

## 3rd European Forum on Rural Development

**Palencia, Spain**

**29 March – 1 April 2011**

Breakout Session no 6

# LINKING SMALLHOLDERS TO EFFICIENT MARKETS

## Background Paper

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# 1. Introduction

Agricultural development is considered strategic for poverty reduction (WorldBank 2008). After having put the emphasis on production issues, a new generation of agricultural policies and development projects has come to consider that support to production enhancement cannot be separated from an efficient functioning of marketing channels. In this perspective, over the last decade, donors and policy makers have developed tools and approaches addressing “access to markets” issues to reduce poverty, where farmer organizations had to assume a growing role. This background paper reviews determinant factors on linking smallholder farmers to efficient markets that can be useful to guide further development projects.

Our review is focused on smallholders’ access to agricultural output markets, setting aside their connection to other markets such as land, labor, and credit markets. It is based on the assumption that the success of interventions aiming at improving smallholders’ linkages to agricultural markets depends on the relevance of the interventions within a given technical-economic context (market and products), a politico-institutional context (institutional environment defined by a large set of policies), as well as on the efficiency of the implementation modalities. The question “linking smallholder farmers to *efficient* markets”-could be rephrased, here, into “how to support smallholder farmers to draw benefits from their linkages to markets?” i.e. understand farmers’ marketing strategies that could improve their global situation in terms of food security and income generation, considering their specific constraints to access agricultural output markets.

The rest of the paper is organized as follows. Section 2 provides the background regarding the evolution of the global agricultural trade environment. Section 3 describes the specific constraints of smallholder farmers face in accessing and benefiting from markets, and shows that these constraints express themselves differently, according to the diversity of the farmers’ situations and to the characteristics of the agricultural products traded. Section 4 presents four types of interventions that enables farmers to access markets: strengthening producer organizations, promoting contractual arrangements, providing information and ensuring favorable institutional environments. For each type of intervention, a careful assessment of their potential and limits to support farmers in benefiting from their linkage to markets is undertaken, based on empirical literature results. A discussion follows in section 5 on research and policy issues that arise on improving farmers’ linkages with markets durably.

## 2. How are agricultural markets evolving?

In the last twenty years, smallholder farmers have had to face new challenges, arising directly from the liberalization policy reforms (withdrawal of the State from agricultural support, liberalization of food marketing systems); and indirectly from social trends (urbanization, cultural changes, technological innovations, rising incomes). In parallel with the dismantling of state centered-marketing systems, a whole set of changes have reshaped agricultural output markets (IFAD 2011). Four important changes, that affect the whole agricultural sector, are presented here: the globalization of exchanges (2.1), the economic concentration of agents (2.2), the emergence of new demands (2.3) and the potential evolution towards higher food price volatility(2.4). These changes may entail different farmers’ capacity to access markets, or make their access riskier or less profitable than it could be. Depending on smallholders’ specific situations, the mentioned changes may represent an opportunity or a threat.

### 2.1 The globalization of exchanges

The liberalization of international trade led to an increasing confrontation between agricultures with uneven productivities. Smallholders are forced to compete not only with their local peers, but also with farmers from other countries as well as domestic and international agribusinesses (Markelova and Meinzen-Dick 2009). In low income countries, smallholder farmers, that have low access to resources, suffer from the competition with high productivity-agriculture production from high income countries, that may be highly supported through massive public subsidies (Campbell and Losch 2002; Mazoyer and Roudart 2002). Thus, the globalization of exchanges may be assimilated to increasing risks and may

result in the marginalization of smallholder farmers in low income countries. A progressive differentiation among farmers is thus appearing, between a fringe of farmers characterized by high resource endowment and policy support for which international integration tends to be an opportunity and the large bulk of farmers characterized by low resources endowment and policy support for which international integration tends to be a threat.

## 2.2 The economic concentration of agents

Agents' strategies to control price instability and competition resulted in the concentration of production, processing and distribution functions by dominant national and international players, and led to the emergence of oligopolistic supranational macro-actors. As a result, the distribution of agricultural products is becoming more and more concentrated in the hand of retail chains companies, which consolidate both wholesaling and retailing functions (Reardon and Timmer 2007). Those processes lead to a major increase in asymmetry in bargaining power at the expense of smallholder farmers, for whom infrastructure or information gaps remain relatively unchanged.

## 2.3 The emergence of new demands

The recent years have witnessed a considerable rise of public norms and private voluntary standards, in the governance of global agri-food chains (Henson, Jaffe et al. 2008; Fouilleux 2010; Daviron and Vagneron 2011). Norms and standards have been developed due to growing consumer concerns for food safety and sustainable food production practices. In developing countries, quality and safety are required by international markets (e.g. Globalgap standard on fresh fruits and vegetables is required by all European supermarkets) and foreign direct investments, as well as by the domestic demand through urbanization, income rise and the growing development of supermarkets (Reardon and Timmer 2007). The new downstream food sector requirements are intended to be turned towards upstream segments of the marketing channels until producers that should then adapt quality production according to this new demand (Swinnen 2005). If this demand represents new market opportunities for high-value products, particularly by protecting local products with specific labels (Onumah, Davis et al. 2007), under certain conditions farmers may not benefit from these opportunities. Indeed, smallholder farmer's low capacity to analyze the functioning of national and international markets makes it difficult for them to identify new opportunities and to build relevant strategies because of their lack of resources, partnerships, trade networking, etc (Minten, Reardon et al. 2009).

## 2.4 The food price volatility

Another characteristic of the agricultural output markets is the potential trend towards higher food price volatility. The 2007-2008 sharp rises in food prices and the food crisis that followed in developing countries brought food price volatility at the heart of political debates. The current food price spike, that began in mid-2010 receive increasing attention (Ortiz, Chai et al. 2011). Food price volatility can have negative effects both on consumers and producers<sup>1</sup>. Smallholder farmers are particularly vulnerable to related production and marketing risks.

Many potential factors influence food price volatility, and are basically related to supply and demand fundamentals: rapid growth of demand (urbanization, demography growth, biofuels), slow growth of supply (limited productivity growth). These factors are likely to include market-specific and broader economic factors such as inflation, exchanges rate changes, oil price changes, etc (Roache 2010). The policies pursued at domestic level are directly affecting food price volatility, and recent debates have focused on the potential impact of these policies at the international level (export restrictions by major surplus producing countries, ad hoc market interventions by deficit countries). Changes in these factors may have large effects because short run supply and demand elasticities of food prices are typically low (Balcombe 2009).

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<sup>1</sup>These negative effects are likely to be more important in African countries, where markets are spatially segmented and where food expenditures account for most of household expenditures.

Despite a consensus on the need to tackle food price volatility, there is a long-standing debate on the ways to do it. Many interventions have been promoted, from the promotion of safety nets to the reinforcement of trade and marketing policies, and to the strengthening of warehouse receipt systems that may be led by farmer organizations (Demeke, Pangrazio et al. 2008).

### 3. What are the constraints for smallholders to access agricultural markets?

Changes in the global agricultural trade environment are providing smallholders with new opportunities to access markets that also correspond to new constraints (Markelova and Meinzen-Dick 2009). Smallholders tend to be disadvantaged due to small size of operations, weak technical capacity, high vulnerability to risks, and lack of capital (Bijman, Ton et al. 2007).

Many constraints are identified in the economic literature to describe the challenges smallholders have to face to access agricultural output markets. Some of these constraints are linked to production issues<sup>2</sup>, but for the purpose of this paper, we focus only on constraints for the transaction and the exchange of products that prevent smallholders' connections to agricultural output markets, setting aside their connection to other markets (land, labor, credit). We identified six factors that may affect smallholders' capacity to access to (and benefit from) agricultural output markets. These factors are barriers to entry (3.1), high production risks and lack of economy of scale (3.2), high marketing risks (3.3), high transaction costs (3.4), low bargaining power (3.5), and lack of human and social capital (3.6). These constraints may influence smallholders' marketing strategies.

#### 3.1 Barriers to entry

Smallholders may have difficulties to access agricultural output markets because of the existence of barriers to entry. These barriers may come from:

- ▶ Structural barriers, such as geographical barriers for remote areas with poor infrastructures of transportation
- ▶ Standard compliance requirements (public and private norms) or trade restrictions (regulation, price controls, and procedures for the allocation of inputs). Currently these barriers to entry are high for products subject to international trade such as export products (Maertens and Swinnen 2009). They are also growing in domestic markets given the development of higher demand for quality by urban consumers (Reardon and Timmer 2007). These new market demands may generate new barriers to entry for smallholders since higher investments are made necessary. In most of the cases, standards compliance represents a threat for smallholders.
- ▶ Access to capital/credit and irreversibility of high sunk costs (Barrett 1997; Osborne 2005). This results from the investments needed to produce or sell products, which are either physical means of production, post-harvest equipment, processing facilities, specific knowledge or know-how
- ▶ Strategic barriers set by incumbent enterprises through predatory pricing, interlinked contract, product differentiation (Dixit 1982; Barrett 1997).

#### 3.2 High production risks and lack of economy of scale

Since smallholders have low resource endowment, they tend to be highly vulnerable to production risks. Production risks are related to natural conditions and climatic shocks, which are likely to increase in the future (Haile 2005; Ahmed, Diffenbaugh et al. 2009). In low income countries, the intensification of production systems is often limited, which exacerbates farmers' vulnerability to production risks. Furthermore, smallholders cannot achieve economies of scale since they have poor productivity potential, partly resulting from their low endowment in production factors (especially land and capital assets) and from their lack of investments due to their aversion to risks.

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<sup>2</sup>Producing for the market implies production means such as land, labor force and capital. These production means may be possessed by the farmer or be accessible through markets or other kinds of coordination.

### 3.3 High marketing risks

Marketing risks are related to transaction risks and to growing price fluctuations. If food prices vary too much, smallholders may not be motivated to invest in their production system, because of risk aversion (Moschini and Hennessy 2002). In such a situation of risks, smallholders may either be unwilling to invest or even, for the poorest, to sell (Gérard, Alpha et al. 2010), and may be stuck in poverty traps (Kydd, Dorward et al. 2002). In low income countries, markets risks have increased with the withdrawal of state intervention, and private instruments to mitigate such risks are either missing or inefficient (Bijman, Ton et al. 2007). Recently, export bans by major surplus producing countries have reinforced food price volatility at the international level (Abbott 2010) and resulted in higher marketing risks for deficit countries.

Transaction risks, associated to a potential breaking up of business partner relationship (opportunistic buying behavior), may arise for farmers engaged in contract farming that have invested in specific assets (which is not the case in the majority of smallholders). These transaction risks tend to be higher when specific investments are required (compliance with export standards), and when volumes traded are important.

### 3.4 High transaction costs

Smallholders are facing transaction costs such as market and information search costs, screening costs, bargaining costs, transfer cost, monitoring costs, enforcement cost (Jaffee and Morton 1995). These costs tend to be higher for farmers living in remote areas with poor infrastructures of communication and transportation. The farmers lack information about: prices of products at the local level, and at final consumer's level, about quality requirements, about places and best periods for selling their products, about potential buyers (Moustier 1998), about production in other areas; but also about their rights and the legislative framework. Information about market demand is difficult and costly to obtain for smallholders (Bijman, Ton et al. 2007; ESFIM 2007a). They may get information through contacts with other actors in the commodity chain but the accuracy of this information is not certified since those actors might have "opportunistic behavior". This matter of facts reduces their ability to trade their products efficiently and get full benefit from the marketable part of their production.

### 3.5 Lack of bargaining power

Bargaining power refers to the relative capacity of different actors to obtain favorable terms from the transaction. It is strongly related to access to information, to producer distance (which implies a lack of alternatives) as well as to the perishability of the products (Moustier 1998). The bargaining power of the small producers is especially low since they have poor access to market information and limited access to financial markets which prevent them from selling their products at the most profitable period. Their lack of bargaining power may lead them to under-value their production and obtain a smaller share of the added value created in the commodity chain. Smallholders have particularly low bargaining power when they operate in long supply chains, where the specificity of the product transformation assets leads to the creation of oligopsony. In developing countries, agricultural output markets are often described as dominated by large buying firms or intermediaries (Barrett 2008; Mérel, Sexton et al. 2009).

### 3.6 Lack of human and social capital

Smallholders are often illiterate, with poor technological skills, which can be a serious obstacle in accessing useful formal institutions that disseminate technological knowledge (WorldBank 2002). Hence, farmer training continues to be a central component of strategies to reinforce the managerial, financial, and negotiating capacities of farmers and their organizations (Bosc, Eychenne et al. 2003). Social capital refers to social networks, institutions and associated norms of trust and reciprocity that underlie social relationships, and then the resources accessible to individuals because they belong to these social structures. Social capital ownership can give rise to more favorable exchange terms, transaction cost reductions, a wider range of options for coping with risks, through social networks and organizations (Brown and Ashman 1996; Robison, Siles et al. 2002). Encouraging networking and expansion of community-oriented activities may lead to changes in local social relationships as new economic opportunities arise (Bingen, Serrano et al. 2003).



The above-mentioned constraints may have a different impact on smallholders depending on their strategic activities, and notably on their linkage to agricultural output markets (Table1).

- ▶ Farmers oriented towards self-sufficiency have a limited linkage to markets that could be explained in terms of barriers to entry (lack of capital, geographical barriers). These farmers are vulnerable to production risks because of their low level of intensification (natural shocks), and this vulnerability could lead them to process of de-capitalization. Production risks can be managed by diversification strategies.
- ▶ Farmers oriented towards both food sufficiency and markets manage diversified production systems, and doing so they can lower production risks. Nonetheless, the evolving market demand toward high standard requirements may constitute new barriers to entry for these farmers due to the higher investments required. Furthermore, they may need to establish costly contractual arrangements, and growing price fluctuations may constitute a threat to them (even if mitigated by the fact that they tend to diversify their production). For the development of their linkage to markets, they may lack bargaining power and social capital.
- ▶ Market-oriented farmers are often more specialized, and thus their activity can be highly sensitive to production and marketing risks. Production risks can be lowered because their productive systems tend to be quite intensive. Furthermore, their access to markets can be constrained by the presence of other actors in the food supply, such as commercial partners or competitors: problems of lack of bargaining power and strategic barriers can happen.

Table 1. Vulnerability of farmers to markets access constraints according to their linkage to markets

	Self sufficiency oriented farmers	Surplus-producing self-sufficiency-oriented farmers	Market oriented farmers
<b>Barriers to entry</b>	High (geographical, capital)	Variable (May be high if standards apply)	Medium (strategic)
<b>Production risks</b>	Medium (when diversified system)	Medium (diversified system)	Medium/ High (when specialized system)
<b>Marketing risks</b>		Medium (diversified system)	High (specialized system)
<b>Transaction costs</b>		High	Medium
<b>Bargaining power</b>		High	Medium
<b>Lack of human and social capital</b>		High	Medium

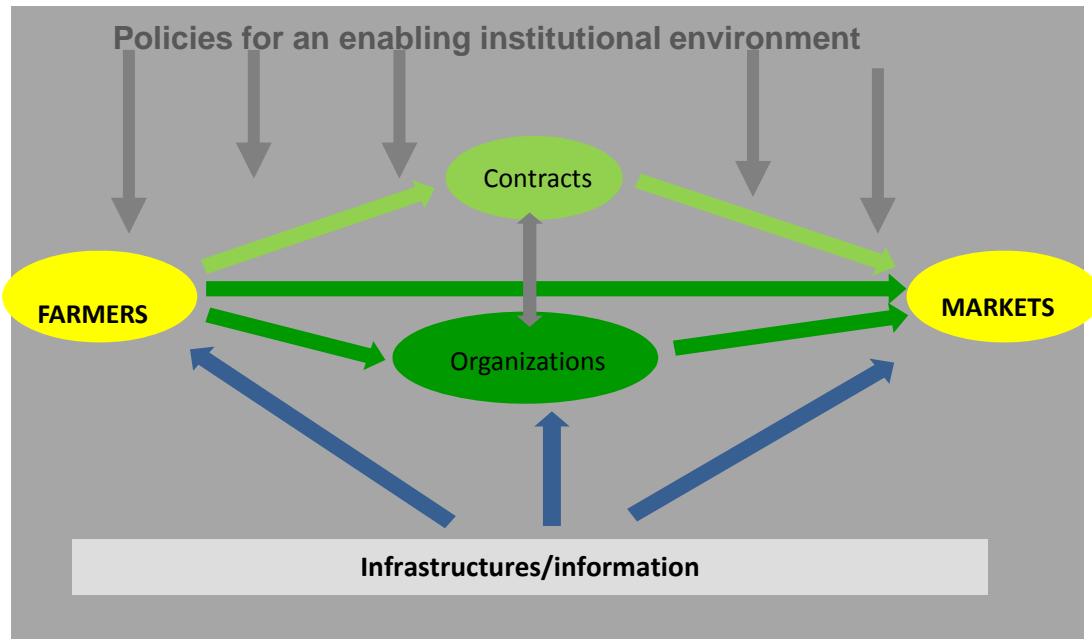
The constraints may also express themselves differently, depending on the types of markets and products. For example, export markets present many more challenges than local markets in terms of barriers to entry (quality requirements) and market risks (contract breaking up, food price variations) (Markelova and Meinzen-Dick 2009).

## 4. How to strengthen smallholders' access to agricultural markets?

The aim of this section is to present the main mechanisms mentioned in the literature to enhance smallholders' access to markets, highlighting their potential effects on the reduction of the specific constraints presented in section3. The following intervention mechanisms are addressed: farmer organizations; contractual arrangements; information and infrastructure; and enabling institutional environments (policies). These mechanisms are complementary: for smallholders to benefit from

market access, the combination of the four mechanisms is often needed (Figure 1). The existence of an enabling institutional environment corresponds to the “basics” that need to be put in place (Markelova and Meinzen-Dick 2009) for collective action and contractual arrangements to work well

Figure 1: Key factors for enhancing farmers' benefits from market linkages



#### 4.1 The central role of farmer organizations in connecting farmers to markets

In many cases, farmer organizations make it easier for the many small farmers to engage and to draw benefits from their linkages to markets. Farmer organizations can assume a large scope of activities and functions in the commodity chain, such as collection, grading, post-harvest and storage (Bosc, Eychenne et al. 2003; Perret and Mercoiret 2003; Stockbridge 2003; ESFIM 2007b; Meinzen-Dick, Markelova et al. 2009). They enable the necessary investments in terms of training, packaging, control, communication, and reputation building, which are necessary for the marketing of products with special quality (Moustier, Phan et al. 2010). Through bulk purchase or selling, they increase farmers' bargaining power. Indeed, collective marketing allows to structure a critical mass of producers making it possible to initiate or negotiate better contract with other actors. Furthermore, by organizing and rationalizing the transactions, they may play an important role in reducing transaction costs. In addition, since smallholders usually have defensive strategies with respect to the markets due to the multiple constraints they face, their involvement in farmer organizations can create the conditions for setting a collective offensive strategy to capture added value in the processing of agricultural products or to catch new market opportunities. Finally, in the current context of food price swings, farmer organizations can efficiently mitigate marketing risks, through the implementation for example of warehouse receipt systems. These systems can both permit farmers to manage price risks –delaying sales beyond the immediate post-harvest period- and to obtain finance (Onumah, Davis et al. 2007).

Nonetheless, farmer organizations face many challenges. First, large groups are likely to encompass more divergent interests (Cook 1995), and asymmetric information may lead to “free rider” problems asking for the creation of an incentive system (Olson 1965; Jaffee and Morton 1995; Ton 2010). Second, the more farmer organizations are a market orientation, the more their members' selection will be done according to strategic objectives (sub-sector specialization). Selection of members is often an essential condition for creating necessary trust among members and raising individual and collective investment levels (Cook and Iliopoulos 2000; Thorp, Stewart et al. 2005). Yet, while collective investments, such as post harvest, storage and processing facilities, decrease losses risks for all kind of commodities and may provide added value, they raise, at the same time, considerably risk-bearing costs for members. Finally, the flipside of these organizations with restrictive membership conditions can intensify differentiation

between member and non-member farmers and create new barriers to entry, turning the ownership structure into a closed shop (Lemeilleur and Codron 2011).

While, in some cases, they present some limits and paradoxical effects, support actions to farmer organizations appear to be fundamental in the reduction of market access constraints for the farmers (Faure, Maitred'hotel et al. 2010). Nonetheless, whatever the choice of interventions and approaches, some precautions should be taken into account when designing farmer organization supports. Firstly, farmer organizations support actions must be adapted to the diversity of their specificities in term of their own objectives, of their membership features (women, young, small to large farmers) and internal level of structuring and professionalization. Empirical studies led pointed out that, depending on the situations, collective marketing could be best undertaken by primary-level farmer organizations or by secondary/tertiary level structures (Bijman, Ton et al. 2007). Secondly, support to farmer organizations on the issue of market access provided by donors often results in a certain form of farmer organizations' instrumentation with the objective to implement interventions that have been designed without their participation. Farmer organizations have to be considered as full partners of the projects. Otherwise, they may get involved in activities that they cannot manage effectively or that do not contribute to achieve their strategic objectives..

## 4.2 The role of contracts in connecting the farmers to a effective market

Contractual arrangements, often labeled "contract farming", between producers and other agribusiness traders may give the following advantages to farmers: inputs and production services usually through an advance, opportunity to learn new skills and technology, and strive against price volatility and instability (Eaton and Shepherd, 2001). Moreover, contracting is fundamentally a way of allocating risk between producer and contractor –even if the allocation of risk can vary widely according to what is specified in the contract. Finally, they can be used as means to mitigate transaction costs (market research costs, screening costs) (Hoff, Braverman et al. 1993).

Concerning the new rise of public norms and private voluntary standards, contract farming –including technical advices for management specification and sometimes advances for investments- appears to be the major way for small farmers (except to be directly employed in a large agribusiness farm) to adapt quality production according to this new demand (Maertens and Swinnen 2009; Minten, Reardon et al. 2009). Contractual arrangement may thus allow farmers' access to new markets and decrease therefore barrier to entry.

Nonetheless, contractual arrangements may have some potential drawbacks for smallholder farmers: particularly when growing new crops, farmers face risks of both market failure and production problems, and non respect of commitment by the sponsoring companies (due to inefficient management, exploitation of monopoly position, corruption...). Moreover contract farming may be more likely to develop with large farmers since buyers prefer to deal with larger producers to reduce risks of supply failure and to have access to greater production volume to reduce transport and monitoring costs (Coulter, Goodland et al. 1999). This results in the likely exclusion of the smallest farmers from contract farming. Coulter, Goodland et al. (1999) argue the case for combining farmer cooperation or collective action with contract farming which relates back to section 4.1.

Since smallholders face many constraints in taking advantage of their connection to markets, farmer support actions to promote new contractual arrangements with buyers appears decisive as a way to reduce marketing risks by securing outputs access. Nevertheless, contractual arrangements relevance relies on a rigorous combined analysis of the risks of opportunistic behavior of contracting parties (Ton and Van-Der-Mheen-Sluijter 2009), production risks (production cycle length, scale of investment, input specificity) and market risks (perishability, rigidity of quality, rigidity of timing). Furthermore, to build efficiently new mode of coordination in a sustainable way entails a complex and long process, as it requires the building of a consensus among actors and effective incentive structures that reduces transaction risks and induces compliance, and implies the learning of new relationships: since actors' decisions are based on a diversity of convergent or divergent criteria according to their own interest, it is important to establish a mediation process with the objective of promoting a concerted identification and diagnosis of constraints, as well as to foster information-sharing. This mediation requires specific tools such as, for example, multi criteria analysis process, capitalizing on 'good practice' governance

mechanisms and participative research development, information dissemination, actors' capacities building in the field of policy analysis.

### 4.3 The role of information and infrastructure

Improved infrastructure is strongly associated with better functioning markets (IFAD 2011). Market-related infrastructures have some characteristics of public or collective goods, which make them difficult to develop by smallholder farmers on their own (Jaffee and Morton 1995). Thus, they are often lacking in remote rural areas where the State intervenes poorly and where local communities do not have sufficient financial nor management capacities to provide them. Different market-related infrastructures can be considered as drivers of new market opportunities for smallholders. :

- ▶ **Energy and water infrastructures.** These infrastructures may lower production and marketing risks.
- ▶ **Rural roads.** Investment in rural roads can significantly reduce barriers to entry (geographical barriers) and lower transaction costs for smallholders to access markets.
- ▶ **Transportation and market place infrastructures.** Investment in transport and wholesale market places may enhance the potential for exchanges among different producers and traders, and doing so reduce transaction costs. Yet, in some remote areas, transportation costs may be too high to permit exchange centralization via wholesale market places, and then, traditional decentralized commercial channels may be more efficient than centralized ones (Moustier 1998).
- ▶ **Information infrastructures.** These infrastructures enhance farmers' access to information on the market (price, quantity), and specific communication infrastructures may be key drivers as well. The development of new information and communication technologies is bringing a revolution in information, even in remote rural area (IFAD 2011). These technologies may reduce information asymmetries, increasing farmers' bargaining power, and greatly reduce transaction costs and risks (Giovannucci and Sheperd 2001). By increasing communication among actors, they also facilitate other types of interventions such as the establishment of new contractual arrangements. Market Information Systems corresponds to public dissemination networks that provide market information to farmers or traders who lack the economies of scale to gather such information on their own account (Chaudhury and Banerjee 2001; Galtier and Egg 2003). If these information systems have a history of being ineffective, the spread of new communication technologies makes it possible to provide real-time information (IFAD 2011). If Information and Communication Technologies have reduced cost of delivering market information, other questions arise about the type of information farmers need (not just prices but also demand from buyers) and about the institutions required to minimise counterparty performance risk so as to make bulletins on stocks for sale more relevant to buyers.

The conditions for the success of market-related infrastructures as ways to better connect smallholders to markets depends on the definition of rules setting who will be in charge of maintenance costs and management. The involvement of a large range of stakeholders (traders, producers, intermediaries) in planning decisions regarding market infrastructure, as well as the improvement of technical and management skills of market traders, shopkeepers and market manager are recommended (Albert, Henckes et al. 2001).

### 4.4 Ensuring enabling institutional environments/ policies

The institutional environment creates the context in which stakeholders interact and the conditions under which the former identified mechanisms (farmer organizations, contracts, etc) are likely to be effective. The role of the state is central in setting such an enabling institutional environment supporting the development of agricultural value chains in which smallholders can find low-risk market opportunities (IFAD 2011). This environment should be conceived not only to favour competitive market arrangements but also to foster other types of coordination characteristics that forms part of what is referred to as the "Coordinated Market Economy" (Kydd, Dorward et al. 2002).

- ▶ **Towards more competitive market arrangements.** Different types of policies can be targeted to promote efficient market coordination. First, policies to allocate and enforce property rights are seen as a prerequisite for efficient exchanges within a commodity chain (Jaffee and Morton 1995). Lack of

clear property rights limit smallholder farmer's capacities to take advantage of market opportunities, increase transaction risks and reduce incentives to invest in new technologies and assets. Second, policies aiming at regulating competition, such as anti-trust law, increase smallholder farmers' bargaining power, in situations where they would otherwise face monopolistic actors. And third, policies dealing with the establishment and enforcement of norms and standards may reduce transaction costs by increasing the available information to buyers and consumers (Jaffee and Morton 1995), even if, from a smallholder's point of view, they may at the same time increase barriers to entry.

- ▶ **Towards more dynamic non-market arrangements.** Some policies may facilitate the emergence of non-market arrangements (Kydd, Dorward et al. 2002; Stockbridge 2003), as is the case of the laws enabling the creation of cooperatives, associations, nongovernmental organizations, and inter-professional bodies (Meinzen-Dick, Markelova et al. 2009). In some countries, there is a lack of legal recognition for farmer organizations other than the cooperatives that have been widely supported by States in the past and are marginal players nowadays. Investments in non-market institutional arrangements are likely to be effective in situations of low density of economic activity (Dorward, Kydd et al. 2002) and where state power is dispersed (Hall and Soskice 2001).
- ▶ **Agricultural and macroeconomic policies.** Interventions related to the promotion of changes in the legal framework are strongly embedded with the support of agricultural and macroeconomic policies. These policies directly modify the context in which smallholder farmers operate, through the action on key variables affecting markets' structure and functioning, and thus farmers' possible connection to markets. Agricultural policies cover a large range of objectives, from infrastructure development, to agricultural services (research, credit...), to marketing and trade control. Marketing and trade policies are important for smallholders' access to markets and may correspond to many policy instruments (price administration, buffer stock management, international and regional economic integration agreements, export and import control through tariffs and non tariff measures). These policies can be crucial when dealing with food price volatility. If managed in a transparent and effective way, these policies can significantly lower marketing risks for farmers (Gérard, Alpha et al. 2010). Macroeconomic policies have a large impact on price-competitiveness of agricultural products and thus, on market opportunities for smallholders whose production is targeted towards export markets (monetary changes) or domestic markets (inflation control).

Therefore, policy design and implementation are key issues. Many difficulties can hamper policy processes in low income countries such as a lack of information and reliable statistical data, difficulties in organizing negotiation with different stakeholders, a lack of dialogue among different ministries, the existence of donors' pressure (Brinkerhoff 1997; Omano 2003). Strengthening national level structures that foster policy dialogue by the farming lobby should be considered and further encouraged, particularly in addressing the institutional, policy and regulatory constraints that stymie the development of efficient marketing systems and also limit access to them by smallholder farmers. Those statements call for the development of participatory approach and stress the importance of information sharing (Jesus and Bourgeois 2003). There is a large scope for interventions aiming at supporting policy design and implementation that encompass financing external consultancy, strengthening capacities of public and private stakeholders, supporting statistical apparatus, fostering information exchange among stakeholders, etc.

Without such an enabling institutional environment, collective marketing may not be a realistic goal for a group of smallholders (Meinzen-Dick, Markelova et al. 2009).

## 5. Conclusions: Lessons learnt and way forward

### 5.1 Lessons learnt

What are the lessons learnt from agricultural development experiences in low income countries? This section Reducing risks and costs along food value chains is critical for smallholders to benefit from their access to agricultural output markets. In this paper, we carried out an assessment of the expected outcomes of different intervention strategies on constraints limiting smallholders' access markets. This assessment is summarized in Table 2 below.

Table 2. Expected outcomes of interventions strategies on constraints limiting smallholder access to agricultural output markets

	Reduced barriers to entry	Reduced production risks and enhanced economy of scale	Reduced marketing risks	Reduced transaction costs	Enhanced bargaining power	Enhanced social and human capital
<b>Strengthen farmers' organizations</b>	Facilitating (investments )	Yes (services, volumes)	Possible (warrantage)	Facilitating (information )	Yes	Yes (human, social)
<b>Promote Contracts</b>	Yes		Possible (negotiated price)	Yes		Possible (social)
<b>Improve access to information, and infrastructure</b>	Facilitating (geographical, norms)		Yes	Yes	Yes	Facilitating (human, social)
<b>Promote enabling policies</b>	Facilitating (competition policies)	Yes (agricultural policies)	Yes (agricultural and macroeconomic policies)	Facilitating (property rights)	Yes (inter-professional bodies, organizations)	

Strengthening smallholders' capacity to participate collectively to markets is a key requirement to reduce the risks and costs associated with such participation. Contracts can help, by managing risks, to reduce transaction costs, and they can also facilitate improved access to financial services. Transportation and communication infrastructures are important to reduce transaction costs. All these mechanisms of intervention need to be part of a more global policy agenda to improve the market environment and the ability of smallholders to engage in it (IFAD 2011).

## 5.2 Towards a new research and policy agenda

We carried out an analysis of the constraints faced by smallholders to access markets and the potential solutions to enhance smallholders' benefits from such an access. These constraints are constantly changing, with the evolution of societies, and we need to strengthen our knowledge about the new sets of constraints and solutions related to smallholders' market access. In particular, two set of issues emerge as critical for further exploration: the first one is related to norms, the second one to food price volatility. Norms and standards. So far, the literature on norms and standards has not reached a consensus on the negative or positive impacts of these requirements on smallholders' market access. The empirical evidence reveals contrasting results. Some authors highlight exclusion risks for smallholders, characterized by their financial and skill constraints (Dolan & Humphrey, 2000; Berdegué et al., 2005; Graffham, Karehu, & MacGregor, 2007), while others point out upgrading strategies and higher capture of value added by smallholders (Minten et al., 2007, Swinnen et al., 2008, Henson & Jaffee, 2008). Thus, the role of norms and standards as a development driver for local economies remains an unanswered question and analysis on the institutional innovations which enable farmers to overcome the hurdles and access the differentiated markets created should be further developed. . The following specific issues should be addressed in further researches:

- ▶ **What's the long term impact of standards and norms on smallholders?** This question appeals for rigorous impact assessment methods. In particular, the analysis should focus not only on short term impact but also on the long term impact of norms and standards (dynamic modelization with time series data).

- ▶ **How is food security integrated into private voluntary standards?** While a growing recent literature has surveyed private voluntary standard governance structures and how they work in practice (Cheyns 2011; Djama, Fouilleux et al. 2011), very little is said about how these private standards integrate the dimension of food security (or could integrate it better) and how they may thus impact food security for farmers who participate in such markets.

Food price volatility. The 2007-2008 food crisis and the current food price spike brought food price volatility at the heart of political debates, and many questions deserve to be further developed

- ▶ **What's the long term impact of food price volatility on smallholders?** It is assumed that food price volatility may entail smallholders' capacity to invest because of their aversion to risks, but there is no clear empirical evidence of such a theoretical relation. Microeconomic simulations of the effect of food price volatility have been made, considering both producers and consumers strategies, but the empirical applications of such a simulation are still lacking. The current reversing of food prices trend towards higher prices reveals positive signs on supply response in low income countries, but it is still difficult to say if smallholders are better off than before the crisis (Headey and Fan 2010). Parallel to rising output prices, input and transport costs have increased, which may eat farmers' profits, and which has returned to the focal point in the lobby of farmers' organization for infrastructural investments (seeds, investment subsidies, investment credit, irrigation...). Thus, the issue on the long term impact of food price volatility on smallholders is both an important policy question and a research question.
- ▶ **What strategies should be encouraged to manage food price volatility?** Despite a consensus on the need for a price volatility regulation, we have to recognize the actual difficulty for many countries to achieve a reasonable price stability. Critical analysis of the capacity of different mechanisms to lower food price volatility should be pursued (public buffer stock, trade policies, warehouse receipt systems...). In particular, further analysis should be carried on the implementation of public-private partnerships to manage food price volatility, and on the capacity of these partnerships to manage market risks (how to guarantee the information transparency? what specific role for farmer organizations in such a partnership?). This issue is crucial because in many developing countries, the global price hikes were accentuated at the domestic level by policy failures (credible commitment problems, low predictability...).

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## Useful websites

### **Regoverning Markets**

<http://www.regoverningmarkets.org/en/global>

This collaborative research project is analysing growing concentration in the processing and retail sectors of national and regional agri-food systems and its impacts and implications for rural livelihoods and communities in middle and low income countries.

### **Empowering Smallholder Farmers In Markets (ESFIM)**

<http://www.esfim.org/>

The ESFIM program initiated a round of participatory National Workshops with farmer organisations and other stakeholders in eleven countries to define the issues that are key for improving market access of smallholders in each country and where the NFO intends to influence the related policies and institutions. Based on these priorities, a process of collaborative research has been defined in eleven countries

### **IFAD, Rural Poverty Report 2011**

<http://www.ifad.org/>

### **All ACP Agricultural Commodities Programme (AACPACP)**

<http://www.euacpcommodities.eu/en/presentation>

It is as an initiative of the European Commission and the ACP Secretariat. Its overall objective is to improve incomes and livelihoods for ACP producers of traditional and other agricultural commodities, and to reduce income vulnerability at both producer and macro levels. Specifically, it seeks to strengthen the capacity of ACP stakeholders all along the commodity value chain to develop and implement sustainable commodity strategies.

### **IFPRI, Policy Brief (CAPRI project)**

[http://www.ifpri.org/sites/default/files/publications/polbrief\\_06.pdf](http://www.ifpri.org/sites/default/files/publications/polbrief_06.pdf)

### **The World Bank**

<http://vle.worldbank.org/bnpp/files/Linking%20African%20smallholders%20to%20high.pdf>

This paper provides the results of an international survey of practitioners with experience in facilitating the participation of African smallholder farmers in supply chains for higher-value and/or differentiated agricultural products. It explores their perceptions about the constraints inhibiting and the impacts associated with this supply chain participation. It also examines their perceptions about the factors affecting the success of project and policy interventions in this area, about how this success is and should be measured, and about the appropriate roles for national governments, the private sector, and development assistance entities in facilitating smallholder gains in this area. The results confirm a growing 'consensus' about institutional roles, yet suggest some ambiguity regarding the impacts of smallholder participation in higher-value supply chains and the appropriateness of the indicators most commonly used to gauge such impacts. The results also suggest a need to strengthen knowledge about both the 'old' and 'new' sets of constraints (and solutions) related to remunerative smallholder inclusion, in the form of the rising role of standards alongside more long-standing concerns about infrastructure and logistical links to markets.



## CASE STUDIES

This breakout session has been organized and coordinated by  
**AGRINATURA**

## Case Study: Costa Rica

### Contract farming and standards for a better market integration

By Sáenz-Segura F (CINPE), Le Coq FJF (CIRAD), Mora R (CINPE)

#### 1. Introduction

Integration to domestic and international markets is crucial for medium and small-sized producers in emerging economies. This market integration is determined by several endogenous and exogenous conditions with respect to producers themselves, which yields different levels of success within a specific sector. Transaction costs, price uncertainty, and lack of confidence along the agri-chain are some of the structural problems that hinder a better integration. The agricultural policy over the past 20 years has been strongly biased toward the promotion of export-oriented cash crops, with little attention giving to important food crops for the Costa Rican population (rice, beans, horticulture). In the long term, food security in Costa Rica may be endangered by transaction costs and lack of a real public policy in this matter, while the country may progressively depend on the import of partially or totally processed food.

Contract farming and the implementation of grades and standards (G&S) are two important instruments aimed to gain a better market integration. Contract farming has been mentioned in the literature as an instrument to considerably reduce transaction costs, and provide a better institutional environment for integration of small and medium-sized producers into the market. On the other hand, G & S becomes an important complement of contracts for compliance of several clue issues, such as regularity and confidence on extrinsic products' characteristics (bio-security, environmental effects), and improvement of social conditions at primary production level. Under certain conditions, both instruments can be part of a successful strategy to integrate producers into dynamic chains and assure sustainable production. Nevertheless, synergies and competition between contract and G&S strategy has been poorly documented

#### .2. Objective of the action

In this presentation we analyze two different agri-chains with different market orientations: chayote for both domestic and international markets; and pineapple oriented toward international market. In the first case, G&S are less developed than in the second case, while in both cases they manage verbal procurement contracts. Moreover, both sectors are subject of low public regulation. With an historical perspective, we analyze the level and configuration of market integration in each case and the role

played by contracts and G&S in the sustainability of this integration. We focus on successful experiences and points out policy recommendations.

### 3. Implementation process

For a successful implementation of both instruments, producers would require certain stable market relationship with a export/processing buyer, where flows of information regarding product specification goes from the buyer to the producer, while in the opposite direction the produce is delivered according the quality conditions (G&S), at the required volume and timing (contracts). A successful contractual relationship should be a “play of two”, where the transference of risk, rights and obligations would conduct to a stable market integration.

### 4. Key points of success

- ▶ Technical assistance provided by the buyer is the most successful mechanism to assure the right information goes to produces and monitor compliance of contracts and G&S. Important issues here are to gain maximum product coordination and avoid producers' default.
- ▶ Successful contracts should function as provider of insurance and incentives to producer, which in turn should yield effects in terms of equity (access to markets), and efficiency and sustainability of the market relationship.
- ▶ Attitude, transparency, frequency and loyalty are key important issues to sustain a contractual relationship between two parties.

### 5. Conclusions and lessons learned from the experience

Because of low bargaining power, producers do not directly participate in the design of contract schemes and G&S, which usually takes place at middle and final stages in the agri-chain (export companies in case of contracts and supermarkets in case of G&S). If small and medium-sized producers are usually considered as price takers, we can say they are also “market conditions takers”. Contractual systems are important for providing security, incentives and information to producers. These functions yield certain effects on producers' decisions regarding resource allocation and supply chain integration. G&S are proven to be important for accessing international dynamic markets and enforce already existing environmental and social legislation. Nevertheless, both instruments require continuous revision and policy support to make them more efficient, effective, and manageable by small and medium-sized producers.

## Case Study: Kenya

### ESFIM study on government interventions in inputs and output markets: a case of maize seed, fertilizer and maize grain<sup>i</sup>

By Gatwiri Daphne (KENFAP)

#### 1. Introduction

In an effort to increase food production to ensure food security, the Government of Kenya launched the National Accelerated Agricultural Inputs Access Programme (NAAIAP). The Programme targeted resource poor smallholder farmers and included the delivery of package of farm inputs to the farmers. The package delivered to every selected farmer consisted of maize seed (10kg), fertilizer (50 kg of DAP and CAN) and pesticide (1 kg of *Bulldog*). The total value of the package ranged between the equivalent of US\$72 (Kenya Shillings 5,600) and US\$100 (Kenya Shillings 7,500), depending on the region in Kenya.

#### 2. Objective of the action

Kenya National Federation Agricultural Producers (KENFAP) is the umbrella farmers' organisation in Kenya with membership of over 1.8 million family farmers spread all over the country, predominantly smallholder farmers. In its endeavour to empower farmers, KENFAP carried out a study to review the impact of the NAAIAP programme one year after its launch. This study was undertaken as part of the "Empowering Smallholder Farmers in Markets" (ESFIM) Project which is jointly funded by the International Fund for Agricultural Development (IFAD) and the Dutch Government. Its implementation involves collaboration between AGRINATURA (a consortium of European research and education institutions) and national farmers' organisations in 11 developing countries, including KENFAP. A sample of 350 respondents drawn from 34,140 farmers who benefited from the package were interviewed. These beneficiaries were reached by KENFAP Services Ltd (KSL) which was competitively appointed distributor to deliver the package to target farmers through its rural network of farm input shops.

#### 3. Implementation process

Preliminary results from the study indicate that government subsidies on fertilizer and certified seeds helped reduce the cost of production for beneficiaries. However, other important production costs were unaffected and remained very high. For instance, cost of land preparation, planting and weeding remained high. Post-harvest costs such as the cost of transporting grains to the market and compliance with quality standards in the formal markets as well as local taxes continued to rise or at best remained constant. Hence, the overall impact of the subsidies on farmers' production cost was

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<sup>i</sup> This piece is extracted from reports produced by the Kenya National Federation of Agricultural Producers (KENFAP)



rather marginal. The study further reveals that interventions in inputs markets trigger need for more private sector involvement and sub sector players to improve output markets.

#### 4. Key points of success

Many of the beneficiaries reported significant increase in grain output. However, they did not report commensurate increase in household income. This is attributed to inefficiencies in the grain marketing system in Kenya, as in many other African countries, which makes it difficult for farmers to optimize gains from sale of staple grains. Due to lack of efficient on-farm storage facilities as well as acute household liquidity constraints, most smallholder farmers are compelled to sell during the harvest season, often below production cost. In part to address this problem and also stabilize grain prices the Government of Kenya continues to offer a minimum guaranteed price for maize, which farmers can obtain if they sell to the state-owned National Cereal Produce Board (NCPB). However, most farmers report delays in payment when they sell to NCPB, leaving them no option but to sell to traders offering very low prices during the harvest season. Consequently, the potential gains from increase in output and lower production cost is lost to farmers as a result of marketing problems. Hence, efforts to promote sustained increase in grain output through improving access to affordable inputs need to be complemented by policies and investments to enhance the efficiency of the grain marketing system.

#### 5. Lessons learned

The emerging conclusions are to be validated during a stakeholder workshop planned for March 2011. The outcome will provide the evidence basis for policy advocacy by KENFAP and other farmers' organizations as well as representatives of private sector in Kenya.

## **Case Study: Vietnam**

### **Hoavang sticky rice case**

#### **Linking the poor to high-end market**

**By Pham Thi Hanh Tho (CASRAD), Dao The Anh (CASRAD),  
Paule Moustier (CIRAD)**

#### **1. Introduction**

With a 13.1 percent poverty rate, An Phu is one of the poorest commune in Kinh Mon district, Hai Duong province, red river Delta in Vietnam. In this commune, farmers rely on plantation in which sticky rice accounts for 25 percent of total rice income. For the poor, rice income play an important role contributing up 60 percent of total income. The income from sticky rice is higher than from ordinary rice for the same unit of land. However, in the market, “hoavang sticky rice is not well recognized by consumers as it is mixed with common sticky rice and as no quality sign permits to differentiate marketed product. As a result, “Hoavang sticky rice” is not paid higher,. Thus, farmers are not interested in investing in Hoavang sticky rice: the area for sticky rice being grown fell from 5 percent of land being allocated by the cooperative to the rural households to only 1-3 percent of land, due to degraded quality and productivity.

Although it is not clearly recognized by the consumers, its reputation has been perceived by experienced consumers who have an increasing demand of consuming “authentic” Hoavang sticky rice. The authenticity of the product differentiates Hoavang sticky rice from any other as by its good flavor, especially after cooking, glutinous and glossy. The city consumers are willing to pay higher prices for it, around 20 percent more with adequate criteria of shape, shine and aroma

#### **2. Objective of the action**

Understanding constraints and opportunity of Hoavang sticky rice, in the framework of Superchain project funded by IFAD and CIRAD, implemented by Markets and agriculture linkages for cities in Asia (Malica) consortium in the period of 2007-2009, Hoavang has been chosen for research and development. The main aim of the project was to link farmers to high quality market channels, creating high quality chain to improve their income and become the sustainable livelihood source for the poor. To achieve the goal, the project has had a comprehensive process of research-based interventions. Many outcomes and impacts have been appreciated by beneficiaries and local authorities as well as the value chain stakeholders.

### 3. Implementation process

Diverse changes could be observed from technical, marketing and institutional aspects. Hoavang sticky rice is now produced by an association in Kinh Mon district (with 131 founding members in 2008 and 253 members in 2009), replacing individual production with internal quality control by applying the same production protocol (including food safety). Product is sold in collective brand and packed by that association. Through the association, paddy price is 5 to 10% higher than market price.

### 4. Key points of success

That changes market situation of Hoavang sticky rice, a local specialty, well aware by stakeholders, buyers in high-end market have procured and built strong relationship with the association to get “higher quality product” at differentiated price. Potential buyers have been more and more increased such as supermarket, special food shops. Especially, farmers through association, the new form of production organization have been taken the role of processor and distributor final product directly consumers. That improves horizontal relationship of farmers, becoming the foundation for building vertical relationship with other potential stakeholders developing written contract replacing to verbal contract currently. Impacts on community have been perceived by the local authority as hoavang sticky rice become “a local industry” in that rural area.

### 5. Lessons learned

The case could be seen as a successful case linking the poor smallholders to quality market.

## Case Study: West Africa

### Warehouse receipt systems and smallholders' market access. A review of experiences

Matiéyédoú KONLAMBIGUE (AGRA Ghana)

#### 1. Introduction

Despite of the contribution of agriculture in the economic development of many West African countries, financial institutions are reluctant to finance the agricultural production. This sector is considered highly risky due to the climatic hazard, its relatively low profitability and the risk of economic coordination along the value chains. This situation calls for alternative innovative mechanisms that will secure both the intervention of financial institutions and farmer's income.

#### 2. Objective of the action

This case study aims to review relevant experiences of warehouse receipt systems in West Africa. The methodology has combined a desk review and field visits in Burkina Faso, Mali and Togo to discuss with key stakeholders involved in various experiences. These visits were completed by e-mail and phone discussions with resource persons in Niger and other countries.

#### 3. Implementation process

This review revealed that almost all experiences available in the region refer to more or less formalized institutional arrangements between farmers, their organizations and microfinance institutions, in absence of independent warehouse operator and legal and regulatory framework, called "warrantage".

In general farmers do not have access to credit and inputs for staples food crops. At the end of the cropping season, farmers have difficulties to meet household need and to pay the agricultural production debts. This time coincides also with the harvest, and farmers do not have choice to sell off their produce. This huge quantity of produce into the market leads to a drop in the price. Four to six months later, many of those farmers will buy the same produce at high price. The warrantage system allows farmers to deposit cereals in the farmer's group's warehouse and use it as collateral to get loan from the financial institution at the harvest. The loan is used to buy agricultural inputs for the next season, invest into other economic activities and the household consumption. This system has improved the access to inputs and then has contributed to increase the productivity and production. The access to credit has permitted many farmers to store their cereals for the household consumption and/or to organize the collective sale when prices are high. Nowadays, in many cases, the cereals stored are surplus and are sold collectively to repay the loan. Used genuinely for food security purpose where farmers withdraw cereals for the home consumption after the repayment of the loan, today the there is a trend to use the warehouse receipt system for a collective sale.

#### 4. Key points of success

This system constitutes a collateral instrument to access credit. It has contributed to increase the amount of credit to farmers, to improve the marketing of produce and to improve of the food security through a better access to inputs and technologies. However, the scaling-out of this system is curbed by the lack of adequate warehouses, the lack of financial resources at MFI level, the low involvement of commercial banks and the absence of organizational structure toward a collective sale and marketing within farmers' organizations that exposed them more to market risks.

#### 5. Lessons learned

While the warrantage is interesting at village levels and need to be supported, it is important to promote also a structured warehouse receipt systems with an independents warehouse operators and appropriate documents in order to attract commercial banks and processors. To achieve that, the establishment and enforcement of simple and cheap regulatory and legal framework is indispensable.

## Case Study: Tanzania

### ECO LABELING

By Jacob Maiseli

#### 1. Introduction

The major driving forces for eco labeling of the Nile perch in Tanzania are a concern for the sustainability of the fisheries resources, reduction of impacts to the environment and dealing with international trade barriers.

#### 2. Objectives:

To enhance ecological, social and economic sustainability of the fisher communities.

Enhancement of responsible fishing.

To alleviate poverty.

Improve community livelihood.

#### 3. Implementation process:

Attending the Nairobi KENYA meeting, Introductory project initiation meeting and first planning workshop in Bukoba Tanzania, Formation of an ICS Team, Identification of project area and key players, Baseline survey, First SRT meeting and starting implementation of project plans.

#### 4. Key points of success:

1. Eight project field stations were established,
2. More than twenty community welfare projects were established and implemented,
3. Community livelihood in the project area is relatively better than those outside the project area,
4. Fishing is done responsibly as per Naturland Standards for wild fisheries and Tanzania national standards.
5. The fishery / Nile perch of the eco label project area was eco label certified in 2009,
6. Ecolabeled products are exported to Europe,
7. A community development TRUST has been established to fund community projects.

#### 5. Conclusions and lessons learnt:

The project has a very positive impact to all beneficiaries and players and is a pilot example of a well managed and sustainable fishery. Lessons learnt from this pilot project on the western part of Lake Victoria have resulted into the lake-wide up-scaling of eco labeling to the eastern part of Lake Victoria, Tanzania. Four industrial fish processing companies are in the process of preparing for eco label certification.