of producer groups. Partnerships between coffee buyers who know the technical skills required and the market demand pattern, and public sector agencies that provide infrastructure and basic services such as roads, communication, and electricity seem to offer particular advantages. GTZ has initiated several partnership projects with coffee companies in areas of Colombia, Peru and Uganda.

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Public institutions and donors may subsidize the certification costs as those costs are a particular burden for small-scale producers due to economies of scale. However, this instrument should be used carefully since subsidies tend to increase production irrespective of demand patterns. Another area of intervention is the bias in domestic agricultural policies. Those frequently geared toward supporting "technified" coffee, e.g. through input and credit schemes, subsidies and tax breaks for agrochemicals, priorities in research and extension organizations. Governments should no longer support farm practices that harm the environment. Donor and development agencies can help to reverse some of the biases through policy dialogue and support the recognition of the local and global benefits of sustainable coffee for rural development and environmental protection by partner country policy makers.

Beyond niche markets, coffee of lower quality which is demanded due to its blending characteristics can be made more sustainable through the adoption of sustainable sourcing criteria throughout the conventional supply chain. GTZ has recently entered a partnership with the German Coffee Trade Association for developing a code of conduct for minimum environmental and social standards to be adhered to by all actors in the German market. It is expected that the adoption of the code will lead to quality improvements and higher producer prices.

Producing and marketing "sustainable" commodities is increasingly recognized as a practical way to capture the willingness-to-pay of consumers for environmental and social services of agricultural production through market-based mechanisms (Pagiola and Ruthenberg, 2002). Coffee is at the forefront, but other crops may follow. For example, many multinational companies trading tropical commodities like cocoa and banana depend on long-term and stable sourcing in developing countries and the trust of consumers in their products. They are increasingly concerned about the degradation of fragile ecosystems and deteriorating social conditions including war and civil strife. While large banana companies may have a certain degree of control over the supply chain through vertical integration from the plantations to the supermarket shelves, cocoa companies depend on millions of small-scale producers in predominately agro-forestry systems. There is already an established market niche for organic and fair trade bananas, but market differentiation for cocoa is only in its infancies. This offers particular opportunities for producers in the traditional cocoa growing areas of West Africa.

References: Fleischer, G. 2002. Sustainable Coffee, Agricultural Technology Note 30, Agriculture and Rural Development Department, World Bank, Washington [D.C. www.worldbank.org/rural](http://www.worldbank.org/rural) (see also page 66 Recommended Websites) Halweil, B. 2002. Why your daily fix can fix more than your head. World Watch. Vol. 15. No. 3. May/June 2002. Pagiola, S., I.-M. Ruthenberg. 2002. Selling Biodiversity in a Coffee Cup: Shade-Grown Coffee and Conservation in Mesoamerica. In: Selling Forest Environmental Services: Market-Based Mechanisms for Conservation and Development. (S. Pagiola, J. Bishop, N. Landell-Mills, eds.), London: Earthscan.

3. Competency-based Economies through the Formation of Enterprise (CEFE) (P. Schütz)

Our topic in focus in this issue reflects on the increased tendency of commercialising agriculture as one effect of globalisation. The majority of agricultural producers in developing countries have only been partly integrated in the economic cycles. Full integration into agricultural markets, assuming the perspective of production chains and looking at the interaction within segments of the chain like primary production or transformation through value added services and between segments shows a strong need of a variety of new skills and knowledge of the actors from rural areas that are new and trying to find their place. The article on knowledge and information reflects more generally on the different cycles of knowledge going with increased integration into market transactions. In this article the focus is on entrepreneurial skills needed and the applicability of GTZ's CEFE concept.

In the context of development cooperation the promotion of micro and small business has already tradition. For this purpose a comprehensive training concept has been developed over the past twenty years or so. The concept has been called CEFE. Below the concept is shortly presented and its relevance for rural areas discussed. The objective of the article is to trigger that discussion also among readers. In one of the next issue the aspect of rural qualification will be in the focus and then the discussion will be intensified. Interesting enough right now an electronic conference is going on that discusses the issue of Rural Business Development Services (RBDS). The forum is hosted on Bellanet-Website and initiated by Swiss Development Cooperation, moderated by Ueli Scheuermann from LBL (Landwirtschaftliche Beratung Lindau).

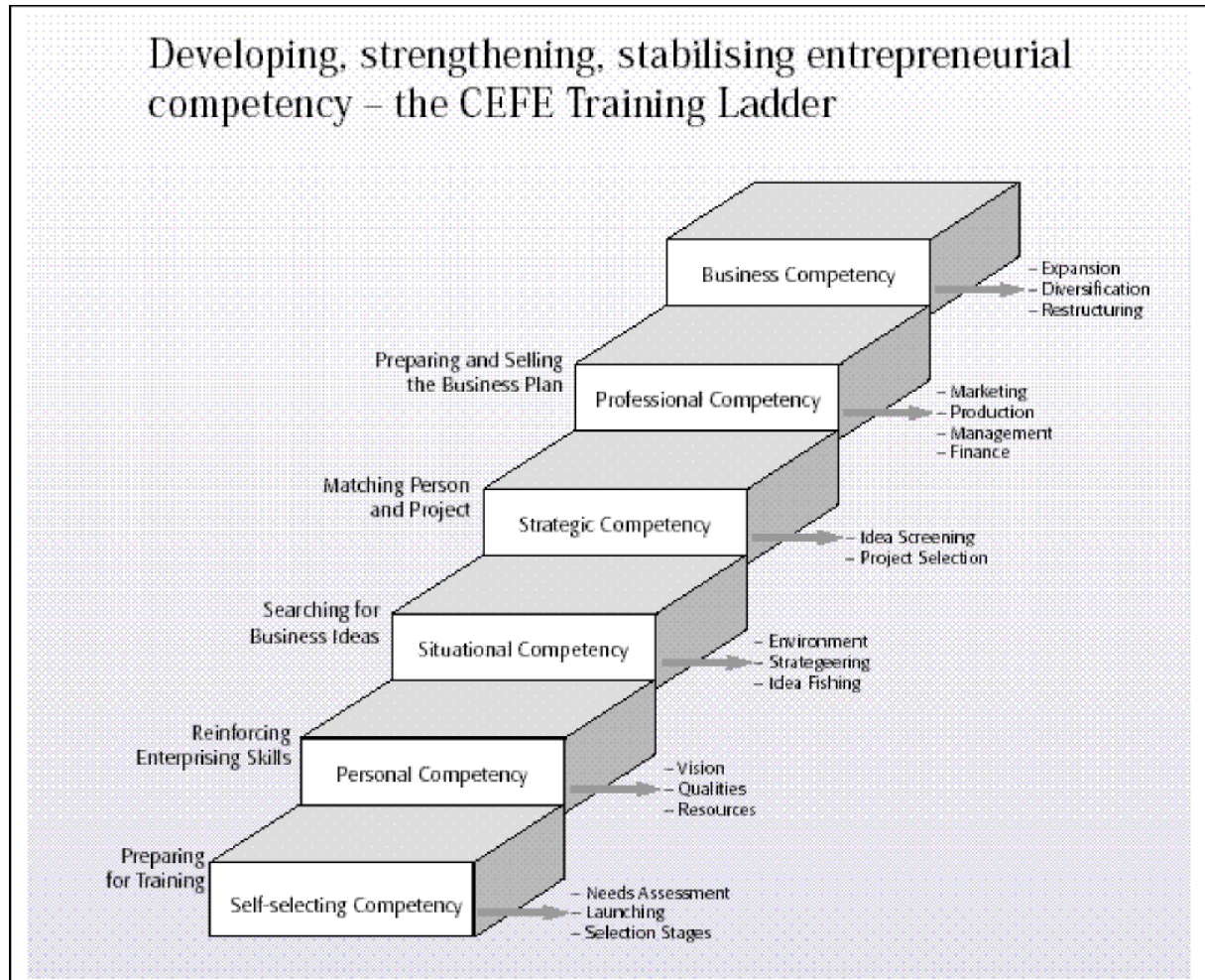
The presentation of the CEFE concept is mainly taken from the CEFE material that is available from the CEFE website and the trainer manual on CD-ROM. In the meantime CEFE International has developed into a broad service package and users have to pay for the services through membership fees and separately for training material. The package consists of a worldwide network, a regular newsletter (Brainstorm), news, a website (<http://cefe.gtz.de>) with public and member's only features as well as a wide range of training materials. The project Knowledge Systems in Rural Areas is a member of the CEFE Network.

CEFE has been introduced in more than 100 countries during the last ten years and is practiced by an International Network of 1300 Organisations and 2500 People. The activities related to the world-wide dissemination of the CEFE concept are supported and financed by a number of bi- and multi-lateral donor agencies as well as local governments (ADB, IADB, EU, ILO, World Bank, UK, Canada, Austria, Switzerland, USA, Brazil, South Africa, Tunisia). Under German Development Cooperation there are 150 bi-lateral projects and a project called CEFE International operating with the CEFE method. CEFE INTERNATIONAL is specialised in supporting long-term projects, CEFE partner institutions and other donor agencies in the use and implementation of CEFE programmes. It also assists CEFE partners in adapting and implementing CEFE know how according to the specific needs of their respective target groups and the objectives of their project activities. The CEFE is a comprehensive set of training instruments using an action-oriented approach and experiential learning methods. The objective is to develop and enhance the business management and personal competencies for people in the context of income and employment generation and economic development. The concept has been developed and adapted by GTZ over past twenty years with an emphasis on creating urban (self-) employment and income CEFE, being a training concept is based on the assumption that the enrichment of society is essentially depending on its human resources, and the more productive and accountable these people are, the greater will be the wealth of that nation. It has evolved over the years from an approach training individuals who want to start their own enterprise to a far-reaching training methodology, designed to evoke enterprising behaviour and competence in a wide variety of situations. The fundamental assumption is that people

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with a clearer vision of their goals and equipped with the skills to achieve them are far more likely to become productive individuals in society.

Figure 1: CEFE Concept (Source: NL 8/9, Service for Rural Development, 2002)



CEFE is a highly adaptable concept that has been used to promote a range of very different social groups such as demobilised soldiers in Ethiopia, refugees in Mozambique, women in vocational training in Tunisia, ex-prisoners in Chile, favelados in Brazil, university graduates in Vietnam, staff members of privatised enterprises in Uzbekistan, just to name a few. CEFE has proven to be a very successful approach to the promotion of small and medium enterprises, employment, income and economic growth. CEFE's training methodology has been applied in a variety of situations, its core focus yet remains the stimulation of growth in the small and medium enterprise development process where the emphasis with entrepreneurs is on improving their business performance while with personnel from enterprise support and regulatory institutions more attention is given to creating a positive enabling environment at the macro and meso level. There are essentially six stages in a CEFE training programme regardless of the target group. The first stage is awareness, in which participants are encouraged to examine who they are, clarify their own values, and evaluate their own personality, motivations, capabilities and personal resources. The second stage is acceptance or recognition of one's own strengths and weaknesses - not everyone has to be a leader or hero, but being more creative, innovative, and competent is likely to produce rewards in any profession. The third stage is goal setting, where the emphasis is placed in developing clarity of purpose in one's short and long term goals of life. The fourth

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stage involves developing strategies or action plans which are oriented to generating growth; this is done after analysing the relevant components of the six factors mentioned above and includes the upgrading of knowledge about economics and entrepreneurial decision-making. The fifth is direct experience where the emphasis is on doing; structured learning experiences and encountering "real life" situations assist in building up this experience in which strategies are tested, evaluated and modified. The last stage is transformation and empowerment where the competencies acquired come together into a pattern which matches personal strengths and weaknesses with goals.

CEFE's overall guiding principle to the training is the ownership of the process which is acquired through the time and energy that participants must invest into the highly demanding schedule of each course. By moving through these stages from awareness to transformation, the participant is given the opportunity to experience personal growth and to develop a more enterprising approach to life. The amount of empowerment that actually takes place is in direct proportion to the investment made by the participant and to the increase of economic opportunities. CEFE's method of enterprise promotion represents the synthesis of enterprise research, theory and application and links economic growth with more and better qualified employment and higher individual income. Its strength comes from paying particular attention to the practical results of its interventions. The method has been widely used in sectors such as small and medium enterprise development, reconstruction and privatisation, management training, vocational training, education, rural and urban development, refugee and reintegration programmes and in agriculture.

Also CEFE mentions agriculture as a field of application the actual experiences are rather limited. In 1998 the 3rd CEFE congress in Belo Horizonte had the rural areas in the focus. The general environment at that time was not yet favourable for the promotion of rural entrepreneurship. An initiative was started in 1999 in Central America (Nicaragua and El Salvador) to promote intensively the use of CEFE in rural areas. Due to a number of factors like phasing out of some projects the efforts were not continued. Looking at the debates of rural economic development and rural non-farm employment and privatisation of service systems there seems to be an increased potential for the successful application of the CEFE set to create more entrepreneurial spirit in rural areas and opportunities for acquiring the necessary skills. Referring to the knowledge cycles in the article on Knowledge and information in commercial agriculture some strategic areas for the application of CEFE seem to evolve:

- Commercial agriculture (farming as a business)
- Associative peasant business firms of small-scale producers
- Private service providers up and downstream of primary production
- Rural business development services (as a separate and special field)

What implications arise from this potential new clientele? Concerning the first two points, it implies that CEFE should be ready to train illiterates. Many developing countries have still considerable portions of the population that are not able to read and write. The larger part of the illiterates can be found in rural areas and still often enough farm families depend on the labour of the children for farm work and therefore do not school them. Under gender aspects one can say that schooling rates for girls are still significant lower than for boys.

Being illiterate does not necessarily mean that these people do not have potential for entrepreneurial development. Judging the potential for entrepreneurial development in rural areas needs to be done with a profound knowledge of agriculture. The state of agricultural development defines the possibilities of the service sector before and after agricultural production. Subsistence farmers e.g. have a very limited need for artificial insemination of cattle or a crop-insurance. Agriculture and its corresponding service system influence each other and also open up new alleys for each other. Services for agriculture include physical inputs like seeds or agrochemicals, implements but also intangible services such as research, advice or market information. Current development show that the trend to commercial agriculture is not limited to Latin America but also in Kenya, Uganda, Ghana and other African

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countries an increased interest in entrepreneurial skill among farmers can be observed. Especially American NGOs like ACIDI-VOCA or TechnoServe have business initiatives in African countries.

A broad variety of practical examples from the area of non-farm rural economic development will be presented at the multidonor workshop at the GTZ premises in Berlin (19-22.11.02 see also announcement in this issue). The next issue will report on the workshop.

If the CEFE movement wants to get deeply rooted in rural areas and to contribute to poverty alleviation in the rural areas and work with farmers, CEFE has to meet the farmers where they are. And CEFE needs to link up with other organisations like agricultural extension services, private service providers, farmer organisations, cooperatives and NGO's. These partners transport the message of the CEFE potential and usefulness and help linking up with farmer groups for training and networking. A special challenge might be the contribution of CEFE to the third learning cycle or the evolving fourth where social learning and social competence becomes more and more important in the context of entrepreneurial collective action.

4. Analysing the beef and meat sector – a tool for production chain development, Kenya (A. Springer-Heinze/ P. Schütz)

A chain analysis is the review of the steps through which an agricultural product is generated, from the services delivered to primary producers on to the processing and marketing of the product to the final consumers. It is understood that no service provider or producer can be economically successful without contributing to a product chain that provides the link to markets. This article presents the results of a „rapid supply chain analysis“ that was done for and with the Bahati/ LISSA slaughterhouse association in Kenya. The objective of the exercise was to identify a strategy for product chain development in the beef and meat sector. Besides its technical content, the analysis is also interesting from a methodological point of view. The approach taken may become a general tool for identifying interventions to develop agricultural product chains that may be applicable in other cases as well. The approach went through five steps:

1. Selection of a commercial commodity
2. Description of the product supply chain
3. Analysis of chain problems
4. Identification of intervention points
5. Development of an intervention strategy.

4.1. Selection of a commercial commodity

In the case at hand, the commodity was given by the partner Bahati/LISSA, an association dealing with slaughtering cattle, and selling meat. The development interest of this commodity is obvious, as the association includes small-scale entrepreneurs who are already present on the market. In other cases it may be more difficult to judge the economic potential of a commodity. Development agencies or by producer organisations initiating chain development have to make sure there is a market outlet. The article on "agribusiness and development" presents some of the criteria to be used to judge the potential and select a particular product (see page 8 ff. of this issue). Core criteria are certainly the comparative advantages of small producers (labour intensive or specific local climatic conditions) on different product markets, especially the fair trade, niche and organic markets as well as the local markets for fresh products. The other aspect is the contribution of the new production line to development objectives, i.e. the extent to which poor people participate and the ecology benefits. In the case of beef meat, some of these criteria apply: The meat is produced by low-income people to satisfy a growing local demand for high-quality fresh products, and the way BAHATI LISSA operates the slaughterhouse delivers positive effects for the environment and for public health.

4.2. Description of the product supply chain

After having chosen a commodity we need to look at the whole chain, starting from the inputs for primary production through storage, transport, transformation and sales. The chain is primarily defined by the flow of the product, but also includes all necessary services accompanying the production stages. The following charts give a simplified overview of the traditional live-stock to meat chain from the Kenya Rift Valley to the final consumer in Nairobi. Figure 1 provides an overview and figure 2 highlight the specific (sub)-chain of livestock production and trade.

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Figure 1: Traditional Beef Market (Source: NL 8/9, Services for Rural Development, 2002)

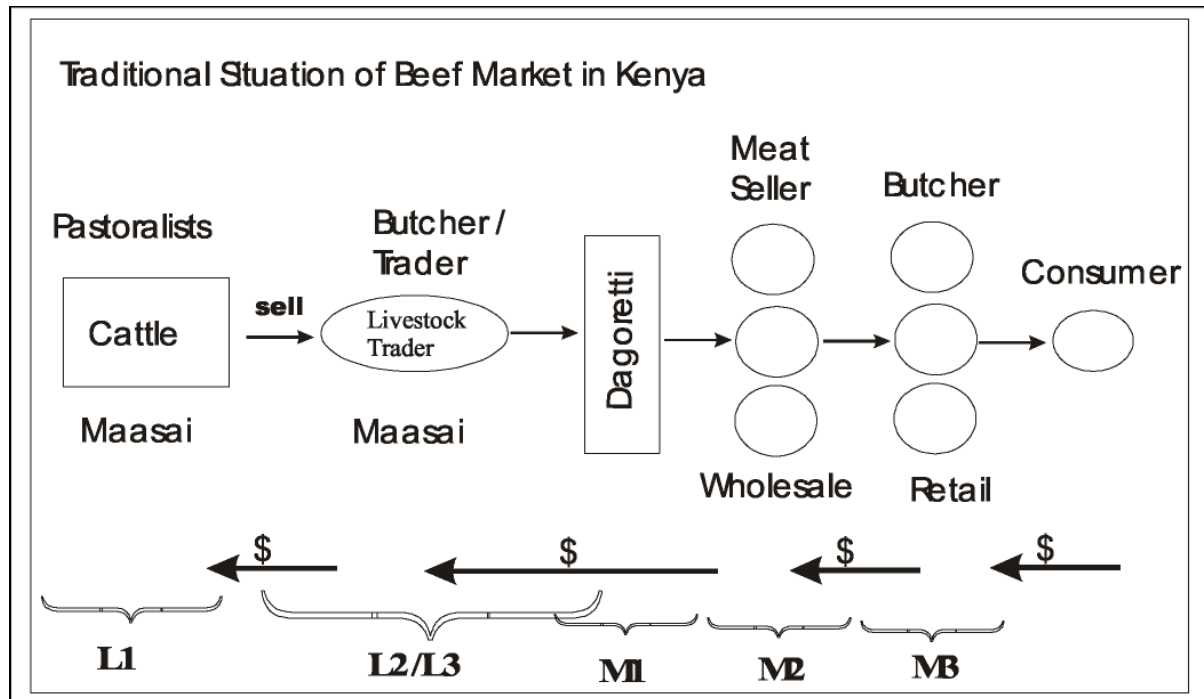
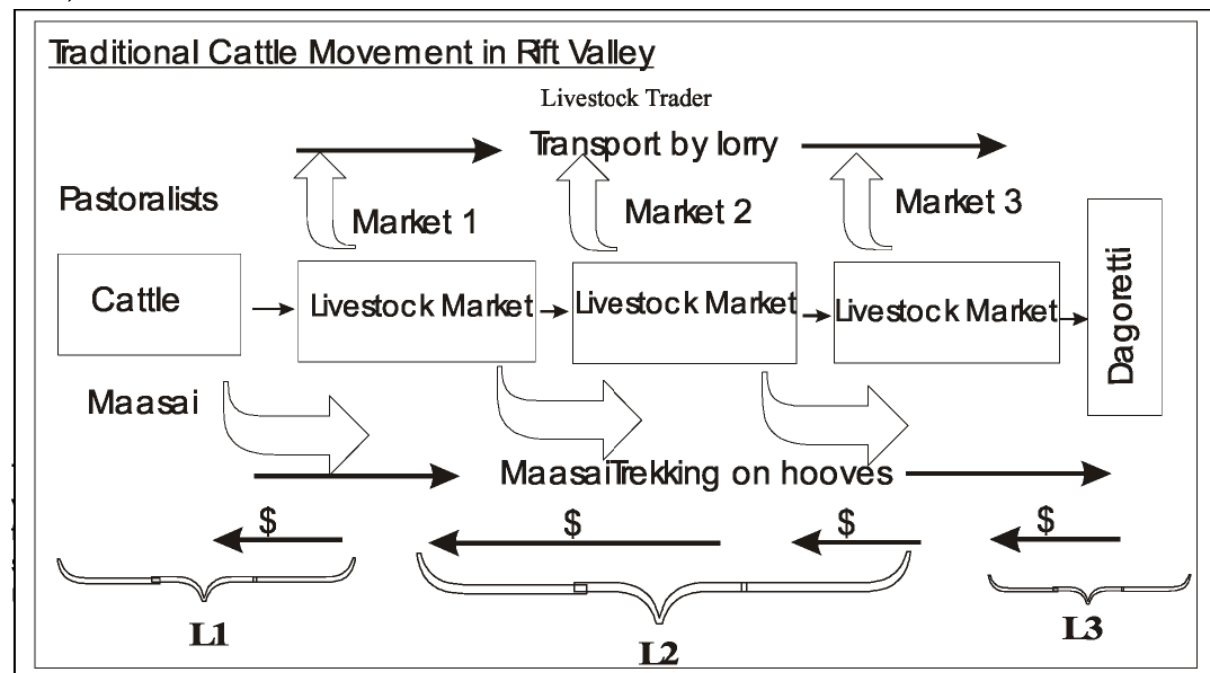


Figure 2: Traditional Cattle Movements in Rift Valley (Source: NL 8/9, Services for Rural Development, 2002)



Those producers that could not sell on the first market move their animals to the second and third market along the transport route to Nairobi. When pastoral livestock owners have decided to sell, they are not moving their animals back to the main flock but try the next market. Usually the decision to sell is based on a cash need. From the third market some

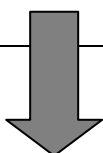
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dealers trek animals directly to Nairobi slaughterhouses. Thus they also circumvent the need for a moving permit. The review of the sector reveals two fairly separate chains, the livestock production and the meat production chains (see chart 1). The simplified chain differentiation, two fairly separate chains, the livestock production with three segments and the meat production chains also with three segments. This becomes clear by looking at the tables in the third step which represent the problem analysis.

4.3. Analysis of chain problems

The chain of livestock production and supply can be summarised into three major steps, segments. This becomes clear by looking at meat production chains also with three tables. In the third step, which represents the problem analysis, livestock production, livestock trade and transport between the production zone and the main Nairobi livestock market (Dagoretti), and the sale of animals at Dagoretti are shown. Although each of the stages includes different functions and can be broken down into smaller steps, it appears that they constitute fairly homogeneous do-mains of economic interaction. The following tables present a short description of the three major stages in the livestock (L1-L3) and meat (M1-M3) chains. Besides two descriptive points, the analysis of the stages uses the criteria "efficiency and environmental constraints" and the "assessment of potentials". Both criteria refer to arguments that are of public interest and from which options for public interventions can be derived to improve the sector.

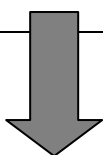
<i>Stages in the livestock chain</i>	Short description	Main Stakeholders	Efficiency and environmental constraints	Potential development approaches
L1. Cattle breeding (focus on the Narok district in the Southern rift valley)	Pastoralist system according to the Maasai tradition, appr. 700.000 stock in Narok district.	Approx. 5000 Maasai herder households, <i>Very few private service providers for animal health</i> <i>few public services such as water supply, disease control provided by government and NGOs</i>	<ul style="list-style-type: none"> • Tradition is to sell animals according to cash needs and less according to herd management principles, pastoralism regarded as way of living and less as a business enterprise, • most land used as communal pastures with resulting over stocking and over grazing, • low productivity (nutrition / vet. services) • oversupply • few market incentives as prices are low 	<ul style="list-style-type: none"> • Supply of improved technology has only shown results in the case of private land owners • Long-term investment in education



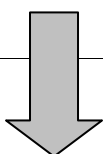
Cases: Knowledge Management

Stage in the live-stock chain	Short description	Main stakeholders	Efficiency and environmental constraints	Potential development approaches
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L2. Cattle marketing / transport	Buying of animals in several local stock markets which are aligned along the main road starting from the production centre. 90% of	Stock traders, partially organised into a stock traders association, cattle drovers, truck owners offering transport services	Market facilities are insufficient (no water, no holding grounds, few services) Reduced incentives as cattle owners cannot sell readily (buyers' market), Losses in weight and quality of the animals	<ul style="list-style-type: none"> • Organisation of markets and provision of services to reduce losses • Improvement of roads to ease transport
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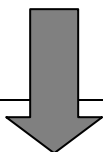
L3. Sales at Nairobi cattle market in Dagoretti	cattle is sold to livestock processors for subsequent slaughtering in private slaughterhouses	Stock traders, partially organised into a stock traders association, Livestock processors ("meat producers") Slaughterhouses Veterinary service with meat inspection District council (market fees)	Market facilities are insufficient (no holding grounds), quality losses Unfair trade practices with buyers in the strong position, frequent defaulting on extended terms of payment and cheating resulting in strong disincentives for the stock trade Lack of capital Part of the trade escapes public suspension, corruption problems	<ul style="list-style-type: none"> • Improvement of market facilities to reduce losses • Law enforcement • Support to trader associations
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The next set of tables summarises the major stages of the traditional beef meat chain in Nairobi:

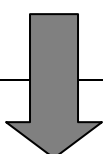
Cases: Knowledge Management

M1. Slaughtering of cattle at Dagoretti	slaughtering of cattle and partition into front and hind quarters, heads, hides, hoofs and intestines.	Livestock processors ("meat producers") Any of four Slaughterhouses Veterinary service with meat inspection and inspection of meat transport containers	<ul style="list-style-type: none"> . Facilities are insufficient, especially waste disposal and general hygiene . Quality of slaughter cattle is often poor . No facilities for processing of meat . Reduced capacity for cooling/ storage . Unknown proportion of animals is slaughtered outside the slaughterhouse 	<ul style="list-style-type: none"> • Support to the improvement of facilities . Law enforcement
<i>..at Bahati slaughterhouse in Limuru</i>	See above	<i>/n addition. Bahati LISSA</i>	<ul style="list-style-type: none"> • Capacity is under-utilised • Quality of slaughter cattle is often poor • No facilities for processing of meat 	<ul style="list-style-type: none"> • Development of business opportunities (see below)



Stage in the livestock chain	Short description	Main stakeholders	Efficiency and environmental constraints	Potential Development Approaches
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M2. Wholesale meat trade	<ul style="list-style-type: none"> - Sale of parts to meat traders and butchers at the slaughter-house outlet - transport to wholesale markets (e.g. Burma market) and sale to retail traders 	Livestock processors ("meat producers") wholesale traders brokers mediating between livestock processors and traders transporters butcheries	<ul style="list-style-type: none"> • Storage facilities are insufficient . General hygiene in the line of transport problematic (no cool chain, meat handling is substandard) . Low level of education and qualification at all stages . No specialised training in meat processing and marketing • Open access to meat business activities • Illegal meat hawking . High market risk as meat degrades quickly due to handling procedures 	<ul style="list-style-type: none"> • Support to the improvement of facilities • Regulation of access to the meat business . Training . Law enforcement
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Cases: Knowledge Management

Stage in the livestock chain	Short description	Main stakeholders	Efficiency and environmental constraints	Potential development approaches
M3. <i>Retail meat trade</i>	- Sale of meat and meat products to consumers in butcheries - Sale of meat to restaurants	Wholesale meat traders transporters butcheries restaurants	<ul style="list-style-type: none"> . Storage, processing facilities are insufficient . General hygiene in transport and processing is problematic . Low level of education and qualification . No specialised training in meat processing <ul style="list-style-type: none"> • Open access to meat business activities • Limited market for the quality of meat offered • Low purchasing power • Low trust of consumers • Display, cutting and packaging does not respond to consumer demand 	<ul style="list-style-type: none"> • Support to the improvement of facilities • Regulation of access to the meat business • Training • Law enforcement • Control of hygiene

4.4. Identification of Intervention Points

The principle of interpreting the tables is to go through the last two columns and assess the development approaches individually.

The constraints should be classified according to the severity of the issue and the general possibility of removing the constraint. Stages with intricate constraints, e.g. the strong limitations to enhancing productivity under the conditions of a traditional nomadic system can be put aside. For the remaining stages, the issue is to judge the likelihood of success in supporting the respective strategies. Secondly, one should analyse to what extent the removal of a constraint might trigger further changes upstream or downstream that is the repercussions of an intervention at one stage on preceding or subsequent stages. Interventions toward the market end of the chain appear to be more effective as they are likely to translate into market incentives for those active at the earlier stages. Another distinction has to be made whether the approaches listed require public action or could partially be taken over by private actors. Generally, private initiative should be given preference because it offers greater prospects for a sustainable change. Another option for preparing a choice is a "SWOT analysis" of the stakeholders at each stage checking on the four dimensions of SWOT (Strengths, weak-nesses, opportunities and threats). Looking at the bottlenecks in the chains, it was decided to concentrate on the meat business and dismiss the livestock chain as intervention point. A second decision was to work with a private partner, in our case Bahati/ LISSA. Interventions would support actions of Bahati LISSA that they can take even without a prior change in policies and public services. The alternative strategy to foster the sector by public services and investments or by targeting nomads or livestock traders was deferred. Nevertheless, we expect positive effects on the further development of the livestock sector.

4.5. Development of an intervention strategy

Following the identification of intervention points, the next task is to develop a strategy for the development of the supply chain. In our case, the intervention strategy consists in supporting a private entrepreneur in his business effort. This task has to be done together with Bahati LISSA and is still ongoing. In principle, for this type of strategy the subsequent steps are necessary:

- Choosing (private) partner for cooperation
- Analysis of the market position and current capacity of the enterprise
- Business strategy (including business and investment plan)
- Identify the potential development contribution of the private investment
- Deriving support measures for capacity building.