# A SCOPING STUDY ON THE FUNCTIONING OF COMMODITY MARKETS

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# Acronyms

| | |
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| ACP | Africa, Caribbean and Pacific |
| Anacafe | Guatemala Coffee Association |
| AoA | Agreement on Agriculture |
| CAL | Cocoa Association of London |
| CBOT | Chicago Board of Trade |
| CDC | Commonwealth Development Corporation |
| CFC | Common Fund for Commodities |
| CMC | Cocoa Marketing Company |
| COCOBOD | Ghana Cocoa Board |
| CPHP | Crop Post Harvest Programme |
| CTOR | Cocoa Take Over Receipts |
| DFID | Department for International Development |
| EU | European Union |
| FAO | Food and Agricultural Organisation |
| FEDECOCAGUA | Federation of Coffee Co-operatives, Guatemala |
| FELDA | Federal Land Development Authority |
| FFB | Fresh Fruit Bunches |
| FNC | Colombian Coffee Federation |
| GMO | Genetically modified organisms |
| ICAFE | Costa Rica Coffee Association |
| IFC | International Finance Corporation |
| JVC | Joint Venture Company |
| KACE | Kenya Agricultural Commodity Exchange |
| KBL | Kenya Breweries Limited |
| KLCE | Kuala Lumpur Commodities Exchange |
| KTDA | Kenya Tea Development Authority |
| LDC's | Less developed countries |
| LIFFE | London International Financial Futures Exchange |
| MNC | Multi National Company. |
| NGO | Non Government Organisation |
| NRI | National Resources Institute |
| NYCSC | New York Coffee, Sugar and Cocoa Exchange |
| OPIC | Oil Palm Industry Council, Papua New Guinea |
| PNG | Papua New Guinea |
| QCD | Quality Control Department, Ghana Cocoa Board |
| SLTSDA | Sri Lanka Tea Development Authority |
| TSP | Tea Sourcing Partnership |
| UK | United Kingdom |
| UNCTAD | United Nations Conference on Trade and Development |
| WTO | World Trade Organization |

# Executive Summary

Commodity production, whether for export or for domestic and subsistence consumption, plays a dominant role in sustaining the livelihoods of many millions of small producers throughout the developing world, as well as greatly influencing the incomes received by intermediaries, processors and governments. Over the past fifteen years, the liberalisation of commodity markets in many countries has had a major impact on smallholder operations and created many new challenges. While market liberalisation and the associated new international policy environment has created many opportunities for commodity sector participants, the price and financial risks have increased and new systems are needed to reduce the severe constraints to smallholder development and improve their livelihoods. Extensive research has shown that in many countries there is still relatively little understanding of the new marketing conditions and problems faced by smallholder commodity producers and intermediaries. The major objectives of this scoping study are:

(a) to identify the opportunities and constraints created by the liberalisation and globalisation of commodity markets, particularly for the smallholder sector (Part 1);
(b) to provide an initial assessment of possible options and solutions to overcome these marketing constraints within the current international policy environment and thus improve the functioning of markets (Part 2);
(c) to outline areas and strategies for possible future work aimed at improving the functioning of markets in favour of smallholders and, thus, improving their livelihoods.

**Part 1: The Impact of Liberalisation and Globalisation on the Functioning of Markets**

"Globalisation" and "liberalisation" have had a dramatic impact on the functioning of markets over the past two decades. Following a discussion of the meaning of these two terms, an assessment is made of their positive and negative impacts on small farmers in developing countries. The issues are complex and the range of experiences is diverse. Nevertheless, the belief is that the process of globalisation is irreversible and that, on balance, liberalisation and free trade have been of benefit to developing countries. Moreover, the belief is that in order to achieve the economic growth and foreign investment necessary to overcome poverty, developing countries need to become more integrated into the world economy. The challenge is how to make the process more sustainable and equitable, and governments and donors have a vital role to play in this process.

***Positive Impacts***

Globalisation and liberalisation make it necessary for farmers to adopt a more commercial approach in pursuing market opportunities. Market liberalisation of the agricultural sector predominantly favours producers who have comparative advantages (i.e. natural resources, skills, and capital) that allow them to compete in both international and domestic markets. Considerable opportunities for raising agricultural productivity and output and improving smallholder livelihoods have been created. Alongside efficiency and redistributional effects, the change in price signals has led to longer-term changes to physical and human capital formation. Some of the more readily observable consequences of market reforms include an increased producer's share of the price received often encouraging a more positive supply response.

Several trends in the global economy could work in favour of small farmers including:
- increased capital flows and foreign direct investments to developing world
- improvements in international transport and communications

- marketing and processing costs have fallen and there has been some growth in small-scale trade and processing.
- a wider range of products are coming onto the market and consumers are benefiting from lower prices and efficiency gains.

*Negative Impacts*

Monopoly marketing and service provision helped to provide smallholders with stable prices and access to various inputs, including credit. However, it was often at a substantial cost with a high degree of inefficiency. Market reforms have subjected smallholders to:
- increased price uncertainty and volatility which has created difficulties as regards planting decisions, the ability to purchase inputs and to obtain credit.
- increased competitiveness both for producers selling to international markets and for local producers of staple foods competing against growing and cheaper imports;
- for some commodities, there is a shift from smallholder production to estate and plantation production.
- access to inputs (e.g. seeds, chemicals and fertilisers) has often become more difficult as input distribution has passed from the public to the private sector and subsidies have been reduced or ended. This has invariably raised prices and the lack of affordability has either constrained usage or effectively reduced the grower income received.
- access to finance has become more difficult as parastatals have withdrawn their services; in theory the private sector should have taken over this function but high transaction costs, a lack of collateral as well as high risks (real and perceived) has limited their ability to fill this gap;
- reduced government expenditure has led to a deterioration of physical and institutional infrastructure which in turn has increased smallholders production and marketing costs;
- polarisation has intensified within communities and within regions and countries; the ending of pan-territorial pricing has meant relatively lower prices and reduced access to input and output markets.
- the quality of produce has tended to decline as quality control systems and extension service provision has been cut back.
- market liberalisation has shifted risk along the marketing chain away from parastatals. towards traders and producers. The risk of contract default has increased and commodities are increasingly sold for prompt or nearby shipment.
- many of the risks and constraints faced by smallholders, as well as their outcomes, are interrelated.

Globalisation and liberalisation are not sufficient conditions in themselves to improve the well being of small farmers. Success is dependent on a number of other factors being in place or being developed e.g. possession of requisite human, financial, social, economic, political and physical assets; a supporting public policy and infrastructure; political stability and legal frameworks; lack of non-tariff barriers etc. Smallholders need to develop a reputation for good quality and build up supply volumes but a balance needs to be struck between specialisation and diversification in order to generate sufficient marketable surplus production without creating undue risk.

**Part 2 Options and Strategies to Improve Market Functioning for Smallholders**

Part 2 identifies and assesses some possible strategic options and solutions to overcome these constraints and improve the functioning of markets. In discussing various strategies, a distinction is drawn between commodities grown primarily for export and those grown for subsistence and the domestic market. The various strategies proposed include:

### *The role of farmer organisations*

The importance of smallholders organising themselves into groups with sufficient "critical mass" to generate economic power cannot be over-emphasised as a *sine qua non* to the solving of the major marketing constraints to development. The grouping should be on the basis of addressing specific marketing problems rather than along the lines of "all purpose co-operatives" which have often gained a reputation for corruption and inefficiency. Issues such as access to credit, collection and bulking of crops and price negotiation and processing/adding value are marketing matters that can be effectively addressed by groups of smallholders rather than on an individual basis. Examples are provided to illustrate how smallholders can organise themselves into sufficiently large groups to improve the livelihoods of individual members. These include smallholders, producers of tea (Sri Lanka), oil palm (PNG) and coffee (Guatemala),

### *Managing risk*

Price risks have increased along the marketing chain and there are two key factors involved in devising a risk management strategy. First the development of a system that will facilitate access to price risk management instruments and, second, the choice of acceptable instruments to be used. Possible instruments to reduce risks include forward selling, the use of futures and options contracts, warehouse receipt financing and the use of price fixing formulas. Solutions are likely to vary between countries and commodities but some general points can be learnt from experience, including the need to revise administrative regulations and controls, as well as taxation, to enable the use of risk management instruments; the need to strengthen appropriate producer and trader-based institutions. Also, experience shows that considerable caution is required in devising the appropriate structures and the allocation of powers and responsibilities within them, in order to avoid bureaucratic and political domination of such associations.

If systems for providing risk management to smallholders can be found, these systems can relatively easily be extended to the provision of credit, thus helping to overcome this key constraint facing smallholders. Several mechanisms have been identified to provide credit, including warehouse receipts, contract farming and pre-export financing. The development of such receivable-backed lending systems has several prerequisites, including an enabling legal and regulatory environment, as well as the existence of institutions to perform effective licensing and inspection functions.

### *Futures and options markets*

The traditional method of managing commodity price risk is the use of hedging instruments on international futures and options exchanges. Producers are able to protect their forward sales prices while traders and end users can protect their prices and the value of their inventories. Increasingly, options rather than futures are being used, in part because options can protect the downside risk without eliminating the potential for profit on the upside. Although price risk management is of great importance to developing countries access to hedging instruments has tended to be restricted to market participants from developed countries. Where hedging has been carried out successfully it has tended to be operated by international trading companies with local branches and legal access to offshore US dollar finance. Key impediments limiting the use of hedging instruments in developing countries include the lack of foreign exchange, poor creditworthiness, a lack of critical mass and technical and managerial skills.

*Domestic and regional commodity exchanges*

The development of domestic and regional commodity futures exchanges has been mooted as an opportunity to enable developing countries to hedge against price risks without involving the transaction costs and foreign exchange implications of the international markets.

*Warehouse receipt financing*

Smallholder access to credit is limited for several reasons including an unsupportive policy environment; reluctance by banks and other financial institutions to lend the agricultural sector, in part because of the perceived risks and lack of collateral; and a lack of critical mass amongst smallholders. Recent research indicates that warehouse receipt financing (inventory credit) using commodity-based collateral can be used to access rural credit. While warehouse receipt financing, primarily by offshore lenders, has existed for many years to ease the cash flow constraints of commodity exporters, it has so far had limited use in financing, procuring and storage of durable agricultural products in the domestic sectors.

*Price fixing formulas / contract farming and outgrowers schemes*

*Price fixing formulas*: Small-scale farmers in a free market often find it difficult to obtain a fair price relative to its international value in exportable form, in part because of the limited marketing options and a lack of knowledge. In some instances price fixing formulas based on the elements of value determination have been introduced to ensure that farmers not only receive a fair price for their product but that they receive payment regularly and on time. Such formulas enable markets to function more efficiently and could be extended to cover price risk management through hedging.

*Outgrower schemes* can involve smallholders supplying raw materials to a processing operations on a plantation or centralised factories and some have been in existence for several decades and have often involved land settlement schemes. Additionally, outgrower schemes can involve the supply of produce such as fresh vegetables and flowers ultimately destined for export. The price the smallholder receives is often based on an agreed price fixing formula and such schemes, if fairly devised, can help the functioning of markets to the benefit of the farmer.

*Capacity building and improving infrastructure*

A whole range of capacity building improvements are possible, including strengthening local entrepreneurial and management skills, improving financial institutions and access to credit, developing trade analysis capacity and export promotion centres, improving the collection and dissemination of information needed by market participants. Agricultural research and extension services need to be improved and become focussed more on commercial and post-harvest issues. In addition, there is a need for more investment in traditional crops. More assistance needs to be given to capacity building at the international level, particularly with regard to trade negotiations, the implementation of trade rules and protection of intellectual property rights.

Other solutions include improving infrastructure to help lower transaction costs and improve marketing activities particularly in the fields of telecommunications, transportation, roads, market assembly facilities and ports and airports. Smallholder marketing can be helped by improvements in scientific and administrative capabilities, in part to deal with food standards, plant and animal health inspections, and quality controls. Despite their recent downsizing, agricultural research and extension services still have a vital future role to play. In the past, they have tended to be biased towards technical and production aspects but with market reforms they need to focus more on commercial and post-harvest issues.

### *Quality improvement*

The abolition of parastatals often weakened quality control systems, which combined with fierce competition amongst traders to obtain products of any quality, led to a deterioration of quality (and price). Meanwhile quality controls and phyto-sanitary regulations are becoming increasingly important. Therefore, efforts need to be made to improve quality control through extension, training, the provision of equipment and the development of effective regulatory authorities. Some large private agribusiness enterprises are increasingly providing such services, which not only ensures supplies of acceptable quality but also assist the farmer to obtain both inputs and improved prices.

### *Diversification*

Diversification and/or inter-cropping strategies are not panaceas for coping with uncertain price trends, although they can provide some level of comfort. Inter-cropping, particularly with perennial crops, helps to spread the risk while diversification strategies, particularly when applied to annual crops, plays a vital role in the livelihoods and food security of many poor people. A balance needs to be struck between diversification and specialisation since the latter is required for efficient production and marketing systems. The main problem attached to inter-cropping is the difficulty of identifying suitable alternative crops and the dilemma over reduced overall yields and returns over the longer term.

### *Market information provision*

The ending of fixed pan-territorial producer prices means that both smallholders and growers face much greater price volatility and uncertainly. In order to increase the efficiency of their marketing operations both need to considerably improve their access to market information in order to increase market transparency, reduce risk, and improve their negotiating position and ultimately to lower transaction costs. A wide range of data is needed on prices, quantities, quality premiums and discounts, transport costs, fob, cif and futures prices, trade contacts and technical data. Access to such data would improve market functioning and facilitate smallholders' transition into a liberalised marketing system. For each country, region and commodity there needs to be developed systems that facilitate the collection and timely dissemination of appropriate market information to smallholders as well as traders. These data can be supplied through regular (daily) bulletins in newspapers and on radio, as well as through new institutional communication arrangements and techniques that are being developed (e.g. mobile phones, Internet and e-commerce).

### *National and international policy measures*

Alongside micro level strategies, policy measures at the national and international level can be adopted which improve the functioning of markets to the benefit of smallholders. Some examples include:

- the adoption of policies in industrialised countries that do not distort smallholders competitiveness e.g. a reduction of producer and export subsidies in the EU, Japan and the USA; limits on food aid donations
- stronger and more equitable international institutions should be created, such as the WTO

- developing countries should adopt macro-economic policies that reflect economic realities and do not distort economic activities (e.g. policies to enhance regional and cross-border trade) and improve economic governance to attract investment
- trade policy should be viewed within a wider development context; trade liberalisation alone will not help the poor as the low take up of Lome provisions illustrated. To exploit the benefits of trade, poor countries need better economic governance and reforms to attract investment as well as better trade opportunities.

**Part 3: Proposals for Future Research Topics**

The Table included in Part 3 (see pages 31-33) provides a summary of the role and contribution of strategic options to improving market functioning for smallholders, examples of applications worldwide, and proposed case studies aimed at replication, adoption and improvement in other developing countries.

Part 3 outlines nine proposals for future research for improving the functioning of markets, namely:

A. Capacity building for farmers marketing groups in the western region of Kenya.
B. The potential of futures and options contracts as a smallholder hedging medium for coffee producers
C. Price fixing formulas
D. The development of domestic and regional commodity exchanges
E. Improving market efficiency in the Côte d'Ivoire cocoa and coffee sectors
F. Development of best practices in accessing agricultural markets and services
G. Liberalising the external marketing of cocoa in Ghana: financing and quality control issues
H. Improving marketing systems through the development of contract farming and outgrower schemes
I. Improving systems of quality control under liberalised marketing regimes

In addition to these, there are a number of other possible case studies that would be worthy of future research, including value added – toll processing; crop diversification; ethical trading/fair trading; and the pros and cons of put options.

# Introduction

Commodity production, whether for export or for domestic and subsistence consumption, plays a dominant role in sustaining the livelihoods of many millions of small producers throughout the Third World, as well as greatly influencing the incomes received by intermediaries, processors and governments in these countries. Over the past fifteen years, the liberalisation of commodity markets in many countries has had a major impact on smallholder operations and created many new challenges. While market liberalisation and the associated new international policy environment has created many opportunities for commodity sector participants, the price and financial risks have increased and new systems are needed to reduce the severe constraints to smallholder development and improve their livelihoods.

These needs have been recognised in a recent DFID's Target Strategy Paper (TSP) on Economic Well-being (1999). This consultation paper listed eight priorities for actions, which included:

> No 1: "Make markets work better for the poor" (paras 4.11-4.12), which focuses specifically on market functioning;
> No 6 "Create an international policy environment that maximises growth opportunities for poor countries" (paras 4.20-4.21); which includes international trade policy, domestic reform and assistance to developing countries to take advantage of trade opportunities;
> No 8: "Reduce the impact of shocks, including conflict, on the poorest countries" (paras 4.25-4.27); which refers to the reliance of poor people on export crops, and suffering shocks from global price fluctuations (and, based on a view on past history, largely discounts measures to stabilise global markets).

Extensive research on smallholder market access, post liberalisation, has shown that in many countries there is still relatively little understanding of the new marketing conditions and problems faced by smallholder commodity producers and intermediaries.[1] In the light of these deficiencies and the priorities discussed earlier, the major objectives of this scoping study are:

> First, to identify the impact of increased price volatility and uncertainty and other key marketing constraints faced by smallholder producers of both export and staple commodities. Part 1 of this study describes how the liberalisation and globalisation of commodity markets during the 1980's and 1990's have created both opportunities for market participants and constraints to development, particularly for the smallholder sector.
>
> Second, undertake an initial assessment of some possible options and solutions to overcome these marketing constraints within the current international policy environment – this forms Part 2 of the study.
>
> Third, it is intended that more detailed work is undertaken on the strategies, options and approaches prioritised in the previous two parts. The third part of this report provides some suggested topics and case studies aimed at improving the functioning of markets in favour of smallholders. Such strategies would assist in poverty reduction and empowerment of smallholders and, thus improve their livelihoods.

[1] For example, various research has been carried out under the DFID Crop Post Harvest Programme (CPHP)

This scoping review is based on a combination of the existing practical and theoretical knowledge of the two authors in the marketing of commodities in developing countries, alongside a review of the expanding literature, as well as discussions with key individuals and organisations involved in commodity marketing and risk management.

The main beneficiaries of this further work would be smallholder producers and intermediaries involved in the production and trading of a range of commodities produced both for the domestic and export markets. In addition, it is anticipated that DFID and other donor agency policy-making capacity would benefit from the study's findings.

# Part 1: The Impact of Liberalisation and Globalisation on the Functioning of Markets

### 1.1 Introduction

This part reviews some of the positive and negative impacts that globalisation and liberalisation can have on small farmers in developing countries. The issues are complex and the range of experiences between countries, regions, commodities and individuals is diverse. For example, major opportunities have been created to increase incomes through export-led growth and the benefits of expanded international trade of goods and services, as well as improved access to new ideas, technologies and institutional designs. However, there has often been a downside in terms of increased risks and greater economic and social instability at both the micro and macro levels. These can have a profound impact on the livelihoods of small farmers, a large proportion of whom are already very poor. It is important to remember that most of the world's poor live in rural and peri-urban areas where agriculture is a key source of income, consumption and growth.

Two key developments, which have had a dramatic impact on the functioning of markets over the past two decades, can be loosely grouped under the headings of "globalisation" and "liberalisation". Globalisation has been defined as "the process of integration in product markets and financial markets" (Collier, 1997, p1), while UNCTAD defined it as "a process whereby producers and investors increasingly behave as if the world economy consisted of a single market and production area with regional or national subsectors, rather than a set of national economies linked by trade and investment flows."

It can be argued that the move towards a global economy, where national boundaries no longer matter, has been underway for several centuries and reaching a peak prior to World War 1. However, the current revolution taking place in communications technology, combined with the increasingly important role of the multinational corporation, make the scale and impact of globalisation much greater than previously. Whole areas of activity are becoming increasingly globalised e.g., production, trade in goods and services, finance, labour markets, information and communication, social and cultural aspects. At the beginning of the 21st century, many millions of small-scale farmers in developing countries produce for the global market[2].

These developments have been compounded by the outcomes of the Uruguay Round. This was the most ambitious trade pact ever and involved 19 new agreements, the most notable of which established the World Trade Organization in 1995. Alongside the establishment of a dispute settlement mechanism, many different aspects of international trade are covered including agriculture, services, intellectual property rights, sanitary and phyto-sanitary standards, import licensing, investment, government procurement, technical barriers, pre-shipment inspection, rules of origin, subsidies and countervailing measures, textiles and increasingly environmental and GMO issues. The most contentious issue under the Uruguay Round (and almost certainly in any possible future Rounds) was the Agreement on Agriculture (AoA), which was eventually signed despite considerable opposition. In spite of increasing market liberalisation, agriculture continues to be the most protected area of the world economy with most countries supporting the sector through various policies including the subsidising of production and exports as well as restrictions on

[2] There are still many millions of poor people in developing countries that are only tangentially affected by globalisation and liberalisation.

imports. The AoA has made markets more transparent through the "tariffication" of barriers and through reducing producer and export subsidies.

Nevertheless, the barriers facing agricultural exports from developing countries to industrialised countries are still considerable. In industrialised countries, (especially the major markets of the EU, USA and Japan); there are strong protectionist policies, which undermine the ability of developing countries to compete in sectors where they have a natural comparative advantage (e.g. sugar, rice, grains, meat, footwear, leather goods, and various Mediterranean products). Further reforms of European Union policies, including the Common Agricultural Policy and the relationship between the EU and ACP countries can present small farmers with both new opportunities (e.g. increased market access) as well as greater risks (e.g. a reduction in preferences and increased competition from other origins). Similarly, food aid unless well-targeted, can have a devastating impact on the agricultural sector while non-tariff barriers (e.g. phyto-sanitary and minimum residue regulations) can severely restrict some agricultural exports, such as labour intensive horticultural produce and seafood.

The UK Government's view (as propounded by Clare Short, 1999) is that globalisation is irreversible and to achieve the economic growth and foreign investment necessary to overcome poverty, developing countries need to be integrated into world markets. Protectionism does not benefit the poor. It is argued that, on balance, liberalisation and free trade have been of benefit to developing countries by enabling them to increase their exports and provide access to industrialised country markets. The challenge is to try to make the process more equitable and sustainable. National governments and international donors have a vital role to play in achieving these aims both in terms of negotiating international agreements that provide the framework for globalisation as well as adopting a range of policies and strategies that can achieve these goals.

Alongside the changes in the global economy there has been a sea change in how agricultural products are produced, marketed and financed in poor countries. In many poor countries, over the past two decades, a series of reforms have been implemented which have had a profound impact on the agriculture sector and its various stakeholders whether they are small farmers, traders, institutions or governments. Invariably these reforms have been crisis driven and adopted through pressure from international donor agencies; moreover, there have been frequent policy reversals. The liberalisation process has taken a variety of forms but the result has been a greater reliance on the functioning of markets to direct the allocation of resources. State-controlled agricultural production and marketing bodies have been replaced by more liberalised production and marketing environments. Public sector activities in terms of production, marketing and input provision have been reduced considerably. Fixed pan-territorial producer prices have ended while input supplies, whether in the form of seeds, fertiliser or chemicals are now provided by the private sector. Trade has been liberalised leading to the removal or reduction of both tariff and non-tariff barriers and to changes in the structure of trade. Imports of both inputs and competing foodstuffs have been liberalised leading to greater competition for domestic producers alongside lower food costs for consumers.

### 1.2 Positive Impacts

Globalisation and liberalisation of trade and agricultural services provision has created considerable opportunities for raising agricultural productivity and output and improving the livelihoods of smallholders. Alongside the efficiency and redistribution effects on the agricultural sector, the change in price signals has led to longer-term changes to physical and human capital formation.

This is often difficult to quantify at the present time since the full impact and consequences of the changes occur over the longer term (and are influenced by a range of additional factors). In the shorter term it is only possible to concentrate on the more readily observed consequences of market reforms. These include the impact on prices received by growers, their supply response, private sector activities and institutions as well as financing implications.

Globalisation and liberalisation of agricultural trade predominantly favours agricultural producers who have comparative advantages (i.e. natural resources, skills, and capital) that allow them to compete in international markets. The most commonly cited benefit of liberalisation is the increased share of the price received by producers. This is due to more efficient marketing chains following the abolition of parastatal marketing boards, an increased involvement of the private sector, and the removal of export taxation. There are many examples of export crop producers throughout Africa and the developing world (e.g. coffee, cocoa and cotton) that have substantially increased their share of the fob export price. However, export unit values may have declined as a result of reduced quality and increased supplies. In addition, the ending of pan-territorial producer prices has meant that producers in the more remote areas receive lower prices than producers in more accessible areas. The increased prices received by growers have often encouraged a positive supply response, although this has not always been the case. In part, the lack of a positive response may be because of other influences such as drought or because of a country or region's relatively weak comparative advantage compared with other producers, arising from such factors as climate, ecology, poor communications infrastructure and lack of capital.

There are several trends in the global economy that could work in favour of small farmers in developing countries. For example:

Capital flows and foreign direct investments are no longer restricted to North-South flows but increasingly take place within the developing world. This calls for adequate regulation and appropriate investment codes protecting both investors and small-scale players in the countries concerned.

Improvements in international transport (sea, air and road links) bring small-scale producers closer to the global market. Obviously, transport costs will invariably face fluctuating fuel prices, but the trend in recent decades has been that freight capacities have increased continuously alongside technological improvements. This enables exporters to bring larger quantities of better quality produce in a shorter time-span onto retailers' shelves in industrialised countries.

Those involved in the trade in agricultural commodities are embracing the global revolution in information technology. E-mail, internet and mobile phones are increasingly replacing the less reliable and slower means of communication such as mail, fax, and printed trade literature. Although resource-poor farmers may not be able to directly benefit from new information technology, they are bound to benefit from the improved flow of knowledge. More efficient trading practices are being adopted while research and extension services have better access to internationally held knowledge, information and databases.

Other positive outcomes include:

Marketing and processing costs have fallen and there has been some growth in small-scale trade and processing.

A wider range of products has come onto the market (e.g. less refined and cheaper grades of maize).

Consumers are benefiting from lower prices and efficiency gains.

### 1.3 Negative Impacts

Monopoly marketing and service provision helped to provide smallholders with stable prices and access to various inputs, including credit. However, it was often at a substantial cost with a high degree of inefficiency. While liberalisation has invariably increased the share of the export unit price received by small farmers it has made them and various intermediaries much more vulnerable to world price volatility. However, price risk is only one of several risks faced by smallholders and other market participants. There are production risks, arising from climatic changes and disease; unknown input qualities, the lack of liquidity with which to buy inputs and poor management. On the marketing side, there are risks with regard to price, quality and quantity caused by price volatility, the long term deterioration in the terms of trade for primary producers, demand variations, low liquidity among buyers, and a lack of competition among customers, leading to performance risk as well as price risk.

However, many small farmers are unaware of the wider nature of globalisation and liberalisation processes that are underway. Their perceptions are limited to the more immediate impact in terms of greater price uncertainty and volatility with the ending of fixed producer's prices and subsidised inputs as well as new marketing and financial channels involving private sector organisations. The impact of these changes depends on the extent to which small farmers are capable of reacting to the new challenges they face.

***Increased price risk and volatility***

The ending of fixed producer prices has created greater price uncertainty for farmers and has lead to international price volatility impacting directly onto the domestic market, in part because of the lowering of stock levels. For example, during the 1990s monthly coffee price volatility averaged over 9% - higher than the monthly average in the previous two decades (Common Fund for Commodities, 2000). The degree to which liberalisation/globalisation has affected price volatility is still being debated. It was argued that more open import policies and reduced export subsidies would improve the supply response to international price changes – but this downplayed the key role played by carry-over stocks, which often fell sharply following policy reforms and could serve to increase price volatility.[3] Indeed one could argue that liberalisation by leading to a reduction in the level of publicly-owned stocks, which were not fully replaced by privately owned stocks has helped to intensify price volatility. As policies adjust to the new trading environment, prices are likely to remain unstable; in part because of lower overall stock levels following liberalisation. But, markets are becoming more resilient to price volatility in part because of the faster response to production and demand shocks. Nevertheless, price volatility does create difficulties for farmers as regards planting decisions, the ability to purchase inputs and to obtain credit.
Smallholders always have a "long" position in a commodity from the time that a decision to plant is implemented. Therefore, the smallholder must seek to obtain a price for his crop at least equal to,

[3] The FAO has conducted a preliminary assessment of the impact of the Uruguay Round on agricultural markets which suggests that overall there is little evidence of any significant change in world price instability, either year-to-year or within the year. However, prices volatility varied widely between commodities, a sizeable proportion of which had little to do with the impact of the Uruguay Round (FAO 1999).

and preferably in excess of, his cost of production plus the minimum necessary to sustain his livelihood. Therefore, market price volatility and uncertainty has a major impact on smallholder sustainable livelihoods and development.

Prior to the liberalisation of markets the smallholder tended to be protected against adverse international commodity price movements through government intervention such as guaranteed minimum price schemes, and occasionally through international commodity agreements. Liberalisation has exposed smallholders to both the upside and downside of price volatility, which in the worst case scenario will result in returns to the grower being less than the cost of production. In this situation, alternative strategies are usually limited in the short to medium term because, particularly, for perennial crops such as coffee, tea, cocoa, oil palm, coconuts and rubber, supply is relatively inelastic. The nature of these crops does not permit rapid reaction to negative price movements in the short to medium term. To a lesser extent, the same situation prevails, in the shorter term, for annual crops such as grains, pulses.

The major smallholder issue resulting from price volatility and uncertainty is the threat to livelihoods.

***Increased competitiveness***

African producers of export crops are facing growing competitive pressures from Latin American and Asian producers. At the same time, local producers of staple foods, especially cereals, have to compete against growing and cheaper imports from countries where substantial economies of scale can be achieved (e.g. North America, Argentina, Brazil, Australia, parts of E and W Europe and Asia). This has already happened for some time in some parts of the developing world (e.g. West African imports of rice). In particular, imports can play a significant role in coastal regions where local transport requirements are minimal. At the same time, landlocked regions that are currently protected by prohibitively high transport costs may continue to depend largely on regional trade networks for the foreseeable future (e.g. Mali, Zambia).

Small-scale farmers that lack comparative advantages are coming under increasing pressure in export markets. For example, small-scale African farmers who were able to establish niche markets (e.g. horticultural produce from Kenya and Zimbabwe) are facing increased competition from Latin American and Asian countries, which, overall, are better endowed with production factors. Policy changes, such as amendments to protective preferential tariff exemptions in favour of LDC's (e.g. the replacement of the longstanding Lome ACP-EU arrangements) and the reduction of international transport costs are contributing to this pressure.

For some commodities, there is a shift from smallholder production to estate and plantation production, both within countries and within the developing world as a whole. For example, small-scale banana, palm oil and horticultural producers are facing intense competition from expanding larger scale plantation-type operations.

***Access to inputs***

The use of inputs (e.g. seeds, chemicals and fertilisers) varies widely between commodities and countries. Prior to liberalisation the importation and distribution of inputs was often in the hands of parastatals, and often heavily subsidised. With liberalisation, input distribution has passed from the public to the private sector and subsidies have been reduced or ended. This has invariably raised prices and constrained usage, in some cases very considerably, prompting a reversion to lower input-output systems.

### *Access to finance*

In developing economies farmers and in particular small farmers face a perennial problem in gaining access to credit, due to their lack of meaningful collateral acceptable to financial institutions. Pre harvest credit is required by farmers for the purchase of agricultural inputs such as seed, fertilisers, pesticides, packaging materials and tools etc. Post harvest credit is required to ease cash flow constraints, assist in the timing of sales and generally accelerate agricultural development. The provision of credit to smallholders is an issue of major importance to the maintenance of livelihoods, income generation, and the future development of the agriculture sector in developing countries.

Prior to liberalisation credit was usually supplied to smallholders, particularly to purchase pre harvest inputs, by the public sector through agricultural marketing boards and similar organisations. Following liberalisation government intervention in the agricultural sector in many developing countries was severely curtailed with the closure of many long established marketing boards, resulting in the withdrawal of services to the smallholder such as the provision of credit. It was felt that the private sector would fill the gap in the provision of pre and post harvest credit to the sector, however, in the existing policy environment, progress in this area has been slow.

Liberalisation has created difficulties in accessing financial services, largely because of the high transaction costs and the lack of collateral as well as high risks (real or perceived), both for small farmers and financial services providers. The lack of grower organisations, coupled with insecure land tenure rights and the consequent denial of access to affordable credit, is probably the major constraint facing the smallholder sector. The lack of alternative employment and income opportunities for many small farmers helps to intensify these problems.

Many of the risks and constraints faced by smallholders, as well as their outcomes, are interrelated. Thus, the lack of liquidity is a very serious problem for many producers and intermediaries; while the development of better-organised and more competitive credit and savings institutions would help to reduce this problem, these institutions would still face several different risks when providing credit. Weather, disease and price volatility all increase the risk of default, regardless of the liquidity of the credit market. The higher default risk would be reflected in higher interest rates. However, if small farmers, traders and lenders had less price uncertainly this would help to decrease the risk of default. If lower price uncertainty is reflected in lower interest rates, then smallholders might be able to buy better quality inputs on a more timely basis, and produce larger quantities of a higher quality product. This would improve their revenues, and lessen the performance risk faced by the lender.

### ***Risk management and trading strategies***

Prior to liberalisation it was possible for parastatal marketing organisations to sell forward some export commodities, such as coffee and cocoa. This facilitated the fixing of a producer price as well as the obtaining of credit. Market liberalisation has shifted risk along the marketing chain away from parastatals towards traders and producers. This has increased the risk of contract default, and as a result commodities are increasingly sold for prompt or nearby shipment. With greater price uncertainty, there is an increased reluctance to advance loans. With increased competition in the marketing chain and greater default risk, not only has the level of pre-finance to traders and producers declined but also foreign companies handle an increasing proportion of the crop. The latter tend to have better access to finance as well as better market contacts and risk management techniques. This can make it difficult for local enterprises to compete.

***Polarisation***

Polarisation has intensified both within communities (as some producers are more successful than others) and within regions and countries (where remoteness and the ending of pan-territorial pricing has meant relatively lower prices and reduced access to input and output markets). Globalisation is likely to accentuate this polarisation between those included in the process and those excluded.

***Infrastructure***

"Market reforms have led to considerable emphasis on creating an enabling environment for private enterprise - particularly stressing the export sector. However, physical and institutional infrastructure is also important. Rural roads, telecommunications, functioning cold chains, and airport or port facilities are essential components of the physical infrastructure required to sustain or develop agricultural trade. High internal transport costs (considerably higher than in other continents) are a serious impediment to African exports. " (Coote et al 2000)

In many African countries there has been a marked deterioration in infrastructure as Structural Adjustment Programmes have led governments to reduce expenditure in an effort to balance budgets. Poor communication and transport links increase farmers production and marketing costs not only by reducing the availability of inputs and services but also by making it much more difficult for them to market their produce.

***Quality deterioration***

Government intervention in the agricultural sector included extension services to smallholders. Post - harvest control and inspection services, particularly relative to the achievement of international quality standards for export crops were usually provided by marketing boards and their closure has resulted in declining quality standards, leading to poorer prices. In addition to export quality control, government also provided extension services to farmers to assist with the maintenance of quality generally. With the general deterioration of quality control internally, an increasing proportion of the costs associated with maintaining quality (e.g., drying, grading, sorting, and packaging) have had to be borne by the export trade.

The identification of smallholder strategies and options to improve and maintain higher quality products to ensure marketability and the best available prices is an important issue resulting from liberalisation.

### 1.4 Some Preliminary Conclusions

"In summing up it is important to stress that few developing countries are likely to see major short-run benefits from international trade liberalisation. The economic principles on which these global trends in policy are based depend on long-term processes of specialisation, development in areas of comparative advantage, and capacity building. In the short run there may be some success stories – but sustainable growth in export and domestic sectors is only likely to come from a well-rounded long-term process of economic and social capacity-building." (Coote et al 2000 p.72)

"These policy reforms have done little or nothing to alleviate structural, supply side weaknesses and the high risks and transaction costs which the private sector (in Africa) faces as a result of these structural inadequacies" (Jaffee & Morton, 1995).

Globalisation and liberalisation are not sufficient conditions in themselves to improve the well being of small farmers. Success is dependent on a number of other factors being in place or being developed e.g. possession of requisite natural, human, financial, social, economic, political and physical assets; a supporting public policy and infrastructure; political stability and legal frameworks; lack of non-tariff barriers etc.

Market liberalisation makes it necessary for farmers to adopt a more commercial approach in pursuing market opportunities. In particular, they need to develop a reputation for good quality and build up supply volumes, so as to attract traders. A balance needs to be struck between specialisation and diversification in order to generate sufficient marketable surplus production without creating undue risk for smallholders. Political stability and legal protection for contractual arrangements are also vital components of success. Investors require a minimum of security in order to commit themselves, especially in remoter parts of the country. Decentralisation offers a chance for hitherto disadvantaged districts, but planning and implementation capacity, funding, accountability and community participation need to be improved at local government level. Poor roads and inadequate means of transportation are key constraints to market access and sources of high transport costs in remote areas. Road maintenance is often lacking due to institutional, technical and funding constraints. Lack of information is another constraint often faced by small farmers, in part because of poor communications infrastructure. Rural finance, research and extension services have a facilitating role to play in improving access to marketing opportunities, particularly in remote areas. A functioning credit system is a necessary condition for an efficient marketing system.

# Part 2: Options and Strategies to Improve Market Functioning for Smallholders

## 2.1 Introduction

Part 1 summarised some of the major marketing problems and constraints faced by smallholders. This part of the study seeks to identify and assess some possible strategic options and solutions to overcome these constraints and improve the functioning of markets. The topics reviewed included the role of farmer organisations, the management of risk, the use of futures and options markets, the establishment of domestic and regional commodity exchanges, warehouse receipt financing, the development of price fixing formulas, contract farming and outgrower schemes, quality improvement, crop diversification, provision of marketing information capacity building and improvements in infrastructure. In discussing various strategies, a distinction is drawn between commodities grown primarily for export and those grown for subsistence and the domestic market. For case study purposes, coffee, tea, cocoa and oil palm are used as export crop examples and grains as domestic crop examples.

## 2.2 Smallholder Options and Strategies for Coping with Marketing Constraints

### *Farmers organisations*

Smallholder farmers are at the bottom of the marketing chain and by definition have little or no control over the price that they receive for their produce. It seems axiomatic that a smallholder, by virtue of his size and lack of economic "muscle", will always be a" price taker" subject to the marketing decisions taken by those further along the marketing chain. Therefore, any attempt to eliminate or alleviate the marketing constraints mentioned in Part 1 seem doomed to failure unless smallholders can organise themselves into sufficient "critical mass" to generate economic power.

Invariably market reforms have led to a significant shift in political power to the private sector. However, it is often traders and processors organisations, rather than farmers groups that have been the major beneficiaries and have a greater influence on government policies. Farmers should be encouraged to organise so as to reduce their constraints to market access as well as input supplies. Care should be taken to avoid past mistakes in co-operative building and close attention should be paid to farmers' capabilities and needs. Market integration and linkage building are important. Contract farming and outgrower schemes can overcome some of the constraints related to agricultural service supply. NGOs may have a role to play in getting farmers to take the initiative in improving the commodity chains.

The organisation of smallholders into groups should result in the development of sufficient economic power to enable constraints to marketing to be addressed in an effective manner. It is suggested that grouping should be on the basis of addressing specific marketing problems rather than along the lines of "all purpose co-operatives" which have, in many instances in developing countries, gained a reputation for corruption and inefficiency. Issues such as access to credit, collection and bulking of crops and price negotiation and processing/adding value are marketing matters that can be effectively addressed by groups of smallholders rather than on an individual basis.

The following examples illustrate how smallholders can organise themselves into sufficiently large groups to improve the livelihoods of individual members.

- ***Tea smallholders in Sri Lanka*:** Smallholder growers now account for over 50% of the green leaf used in the processing of Sri Lanka's annual black tea crop of over around 280,000 tonnes. The tea smallholder sector consists of over 200,000 farming families, the majority of which work farms of between 1 and 5 hectares. Under the auspices of the Tea Smallholders Development Authority, a public sector organisation, smallholders have been encouraged to form themselves into "Societies" primarily to address marketing problems connected with the quality and transport of green leaf to private tea factories and price negotiation. Prices in the context of Sri Lanka smallholder tea are governed by a price fixing formula related to Colombo tea auction prices. The Tea Societies range in size from 30 members to 1000 members, with very modest objectives such as the joint purchase of a vehicle to transport green leaf to more ambitious aims involving "toll' processing leading to eventual group factory ownership. The growth of the tea society movement over the past five years has been considered a success as it has inculcated the smallholder with a sense that she/he can improve her/his situation by combining with others for specific goals.

- ***Oil palm smallholders in Papua New Guinea*:** Oil palm smallholders account for around 40% of the fresh fruit bunches (FFB) used in processing PNG's annual production of about 300,000 tonnes of palm oil. Under the auspices of the Oil Palm Industry Corporation of PNG (OPIC), a public sector organisation, smallholders are encouraged to organise themselves into groups to address problems of agricultural inputs, FFB quality, and payment terms under a price fixing formula under which FFB is sold to milling companies. The price fixing formula is calculated from a basis of CIF Rotterdam palm oil values, reported on a regular basis The government is gradually withdrawing from the provision of services to oil palm smallholders, therefore, the formation of groups to safeguard growers' interests has become more important.

- ***Coffee smallholders in Guatemala*:** Coffee in Central America is primarily a smallholder crop and the formation of groups has been a feature of the sector for many years. Typically, small co-operatives will combine to obtain credit, processing facilities, quality control/marketing services and in certain circumstances, price fluctuation protection through hedging on appropriate futures markets. An example of such an organisation is FEDECOCAGUA (Federation of Coffee Co-operatives of Guatemala), which organises credit facilities and processing/ marketing services for its sixty members who produce some 10,000 tonnes of green coffee per annum.

The importance of smallholders organising themselves into groups cannot be over-emphasised as a *sine qua non* to the solving of the major marketing constraints to development.

### *Managing risk*

As discussed in Part1, liberalisation has invariably increased price risks along the marketing chain but how are these risks allocated and what efficient and effective measures are available to smallholders and other market participants to deal with them? A major objective of Part 2 is to identify gaps in dealing with price risks and propose solutions for handling them. There are two key factors involved in devising a risk management strategy. First, the development of a system that will facilitate access to price risk management instruments, which inevitably involves the development and/or strengthening of institutions. Second, there is the choice of instruments to be used, which must be acceptable within the current international policy environment. In practice, the main form of price risk management employed by smallholders is forward selling, which they do in return for seasonal credit, which is often used to pay debts and pay school fees before the harvest is collected. However, more sophisticated methods for credit provision and reducing price uncertainty are being developed. Possible other instruments that could be used to help reduce the increased price and financial risks faced by growers and intermediaries include the use of futures and options contracts, warehouse receipt financing and the use of price fixing formulas. These options are discussed in the following parts.

While solutions are likely to vary between countries and commodities some general points can be learnt from experience. Such points are likely to include the need to revise administrative regulations and controls, as well as taxation, to enable the use of risk management instruments by the private sector. In addition, there is the likely need to strengthen appropriate producer and trader-based institutions not only to facilitate the aggregation of price risk but also to help overcome the lack of capital, as well as know-how and education. Producer and trader organisations vary in their technical, financial and managerial capacity. Strengthening these associations in order to ensure they have the necessary skills in storage, marketing, risk management, finance and business development is a challenge that the international community needs to face. There is also the question as to the extent of direct smallholder involvement in these schemes, or are they just indirect beneficiaries?

While the need to develop such catalytic structures and institutions may not be in doubt, previous experience shows that considerable caution is required in devising the appropriate structures and the allocation of powers and responsibilities within them, in order to avoid bureaucratic and political domination of such associations.

If systems for providing risk management to smallholders can be found, these systems can relatively easily be extended to the provision of credit, thus helping to overcome this key constraint facing smallholders. Thus, if producer and trade associations can provide rules and create mechanisms to facilitate price risk management, these same mechanisms could also help overcome financing constraints. Several mechanisms have been identified to provide credit, including warehouse receipts, contract farming and pre-export financing. The development of such receivable-backed lending systems has several prerequisites, among which are an enabling legal and regulatory environment, which ensures proper contract execution and arbitration procedures, as well as the existence of institutions (either public or private) that could perform effective licensing and inspection functions.

***Futures and options markets***

The traditional method of managing price risk in the commodity trade has been through the use of hedging instruments on international futures and options exchanges. Through the medium of hedging, producers have been able to protect their forward commodity sales prices and end users have been able to protect the value of their inventories by the establishment of short or long positions on futures exchanges. Additionally, international trading companies have also been able to minimise risks and add liquidity to the markets through hedging by the use of futures and options. Increasingly, options rather than futures are being used as a hedging tool on the premise that, for producers, certain types of options theoretically can protect the downside risk without eliminating the potential for profit on the upside. The converse being the case for end users of commodities. However, easy access to hedging tools has tended to be restricted to market participants in the developed world, whereas the importance and value of price risk management is of equal importance to developing countries, particularly those heavily dependent on commodity exports.

The key impediments to the use of futures and options markets by developing countries are:

- ***Foreign exchange considerations:*** The inability in many developing countries to operate in US dollars due to both the lack of available foreign exchange and restrictive foreign exchange regulations.
- ***Poor creditworthiness:*** The sums involved in operating on the futures markets, to meet deposit and margin call requirements, can be very large and "open ended". Options tend to require lesser, finite amounts.
- ***Critical mass:*** Hedging to manage price volatility and uncertainty is a technical and sophisticated business tool. The management skills required to operate are often not available in developing countries.

The potential of using hedging instruments has been examined in developing countries by governments, institutions (commodity marketing boards/trade associations) and private traders/exporters. However, in practice where hedging has been carried out successfully it has tended to be operated by international trading companies with local branches and legal access to offshore US dollar finance. This situation is particularly common in the coffee and cocoa trade.

As previously mentioned, smallholders, whilst being sellers of the physical commodity, do not have the economic power to be more than a spot seller does. In the current policy environment, and notwithstanding the key constraint of foreign exchange availability, smallholders, in contrast to large estate producers, can only become the beneficiaries of hedging through intermediaries.

***Domestic and regional commodity exchanges***

The development of domestic and regional commodity futures exchanges has been mooted as an opportunity to enable developing countries to hedge against price risks without involving the transaction costs and foreign exchange implications of the international markets.

The KLCE is an example of a successful domestic exchange, with contracts denominated in local currency, geared to the domestic hedging requirements of the local Malaysian oil palm growers and palm oil refiners and exporters.

***Warehouse receipt financing***

Access to credit in the agribusiness sector is somewhat limited for the following reasons:

- The policy environment in which warehouse receipt financing must operate may be unsupportive to private trade (see comments below).
- Banks and other financial institutions are reluctant to lend to the agribusiness sector, which they perceive as being high-risk business.
- Small-scale farmers do not have the critical mass required to take advantage of warehouse receipt financing systems. In the current policy environment warehouse receipt finance cannot assist directly in satisfying farmers' pre season requirements for credit to purchase inputs

Nevertheless, the use of warehouse receipts/inventory credit is an option that is growing. The availability of a well- regulated system of warehouse receipts benefits primarily traders, exporters and processors rather than smallholders. Nevertheless, warehouse receipt financing systems can help combat poverty and promote rural employment by permitting access to lower cost credit to those who tend to be excluded from the formal credit sector. Access to credit has been a perennial problem for the agricultural sector in developing countries, whether for the domestic or export markets, mainly because of the lack of meaningful collateral acceptable to financial institutions. Furthermore, since the 1980's the liberalisation of agricultural markets in many developing and transition economies has intensified these problems.

There are many well-established methods of financing trade in the agribusiness sector in developing countries. All secured credit requires the provision of adequate and reliable collateral by the borrower to the lender. The inability to provide such collateral in developing countries has resulted in a general shortage of trade and production credit and in particular a shortage of rural credit. This situation has proved a considerable barrier to improving farm incomes, productivity, and the expansion of trade in foreign exchange earning export commodities.

Research in recent years has indicated that the use of warehouse receipt financing, (also known as inventory credit), using commodity based collateral can provide solutions to the problem of access to rural credit in developing countries. Warehouse receipt financing, primarily by offshore lenders, has been in existence for many years as a method of easing the cash flow constraints of commodity exporters and expanding the volume of trade. However, this methodology may also be used in financing the procurement and storage of durable agricultural products in the domestic food and feed crop sectors and the above comments have application to both the export and domestic trade.

An illustration of how warehouse receipt financing systems could improve the efficient functioning of markets is provided by the maize sector in Western Kenya. This region comprises approximately one third of the country's agriculturally productive land and accounts for approximately 64% of its production of grains and legumes, which are sold, primarily, into the domestic market. Production is dominated by small-scale farmers with average holdings of 2.5 hectares per household of 8 to 10 persons. Some 80% of the region's population are employed in the agricultural sector and about 75% of agricultural work carried out is by women. The region was, in the pre-independence era, an area of European colonial settlement and consequently a number of large commercial farms, well in excess of 100 hectares, are still in existence and either in the ownership of the original settler families or under the control of the government, through, primarily, the Kenya Agricultural Development Corporation. It is estimated that at least 12,000 workers are employed on large-scale farms. However, the current trend is for larger farms to be sub-divided and given to squatters and other small-scale farmers.

Since the liberalisation of the Kenya grain market in the early 1990's the small-scale farmers of the Western Region of Kenya have had to operate in a free market environment. The marketing role of the National Cereals and Produce Board (NCPB) has changed from a buyer of grain from farmers at guaranteed minimum prices to a trader for profit in competition with the private sector. Prices now fluctuate widely in response to seasonal and sometimes political factors and small-scale farmers are unprepared for this new reality. A lack of marketing knowledge and information together with inadequate financial resources and the failure to act collectively for marketing purposes have placed small-scale farmers at a severe disadvantage in endeavouring to maximise returns from their production. This disadvantageous marketing situation manifests itself, particularly, in an inability to sell crops at times of seasonal high prices and in unacceptable levels of product loss due to inappropriate and inadequate on farm storage. Additionally, since liberalisation, farmers have experienced difficulties in accessing credit for the supply of pre harvest agricultural inputs, which coupled with poor sales returns has resulted in declining grain production and increasing rural poverty through the inability to sustain livelihoods.

The World Bank is currently conducting a feasibility study specifically to address marketing problems in the region, particularly in the context of the inability of small-scale farmers to access credit. The project is entitled "A feasibility study on the development of a warehouse receipt system for small-scale farmers in the grain sector of the Western Region of Kenya." The project seeks to enhance marketing efficiency by improving access to credit for storage and marketing, the reduction of involuntary on- farm post harvest storage and the reduction of the costs and trader margins involved in grain trading.

***Price fixing formulas / contract farming and outgrowers schemes***

- ***Price fixing formulas***: Smallholder producers of export crops are at the bottom of the marketing chain and have limited options in marketing their produce in a manner which will ensure the receipt of a fair price relative to its value on the international market. Certainly, before liberalisation, the price share of small-scale farmers was often lower than export values would suggest. Ad hoc sales to small - scale local traders tend to put the smallholder at a disadvantage as lack of knowledge and market information often results in the payment of low prices relative to the true value of the commodity. This disadvantageous situation is compounded when the crop requires further processing, grading and sorting to render it suitable for export.

  Small-scale farmers in a free market find it difficult to assess the value of their product and consequently obtain a fair price relative to its international value in exportable form. Therefore from the smallholders perspective it is doubtful that markets function efficiently and fairly.

  In some instances price fixing formulas based on the elements of value determination have been introduced to ensure that farmers receive a fair price for their product relative to internationally traded levels. Additionally, price fixing formulas ensure that farmers receive payment regularly and on time. Theoretically advance payment is also possible. Specific examples have been noted in the Sri Lankan tea industry and the Papua New Guinea oil palm and copra industry. In the case of oil palm, millers hedge their forward production although the results of these operations are not factored into the price fixing formula. Such formulas tend to be proposed by the owners of processing facilities and monitored by the relevant government department such as the Ministry of Agriculture.

  Price fixing formulas can be advantageous to farmers to enable markets to function efficiently and could possibly be extended to cover price risk management through hedging and introduced to the benefit of farmers where they do not exist.

- ***Outgrower schemes:*** Outgrower schemes involving the establishment of a nucleus estate and factory surrounded by smallholder growers supplying agricultural raw materials to the processing facility have been in existence in developing countries for over thirty years and have often involved land settlement schemes. Such schemes are also common in fresh produce commercial operations.
  The price the farmer receives for his produce is often based on an agreed price fixing formula and such schemes, if fairly devised, can help the functioning of markets to the benefit of the farmer

*Capacity building*

Capacity building includes strengthening local entrepreneurial and management skills, improving financial institutions and access to credit, developing trade analysis capacity and export promotion centres, improving the collection and dissemination of information needed by market participants. Agricultural research and extension services have tended to be downsized as part of government expenditure cutbacks. Nevertheless, they have a vital role to play. In the past, they have tended to be biased towards technical and production aspects but with market reforms they need to focus more on commercial and post-harvest issues. In addition, there is a need for more investment in traditional crops, which play a vital role in the livelihoods of many poor people, especially in the remoter areas.

Also, more assistance needs to be given to capacity building at the international level. For example, countries should be better able to manage trade negotiations and implement trade rules. In particular, the capacity of developing countries in interpreting WTO and related treaties and measures urgently needs strengthening. This is particularly true of a country's ability to protect its plant varieties under TRIPS (Agreement on Trade-Related Aspects of Intellectual Property Rights). While initiatives in this direction have already been undertaken a lot more needs to be done to establish efficient and sustainable institutions.

*Improving infrastructure*

Improving infrastructure to help lower transaction costs and a whole range of infrastructural improvements to improve marketing activities are possible in the fields of telecommunications, transportation, roads, market assembly facilities and ports and airports. In addition, smallholder marketing can be assisted by improvements to the countries scientific and administrative capabilities to deal with importing country regulations with regard to food standards, plant and animal health inspections, and quality controls.

*Quality improvement through private sector agricultural extension*

The abolition of parastatals often weakened quality control systems, which when combined with fierce competition among traders to obtain products of any quality, led to a deterioration of quality (and price). Efforts should be made to improve quality control through training, the provision of equipment and the development of effective regulatory authorities. Sanitary and phyto-sanitary regulations are becoming increasingly important in markets where small-scale producers from developing countries have an advantage (e.g. labour intensive horticultural produce, seafood, etc.)

Large private sector companies involved in agribusiness enterprises and/or sourcing raw materials from the "South" are increasingly providing agricultural extension services to their suppliers in the developing countries. The provision of such services assists the company to secure regular supplies of the required commodity at acceptable quality and assists the farmer to obtain both agricultural inputs and improved prices. The following examples have been noted:

- Nestle coffee in the Philippines, Thailand and Mexico.
- Unilever: oil palm in Ghana
- CDC: oil palm in Papua New Guinea.

### *Diversification*

Diversification into alternative crops and/or inter-cropping has often been proposed as a strategy to cope with long term price declines to levels where continued production is uneconomic. Inter-cropping can spread the risk on the assumption that two or more unrelated markets are not usually depressed at the same time. Diversification strategies can be successful, particularly when applied to annual crops, and intercropping has proved popular for a number of perennial crops. Diversification plays a vital role in the livelihoods and food security of many poor people, especially in the remoter areas. At the same time, a balance needs to be struck between diversification and specialisation since the latter is required for efficient production and marketing systems.

One of the best examples of alternative cropping strategies is the soybean/grain complex in the Mid-West of the USA where farmers respond to price trends by changing their planting intentions on an annual basis between, principally, soybeans, maize, and wheat. Livestock can also be factored into the equation. There are numerous examples of intercropping in the developing countries including:

Coffee/cardamom/macadamia nuts: Costa Rica, Malawi.
Tea/spices/coffee: India, Sri Lanka.
Coconuts/cocoa: Pacific Islands

Diversification and inter-cropping strategies are not panaceas for coping with uncertain price trends, although they can provide some level of buffering. The main problem attached to inter-cropping is the difficulty of identifying suitable alternative crops and the dilemma over reduced overall yields and returns over the longer term.

### *Market information provision*

Prior to liberalisation many smallholders received a fixed producer price for a crop, which was usually prior to the harvest and covered the whole crop year. Market liberalisation has made it almost impossible for the parastatal authority to fix a pan-territorial producer price. As a result, both growers and traders face much greater price volatility and uncertainly. While the level of national and world prices tend to be major components of the price received by growers other important influences include transport, quality and, if applicable, processing costs. The ending of pan-territorial prices has invariably meant that the more remote the producing area the lower the price received by the grower. Transport costs continue to be an important cost component of trading activities and hence profitability. In order to increase the efficiency of their marketing operations both growers and traders need to considerably improve their access to market information. Access to such information will increase transparency, reduce risk and ultimately lower transaction costs. This applies to domestic as well as international markets.

Improved access to information on prices, quantities, quality premiums and discounts, transport costs, fob prices at the ports, along with physical and futures prices in the major markets as well as trade contacts and technical aspects are needed by smallholders to facilitate their negotiations with traders and make more informed planting and selling decisions. Establishing a mechanism for farmers to receive information on price movements and other key market developments would facilitate their transition to a liberalised marketing system. Regular (daily) bulletins in newspapers and on radio stations may prove adequate for both growers and traders. The 1990s have seen major changes in the supply of telecommunication services with important implications for market information flows. Satellite and mobile phones are making traditional telephone lines superfluous. New institutional arrangements are being developed to make telephone supply services more sustainable in remoter parts of developing countries. The use of the Internet, which depends on the availability of telephone connections, is increasingly impacting on domestic and global markets.

For each country, region and commodity there needs to be developed systems that facilitate the collection and timely dissemination of appropriate market information to smallholders as well as traders. The FAO's Marketing and Rural Finance Service has developed considerable expertise on Marketing Information Systems (Shepherd 1997)

***National and international policy measures***

Alongside various solutions at the micro level it is vital to recognise that policy measures at the national and international level can be adopted which improve the functioning of markets to the benefit of smaller producers in developing countries. Thus,

- Policies need to be adopted in the industrialised countries that do not distort the competitiveness of smallholders in developing countries. For example, there should be a reduction of producer and export subsidies in the EU, Japan and the USA; food aid donations should be limited to where they are absolutely necessary.
- Stronger and more equitable international institutions should be created, such as the WTO.
- Developing countries should continue to be encouraged to adopt macro-economic policies, particularly with regard to fiscal and monetary policies, that reflect economic realities and do not distort economic activities. Particular attention should be paid to policies that enhance regional and cross-border trade.
- Trade policy should be viewed within a wider development context; trade liberalisation alone will not help the poor as the low take up of Lome provisions illustrated. To exploit the benefits of trade, poor countries need better economic governance and reforms to attract investment as well as better trade opportunities.

This part has outlined a range of options and strategies aimed at improving market functioning for smallholders. It is important to recognise that several of these strategies are inter-related. For example, a possible solution to improving smallholder marketing efficiency includes the establishment of farmers groups and regulated warehouses. The latter could also be used as delivery points at the expiry of an international futures contract, such as those that exist for coffee and cocoa. Such changes would facilitate the greater use of risk management instruments, reduce seasonal price fluctuations as well as lower transaction costs and increase marketing efficiency. In addition, it could greatly increase the availability and access to finance and credit, facilitate improvements in quality and contract integrity, reduce storage costs, and encourage greater indigenous trader involvement.

# Part 3: Proposals for Future Research Topics

The remainder of this study outlines nine proposals for future research for improving the functioning of markets. The case studies are as follows:

A Capacity building for farmers marketing groups in the western region of Kenya.
B The potential of futures and options contracts as a smallholder hedging medium for coffee producers
C Price fixing formulas
D The development of domestic and regional commodity exchanges
E Improved market efficiency in the Côte d'Ivoire cocoa and coffee sectors
F Development of best practice in accessing agricultural markets and services
G Liberalising the external marketing of cocoa in Ghana: financing and quality control issues
H Improving marketing systems through the development of contract farming and outgrower schemes
I Improving systems of quality control under liberalised marketing regimes

In addition to these, there are a number of other possible case studies that would be worthy of future research. These include:

Value added – toll processing
Crop diversification
Ethical trading/fair trading.
Pros and cons of put options

It is acknowledged that developing countries face different challenges, are at different levels of progress, and have different requirements, therefore there is a need to prioritise research topics. For example the issues of privatisation and institutional capacity building for farmers groups needs to be emphasised in certain countries where the effects of the liberalisation of markets is limited and the government involvement in production and marketing is still strong

The following Table provides a summary of strategic options to improve market functioning for smallholders. The role of the strategic option is discussed alongside examples of its application to date. Relevant specific case studies reviewing current practice and possible adoption, replication or improvement elsewhere are also cited.

| Table: Summary of Strategic Options to Improve Market Functioning for Smallholders | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Strategic options for smallholders** | **Role & contribution to market function** | **Examples of application too date** | | | **Case studies aimed at current practice and replication/adoption/improvement elsewhere** | | | **General comments** |
| | | **Commodity** | **Country** | **Implementing Organisation** | **Commodity** | **Country** | **Description*[4]** | |
| Development of farmers marketing organisations & capacity building | Improved market and credit access, competitiveness and quality control | Tea<br><br>Oil palm | Kenya & Sri Lanka<br><br>PNG | KTDA & SLTSDA<br><br>OPIC | Maize | Kenya | Capacity building for farmers marketing groups in Western Kenya (A) | Essential precondition for improving market efficiency and post harvest credit access for smallholders |
| Managing risk including the use of futures & options markets | The control & management of price risk & volatility. | Coffee | Latin America | Indirect benefits to producers and associations, Anacafe, Fedecocagua & FNC through international commodity traders- | Coffee<br><br>Cocoa | India<br><br>Ghana/ Côte d'Ivoire | The potential of futures and options contracts as smallholder hedging mediums for coffee and cocoa(B) + (E) producers | Foreign exchange/credit restrictions are a constraint to direct use in developing countries.<br>Currently price risk can only be managed indirectly. |
| Domestic & regional commodity exchanges | Improved market access & price transparency | Palm oil<br>Tea<br><br>Maize/beans | Malaysia<br>Kenya<br><br>Kenya | KLCE<br>Mombasa Auction<br>KACE | Coffee<br><br>Tea<br>Palm products<br>Oilseeds<br>Pepper<br>Grain & beans | India & Kenya<br>Kenya<br>Malaysia<br><br>India<br>India<br>India<br>Kenya | The development of domestic and regional commodity exchanges (D) | Analysis of current practice in developing countries and potential for introduction in coffee/cocoa sectors of West Africa & development of KACE in Kenya. |

[4] Letter in bracket denotes case study

**Contd. Table: Summary of Strategic Options to Improve Market Functioning for Smallholders**

| Strategic options for smallholders | Role & contribution to market function | Examples of application too date | | | Case studies aimed at current practice and replication/adoption/improvement elsewhere | | | General comments |
|---|---|---|---|---|---|---|---|---|
| | | Commodity | Country | Implementing Organisation | Commodity | Country | Description | |
| Warehouse receipt financing systems | Access to post harvest credit/finance, quality control | Grain | Ghana | Current<br><br>CFC project | Cocoa<br><br>Coffee<br><br>Cocoa | Côte d'Ivoire<br><br>Ghana | Côte d'Ivoire cocoa & coffee project (E)<br><br>Liberalising the external marketing of cocoa in Ghana: financing & quality control issues (G) | Feasibility of creating a Joint Venture warehouse licensing & regulatory company<br><br>Also see case study (A) for linkages |
| Price fixing formulas | Transparent and fair net prices to smallholders | Tea<br><br>Palm products | Sri Lanka<br><br>PNG | SLTSDA<br><br>OPIC/private millers | Palm products/ Copra<br><br>Cocoa | PNG/Solomons Indonesia/Ghana<br><br>Ghana/ Côte d'Ivoire Indonesia/Nigeria | Price fixing formulas (C) | Can price fixing formulas be extended to include risk management through hedging, & quality premium provisions? |
| Establishing and improving of quality control, storage and handling | Better competitiveness & improved net prices | Coffee<br>Coffee<br><br>Coffee<br>Cocoa<br><br>Flowers<br>Horticultural Products | Colombia<br>Costa Rica<br>Ghana<br><br>Kenya<br><br>Kenya<br>Zimbabwe<br>Kenya | FNC<br>ICAFE<br>Cocobod (QCD)<br>Coffee Board<br><br>Kenya Flower Council | Coffee<br><br>Coffee<br><br>Cocoa | Côte d'Ivoire<br><br>Uganda<br><br>Ghana | Improving systems of quality control under liberalised marketing regimes. (G)&(I) | Development of agricultural services to smallholders, thus improving incomes & food security |

| Contd. Table: Summary of Strategic Options to Improve Market Functioning for Smallholders | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Strategic options for smallholders** | **Role & contribution to market function** | **Examples of application too date** | | | **Case studies aimed at current practice and replication/adoption/improvement elsewhere** | | | **General comments** |
| | | **Commodity** | **Country** | **Implementing Organisation** | **Commodity** | **Country** | **Description** | |
| Contract farming<br><br>Outgrowers schemes | Market access & assured sales offtake & prices | Cotton<br>Vegetables<br>Oil palm<br>Barley | Zimbabwe<br><br>PNG<br>Kenya | <br><br>OPIC<br>KBL | N/A | N/A | Improving marketing systems through the development of contract farming and outgrower schemes (H) | |
| Improved infrastructure and policy environment | Reduction of marketing transaction costs & price uncertainty (ref: import policy) | | | | | | Development of best practice in accessing agricultural markets and services (F) | Interventions required at national and international governmental level |
| Diversification | Coping with long term price declines & rice uncertainty | Grain/soybeans<br>Coffee/cardamom/macadamia | USA<br><br>Costa Rica/Malawi | | | | | Intercropping & alternative annual cropping strategies |
| Improving market information provision | Greater market Transparency and access; reduced risks and greater marketing efficiency. | Various | Indonesia<br>Zambia<br>Zimbabwe | | | | | Requirements vary between commodity and country.<br>Communications revolution (e.g. mobile phones and e-commerce)<br>Could have major impact. |
| Added value - toll processing | Better net prices to farmers | Palm oil<br><br><br><br>Tea<br>Coffee | Malaysia<br>Indonesia<br>Sri Lanka<br>Ghana,<br>Côte d'Ivoire | FELDA | | | | A strategy to move farmers up the market chain and improve incomes |
| Fair trading | Reduction of marketing transaction costs & trader margins | Coffee<br><br>Tea<br><br>Bananas | Peru and Tanzania<br>Tanzania<br><br>Windward Islands | Cafe Direct<br>Tea Direct<br>CDC<br><br>Fair Trade labels & brands | | | | Applicable to niche markets & ethical sourcing by MNC's |

# Case Study A

**Capacity Building for Farmers Marketing Groups in the Western Region of Kenya.**

*Background*

The Western region of Kenya is an area comprising one third of the country's agriculturally productive land and accounts for approximately 64% of its production of grains and legumes, which are sold, primarily, into the domestic market. Production is dominated by small-scale farmers with average holdings of 2.5 hectares per household of 8 to 10 persons. Some 80% of the region's population are employed in the agricultural sector and about 75% of agricultural workers are women. The region was, in the pre-independence era, an area of European colonial settlement and consequently a number of large commercial farms, well in excess of 100 hectares, are still in existence and either in the ownership of the original settler families or under the control of the government, through, primarily, the Kenya Agricultural Development Corporation. It is estimated that at least 12,000 workers are employed on large-scale farms. However, the current trend is for larger farms to be sub-divided and given to squatters and other small-scale farmers.

Since the liberalisation of the Kenya grain market in the early 1990's the small-scale farmers of the Western Region of Kenya have had to operate in a free market environment. The marketing role of the National Cereals and Produce Board (NCPB) has changed from a buyer of grain from farmers at guaranteed minimum prices to a trader for profit in competition with the private sector. Prices now fluctuate widely in response to seasonal and sometimes political factors and small-scale farmers are unprepared for this new reality. A lack of marketing knowledge and information together with inadequate financial resources and the failure to act collectively for marketing purposes have placed small-scale farmers at a severe disadvantage in endeavouring to maximise returns from their production. This disadvantageous marketing situation manifests itself, particularly, in an inability to sell crops at times of seasonal high prices and in unacceptable levels of product loss due to inappropriate and inadequate on farm storage. Additionally, since liberalisation, farmers have experienced difficulties in accessing credit for the supply of pre harvest agricultural inputs, which coupled with poor sales returns has resulted in declining grain production and increasing rural poverty through the inability to sustain livelihoods.

Farmers need assistance to ensure both food security and the maintenance of sustainable incomes through the enhancement of marketing efficiency by improving access to credit for storage and marketing, the reduction of involuntary on- farm post harvest storage and the reduction of the costs and trader margins involved in grain trading.

In order to enhance marketing efficiency it is desirable and probably essential for farmers to act collectively within properly constituted and functioning groups formed specifically to address specific post harvest objectives.

*Purpose*

The purpose of the study will be to assist farmers marketing groups in capacity building in the following areas:

- Constitution – memo of association/articles of association/rules and regulations governing membership etc/office bearers.
- Objectives – the focus on identifiable practical objectives covering such issues as:
    - Group sales / marketing knowledge and expertise.
    - Fair and equitable distribution of group cash advances and final proceeds of sale (equalisation accounts and similar methods of disbursement)
    - Group packing and quality standards
    - Group storage, collection, transport and weighing
    - General and financial administration.

*Activities*

Field visits to the Western region of Kenya focussing on the Districts of Bungoma, Lugari, Uasin Gishu and Trans Nzoia.

Liaison with NGO's in the Eastern African Region involved in farmers' group capacity building. A local collaborator will be selected to jointly carry out the study.

Selection of target groups in the above districts and collection of base line information regarding existing knowledge and capacity.

Study of gender issues involved in the grain sector of Western Kenya and how they may impact on the formation of marketing groups to the benefit of women.

Organisation of a workshop to discuss study findings and to formulate of a strategy to assist groups in building up knowledge and the implementation of training programmes.

Desk research and report writing in the in the UK including research into existing literature and experiences in developing countries in farmer group capacity building.

*Output*

A report of findings and recommendations for future action.

*Beneficiaries*

Small scale farmers in Western Kenya, particularly women.

*Team*

1 Economist specialising in commodities and general finance and administration.
1 Socio economist specialising in women's issues.
1 Local consultant

*Timing*

The study will be undertaken over 3 months and involve the input of two international consultants for 4 weeks in total and 1 local consultant for 6 weeks.

*Estimated cost* - £ 50,000

# Case Study B

### The Potential of Futures and Options Contracts as a Smallholder Hedging Medium for Coffee Producers

*Background*

The international export price of coffee is subject to extreme fluctuations and volatility due, primarily, to the role of futures markets in the price determination process. The reference points for determining coffee values are the New York (for the arabica variety) and London (for the robusta variety) futures markets. Coffee traded on these exchanges represents, in monetary value terms, the second largest traded commodity in the world after petroleum products. Market participants comprise large-scale producers and coffee roasters together with international commodity traders and speculators, including hedge fund managers using computer based systems to trigger their buying and selling orders. The international trade in physical coffee is largely based on values stated to be at a differential, i.e., a premium or discount, to the relevant futures market price for the agreed shipment month position. Final prices are usually fixed at buyers or sellers option prior to shipment. The nature of the coffee market lends itself to extreme price volatility in view of the important role played by speculators who give the market its liquidity.

Large-scale producers, roasters and international traders are able to manage their price risks by hedging on the New York and London futures and options exchanges. However, worldwide coffee production is primarily a smallholder's crop grown by farmers in developing countries. Smallholders are unable to hedge their price risks on the international coffee futures and options markets largely due to their inability, and perhaps reluctance, to form viable groups to market their production jointly, thus enabling access to the credit necessary to operate a hedging policy. Furthermore, a major constraint is the fact that futures and options contracts must be traded in US dollars and the foreign exchange regulations in many developing countries preclude the holding of accounts either domestically or overseas in foreign currency.

Notwithstanding the above constraints, some smallholders groups in developing countries have begun to implement strategies to enable access to the coffee futures and options markets for price risk management purposes.

The proposed target country is India, which has an important coffee growing industry with both smallholders and larger plantations based in the Southern States of Tamil Nadu, Kerala and Mysore. The country produces both robusta and fine quality arabica coffees with a current annual production of around 280,000 tonnes. Sales are made to both the domestic market, which is dominated by a few large multinationals namely Unilever, Nestle and Tata, and to the export market where Indian coffee finds a particularly good market in Europe, the USA and Japan. Traditionally the Indian Coffee Board controlled the coffee market and sales were made exclusively through an auction system. Apart from domestic roasters, the former USSR was a very important buyer, purchasing on rupee payment terms. Consequently, in the recent past Indian coffee appeared only sporadically on the world market and prices tended to be high, in rupee terms, compared to world market prices. Since the collapse of the

USSR and the liberalisation of the Indian internal coffee market in the 1990s farmers have had to operate in a much freer market environment with consequent exposure to price volatility stemming from the levels being traded on the New York and London exchanges. Therefore, price risk management for farmers and other local market participants is an important current issue which is recognised by the government particularly through the Forward Markets Commission, a department of the Ministry of Consumer Affairs, charged with the development and regulation of commodity exchanges in India.

Two points are of particular relevance to the Indian coffee industry. First, the marketing chain tends to be long and complex, with the involvement of small farmers/plantations – small local traders – agents – curing works – large internal traders – licensed exporters – domestic roasters – international traders. Second, the sporadic and seasonal demands of the domestic roasters can often distort the market resulting in high local prices relative to world prices. This factor can result in defaults by exporters damaging the government's long term strategy of developing a reliable name for Indian coffee.

*Purpose*

To analyse risk management techniques currently being implemented by the small scale coffee farming sector in India and investigate the feasibility of the sector accessing international and domestic futures and options markets as an integral constituent of price risk management.

*Activities*

To examine existing hedging strategies being implemented by coffee farmers in developing countries and analyse viable strategies appropriate for selected areas.

The use of commodities linked to financial instruments has been advocated by the World Bank since the 1980's (ref: Maizels, 2000, page 12) and work has also been undertaken in this field by UNCTAD's International Task Force on risk management. . The study will, inter alia, investigate progress on these World Bank/UNCTAD funded initiatives.

The case study will analyse the way the coffee market functions in India and propose strategies to enable farmers to gain access to hedging facilities, concentrating on the following options:

- The use of the New York and London futures and options markets
- The use and development of the existing coffee exchange located in Bangalore.
- The extension of delivery points for international coffee future contracts to Indian locations through the development of acceptable warehouse facilities will be investigated.

The case study will also examine current practice in farmer coffee risk management in Guatemala in order to establish whether the Guatemala experience can, to any effect, be duplicated in India. Guatemala has one of the most successful unsubsidised schemes in which the Guatemalan coffee association (ANACAFE) provides credit to coffee producers who can show that they have hedged their price risk. The penalty for default, namely exclusion from ANACAFE's services, is a severe one.

Field visits will be undertaken to Guatemala and India and UK desk-based research will be carried out with the cooperation of the international coffee trade.

A local collaborator will be identified and appointed.

*Outputs*

A report of findings and recommendations for future action.

*Beneficiaries*

Small scale Indian coffee farmers and groups/cooperatives, with the potential for adoption by other Asian and African coffee producers.

*Team*

One marketing economist specialising in commodities. Additional in-house resources of the NRI will also be utilised. One local consultant will also be employed.

*Timing*

The study will be undertaken over a four month period and involve the input of one international consultant for 4 weeks and 1 local consultant for 6 weeks.

*Estimated cost* - £ 25,000

# Case Study C

**Price Fixing Formulas**

*Background*

Smallholder producers of export crops are at the bottom of the marketing chain and have limited options in marketing their produce in a manner which will ensure the receipt of a fair price relative to its value on the international market. Ad hoc sales to small - scale local traders tend to put the smallholder at a disadvantage as lack of knowledge and market information often results in the payment of low prices relative to the true value of the commodity. This disadvantageous situation is compounded when the crop requires further processing, grading and sorting to render it suitable for export. The following examples illustrate this point:

- Small-scale tea farmers produce green leaf, which is then processed into black tea by factory owners. The price the farmer receives for green leaf is determined by quality, moisture content, the outturn ratio of black tea to leaf achieved by the factory and the expected price obtainable in the international market. Tea prices in the major exporting countries are usually determined in auctions and largely denominated in US dollars. The complexity of the factors determining the price paid to farmers green leaf makes it exceedingly difficult to appreciate its true value and renders the farmer subject to exploitation.
- Small-scale oil palm farmers produce fresh fruit bunches (FFB) which are then processed into palm oil and palm kernels/palm kernel oil by large milling companies. The price the farmer receives for FFB is determined by quality, size of bunch, loose fruit percentage and the outturn ratio of palm oil and palm kernels achieved by the mill. The international price of palm products is largely determined by the US dollar value of contracts traded daily on a CIF Rotterdam basis and published by Reuters. The complexity of the factors determining the price of FFB expose small-scale farmers to possible exploitation.
- Small-scale coconut farmers selling copra to millers for the production of coconut oil and meal/cake are in a similar position to those in the oil palm sector.
- Small-scale coffee farmers producing cherry and/or hulled coffee for sale to millers are paid for a product that requires a great deal of processing, sorting and grading before it reaches the international market. Coffee prices are determined on the New York and London futures markets in US dollars. International physical coffee trading is normally conducted on a differential basis, i.e. at a premium or discount to the relevant futures position with the price to be fixed normally prior to shipment. The coffee trade is sophisticated and farmers are not in a position to assess all the factors, which influence price determination for their product.
- Small-scale cocoa farmers are in a similar position to those in the coffee sector.

From the above illustrations it will be noted that small-scale farmers in a free market find it difficult to assess the value of their product and consequently obtain a fair price relative to its international value in exportable form. Therefore from the smallholders perspective it is doubtful that markets function efficiently and fairly.

In some instances price fixing formulas based on the elements of value determination mentioned above have been introduced to ensure that farmers receive a fair price for their product relative to internationally traded levels. Specific examples have been noted in the Sri Lankan tea industry and the Papua New Guinea oil palm and copra industry. In the case of oil palm, millers hedge their forward production although the results of these operations are not factored into the price fixing formula. Such formulas tend to be proposed by the owners of processing facilities and monitored by the relevant government department such as the Ministry of Agriculture.

*Purpose*

To assess whether price fixing formulas can be extended to cover price risk management through hedging and introduced to the benefit of farmers.

*Activities*

The study will target a selection of the following crops and geographical areas:

Crops: tea, coffee, cocoa, oil palm and copra.

Geographical locations:

Sri Lanka, India, Kenya, Indonesia (tea and coffee)

Papua New Guinea, Solomon Islands, Indonesia and Ghana (oil palm and copra)

Ghana, Nigeria, Côte d'Ivoire, Indonesia (cocoa).

UK desk research through contact with major stakeholders, viz., farmers and farmers groups, government ministries, parastatals, commodity processors and exporters and international traders.

Field visits to Kenya (tea and coffee) and Ghana (cocoa). The situation with regard to oil palm and copra will be investigated by UK based desk research including the examination of literature of the subject.

*Beneficiaries*

Smallholders in the tea, coffee, cocoa, oil palm and copra sector who sell their produce to private and/or parastatal processing companies.

*Outputs*

A report of findings and recommendations for future action.

*Team*

One marketing economist specialising in commodities; additional in-house resources of the NRI will also be utilised together with one local consultant.

*Timing*

The study will be undertaken over a four-month period and involve the input of one international consultant for 6 weeks and 1 local consultant for 6 weeks.

*Estimated cost* - £ 25,000

# Case Study D

## The Development of Domestic and Regional Commodity Exchanges

*Background*

Government policy changes in Africa towards reform of the functioning of markets have introduced new challenges and new opportunities to the agriculture sector and in particular to smallholders. Market reform has resulted in liberalisation measures leading to free markets and the consequent elimination of price controls, the reduction of import licensing constraints and foreign exchange control measures. Furthermore, agricultural parastatals have been, or are in the process of being, privatised. Prior to market liberalisation, the marketing of agricultural commodities was dominated by government controlled marketing boards, which tended to shield smallholders from the effects and implications of both the domestic and global market place.

Smallholders now face a situation where prices can fluctuate widely in response to seasonal and sometimes political factors and they are, in most instances, unprepared for this new reality. A lack of marketing knowledge and information, together with inadequate financial resources and the failure to act collectively for marketing purposes have placed small-scale farmers at a severe disadvantage in endeavouring to maximise returns from their production. This disadvantageous marketing situation manifests itself, particularly, in an inability to sell crops at times of seasonal high prices and in unacceptable levels of product loss due to inappropriate and inadequate on farm storage. Therefore, there is an urgent need to address smallholder's marketing problems in order to enable them to sustain farm livelihoods and maximise their incomes.

It is suggested that the development of domestic and regional commodity exchanges would assist smallholders by influencing markets to function in a manner more beneficial to their interests by:

- providing a regulated, secure, transparent, competitive forum and central location where sellers and buyers, exporters and importers of agricultural commodities may trade efficiently.
- acting as a price discovery and determination point.
- facilitating trading on both spot (cash) and forward markets.
- guaranteeing prompt and timely payment in accordance with established standard contractual terms.
- providing options for secure and reliable off farm storage.
- guaranteeing standard specifications of quality, packing and weight.
- providing, on a regular basis, reliable commodity market information on supply and demand, prices, and trends in domestic, regional and world markets.

*Purpose*

The case study would seek to examine and analyse experience gained to date on the following domestic and regional commodity exchanges in the context of improving market efficiency for small-scale coffee and cocoa farmers in West Africa. Recommendations for the future development of domestic and regional commodity exchanges will be proposed.

*Activities*

The activities and impact on the market efficiency on small scale farmers of the following exchanges will be investigated and analysed:

- the Mombasa (Kenya) Tea Auction.
- the Nairobi (Kenya) Coffee auction.
- the Kenya Agricultural Commodities Exchange.
- the Kuala Lumpur (Malaysia) Commodity Exchange.
- the Kochi (India) Pepper Exchange.
- the Bangalore (India) Coffee Futures Exchange.
- the Bombay (India) Oilseeds and Oils Exchange.

The above exchanges represent markets at varying stages of development ranging from basic concepts in their infancy (e.g. the Kenya Agricultural Commodity Exchange), well established spot/cash markets (the Mombasa Tea Auction) to more sophisticated forward markets providing futures contracts (e.g. The Kuala Lumpur Commodities Exchange).

The findings of the above analyses will be used as a basis for an investigation of the feasibility of introducing and developing domestic and regional commodity exchanges in the coffee and cocoa sectors in West Africa. Whilst the focus will be on coffee and cocoa the study will not preclude other important smallholder crops such as grains, pulses, spices, citrus and tubers.

The above activities will be conducted through UK based desk research and field visits to selected countries (Kenya /Ghana and India).

*Outputs*

A report of findings and recommendations for future action

*Beneficiaries*

Large numbers of African and Asian cash and export crop producers and traders.

*Team*

A marketing economist specialising in commodities along with additional in-house NRI resources will be utilised. In addition 2 local consultants will be utilised.

*Timing*

The study would be undertaken over a period of four months and involve the input of one international consultant for 6 weeks and 2 local consultants for a total of 6 weeks.

*Estimated cost* - £ 30,000

# Case Study E

## Improved Market Efficiency in the Côte d'Ivoire Cocoa and Coffee Sectors

*Background*

Côte d'Ivoire produces approximately 1.2 million tonnes of cocoa and 250,000 tonnes of robusta coffee, equivalent to almost 40% and 5% respectively of global cocoa and coffee product. The past three years has seen the liberalisation of the cocoa and coffee markets in Côte d'Ivoire, decisions which have had a dramatic impact on various stakeholders involved, particularly over one million smallholder producers, as well as large numbers of intermediaries and traders. While most producers are receiving a greater proportion of the export unit value, the ending of pan-territorial pricing and increased price volatility has increased the risk faced by smallholders.

One option to improve the efficiency of marketing systems would be to create networks of licensed warehouses offering storage services to the public. This innovation by itself could have a widespread impact by improving access to trade finance, improving grading and facilitating trade by specification, enhancing the transparency of trade and price-setting, enabling farmers and farmers groups to deal directly with large buyers and end users, making it easier to subsequently establish commodity exchanges, serving as delivery points for existing exchanges etc. It could be argued that strong warehousing systems are a key to getting African agriculture moving out of their relative stagnation and into an "upward spiral".

In the past, industrialised countries faced similar problems to those faced by Africa today and some responded by successfully establishing public sector bodies to license and oversee warehouses. However, in most developing countries of today, state authorities simply do not command the confidence needed to institute a structure of this kind. Lack of confidence stems from concerns both regarding the possibility of ad hoc political intervention and management efficiency. A new initiative is needed to break the logjam. One way to do this would be for warehouses to be licensed and overseen by bodies owned either by inter-governmental institutions, or by trade associations, and which by consequence are detached from the day-to-day politics of individual states, and can provide the confidence needed by the various local and international stakeholders involved (traders, banks, insurance companies etc.).

The core concept proposed for this study is the creation of a Joint-Venture Company (JVC) based in Côte d'Ivoire for the purpose of licensing and overseeing commodity warehouses throughout the country, including up-country locations. The main focus would be on the handling of cocoa and coffee stocks that would be handled according to standard grading and warehousing procedures of the major London (LIFFE) and New York (NYCSC) futures commodity exchanges. This will allow buyers elsewhere in the world to trade in warehouse receipts at minimal risk and lead to a more competitive trading system, ensuring quality, and giving producers the maximum benefit.

Warehouses would have to be insured against all risks, and be bonded or otherwise underwritten against fraud. An arbitration system would moreover be instituted to settle disputes. If the exchanges so desire, these warehouses can serve as delivery points; in this case the JVC would act as agent for the clearing houses in London and New York, which will stand as counterparty to trades, and guarantee contract performance. The JVC would generate income through a fixed charge per storage site, and variable charges per tonne of produce handled. The JVC would be non-Governmental in nature though Government might also take a minority stake. However, the Government could increase the effectiveness of the company by requiring all cocoa warehouses to be registered and overseen by the JVC. In view of their ability to represent a wide range of stakeholders, LIFFE and NYCSCE would be founding shareholders of the JVC alongside development finance institutions, such as IFC and CDC. The international community would also contribute to the process by covering certain of the start-up costs, which would not have to be borne by an operation of this kind in a developed country. The JVC could also oversee the warehousing of other commodities, which will progressively be introduced into the system.

There is currently widespread support from Government and donors for involving farmer organisations in the marketing process, with a view to getting a higher share of the export unit price back to the farmers and to help them manage their price risks. The relationship between the farmer organisation and the warehouse network is critical. Should the farmer organisations own the warehouses (as some would argue), or should they simply bulk up the cocoa and coffee and deliver to a privately operated warehouse? Farmer organisations have a chequered history, particularly in Africa, and there is a real need to get the approach right at the outset, and design systems which will result in self-sustaining farmer organisations effectively interacting with the private trade. The feasibility and methods for insuring farmers against price risk need to be worked out within the context of a licensed warehousing system linked to major futures and options exchanges, as described above. Therefore, it is desirable that pilot schemes need to be implemented and tested.

*Purpose*

The major objective of the case study is to assist in the development of systems that would effectively spread the benefits, while reducing the risks of liberalisation, as widely as possible among the various stakeholders in the Côte d'Ivoire coffee and cocoa industries.

*Activities*

The case study will:
- Develop an outline design and business plan for the above-mentioned JVC.
- Assess the financial feasibility of the JVC.
- Assess the institutional feasibility of the JVC, in terms of the willingness of the relevant stakeholders sanction its operation, and to put up the necessary equity and financial support.
- Indicate the scope and appropriate role for farmer organisation in the cocoa and coffee marketing processes, and division of labour with the private trading sector.
- Propose a strategy for the development of farmer organisations and risk-management instruments for use by producers.

The above activities will be conducted through UK based desk research and a field visit to the Côte d'Ivoire.

*Outputs*

A report of the findings and recommendations for future action

*Beneficiaries*

Over one million coffee and cocoa growers and traders in the Côte d'Ivoire.

*Team*

The study will be carried out by a team including:
- staff of the Natural Resources Institute, with extensive experience in marketing policy reform, trade finance, cocoa marketing and able to communicate in French.
- one or more individuals nominated by the above-mentioned private stakeholders (CAL, LIFFE and NYBOT) with a background in cocoa trading and detailed knowledge of the operational procedures used for management of exchange warehouses.
- one local consultant.

*Timing*

The study would be carried out over a period of three months and involve inputs from two international consultants and one local consultant each for 6 weeks.

*Estimated cost* - £ 50,000

# Case Study F

**Development of Best Practice in Accessing Agricultural Markets and Services**

*Background*

Throughout Africa improved access to markets and agricultural services (mainly input supply, extension, and financial services including credit) offers substantial opportunities for enhancing rural livelihoods and food security. In many cases this requires the development of contractual arrangements between service suppliers and farmers. Co-operation among farmers at the primary level can also assist this process (Stringfellow *et al*, 1996).

Various local and international initiatives have been undertaken aimed at improving service provision usually involving private companies or NGOs. They involve the development of farmer-controlled enterprises (FCEs), outgrower schemes, linkage credit schemes, joint venture companies, inventory credit, input supply networks and rural assembly markets. However, progress in capitalising on these opportunities has been slow, and the range of services available to most smallholders remains weak (with adverse consequences for livelihoods, soil fertility and food security). This is attributed to a combination of problems, including the high transaction costs of dealing with smallholders, default on credit repayments by farmers, absence of trust between farmers and service providers, shortage of entrepreneurs, weak policies and produce quality considerations.

Most of the above-mentioned schemes focus on the production of cash crops. These tend to give farmers higher returns than do food crops, and involve much lower credit risk to companies operating outgrower schemes. This should be acknowledged in future attempts to enhance the food security of the rural poor in Africa. Indeed a growing body of research suggests that one of the most efficient ways to enhance the food security of African smallholders is through well designed schemes involving the production of cash crops (see Govereh *et al.,* 1999). These will provide resources that farmers can both invest in food crop production and/or use to purchase food. This is particularly significant because liberalisation has opened up an array of new market opportunities that did not formerly exist.

Some of the above-mentioned schemes are highly innovative, and in time they should provide the basis for sustainable replication on a large scale within the continent. However, to a large extent, the lessons learned remain within the organisations or the countries immediately concerned, and are not made widely available. Moreover, the organisations themselves may at times be affected by a degree of tunnel vision, and this can slow the process of innovation. NGOs sometimes have a project-focused perspective, and few resources to devote to learning, dissemination and sharing of best practices.

*Purpose*

The study seeks to develop strategies, which not only provide smallholders with better access to markets but also increase the availability and quality of crops produced. The study aims to accelerate the learning process and disseminate guidelines of best practice. The purpose is to effectively promote strategies to accelerate and enhance the process of innovation in the development of agricultural services provided to African smallholders. By improving the functioning of markets this will increase incomes and food security.

*Activities*

The project will study the approaches of various organisations (companies, emerging entrepreneurs, NGOs and farmer organisations), in a number of countries. The identification process will be assisted by a project currently being undertaken by NRI (and funded by the DFID CPHP) on the role of NGO'S in agricultural marketing, focussing on Uganda and India. The initial phase of the project would be to identify the most relevant organisations and countries. For each selected organisation there would be an in-depth study of the best practice in market access and agricultural service development. Conclusions would be drawn about the impact and cost-effectiveness of specific schemes adopted. Criteria used to appraise schemes will include sustainability and potential for growth; transferability to other crops and countries; cost-effectiveness and social inclusiveness - current and prospective. Experiences of different schemes and cases will then be compared, and lessons drawn regarding best practices. Existing models of best practice would thus be identified which could then be disseminated.

The above activities will be conducted through UK based desk research and field visits to selected countries (Kenya /Ghana//Malawi/ and Tanzania).

*Outputs*

A report of findings and recommendations for future action

*Beneficiaries*

Small scale producers of food and cash crops in sub-Saharan Africa.

*Team*

The study will be carried out by a team including staff of Natural Resources Institute and a local consultant from each of the selected countries. Each team member would have extensive experience in agricultural marketing and service provision, while the local consultant would also have detailed knowledge of the local organisations involved.

*Timing*

Following a two month period in which collaborating organisations would be identified, the study would run for a further six months and involve inputs from at least three international consultants and one local consultant from each of the selected countries. It is estimated that each of the selected country consultants will provide a minimum of 6 weeks input per country while the international consultants would also provide a minimum input of 2 months.

*Estimated cost*

The preliminary identification phase would cost an estimated £30,000 while the second phase would cost an estimated £12,500 for each of the countries selected.

# Case Study G

## Liberalising the External Marketing of Cocoa in Ghana: Quality Control and Financing Issues

*Background*

The Ghana Government, in close consultation with the World Bank, is planning to liberalise the external marketing of cocoa from the beginning of the 2000/2001 season. Internal marketing was liberalised in the early 1990s. A major challenge posed by external market liberalisation is how to avoid significant quality deterioration, since Ghanaian cocoa attracts a sizeable premium on the international cocoa market because of its quality. The experience of other cocoa and coffee producing countries suggests that export liberalisation is likely to lead to changes in quality control and a fall in average export quality. Another concern is that marketing may become concentrated into a few hands, as was the experience in some West African countries.

Under the existing marketing system, Cocoa Marketing Company (CMC), which has monopoly over export of cocoa, enjoys a high reputation for quality and contract fulfilment. This allows the CMC to make forward sales, which in turn facilitates fixing of a pan-territorial producer price. Another merit of the existing system is that it enables Ghana to access offshore credit at very competitive rates, thus contributing to improved cost-efficiency in cocoa marketing.

The majority of licensed buying companies (LBCs) which currently purchase cocoa internally lack a track record in obtaining access to credit at equivalent rates to those currently obtained by the Cocobod. If LBCs are permitted to export, initially it is unlikely that they will be readily trusted to deliver on forward contracts as well as on the quality required. Liberalisation could, therefore, lead to a rather uncompetitive market structure, increasingly dominated by a few international buyers and with a weak domestic trade involving a number of under-capitalised players.

A partial solution to the QC problem is to devise strategies to ensure that cost-effective systems of quality control are adopted following export liberalisation. This in turn could be related to the promotion of a warehouse receipts system in which local and international banks and traders have confidence. One possibility would be that all cocoa warehouses (at society level and take-over points) are run by licensed warehouse operators and collateral managers, as "public warehouses", (i.e. they should be open to deposits by all LBCs on a first-come-first-served basis). In addition to providing storage space, the warehousemen could provide primary quality control services and issue warehouse receipts (similar to the Cocoa Take Over Receipts – CTOR) by which LBCs can leverage finance and assure buyers of delivery. There are a number of options as to who would manage and operate such a system. One possibility is the Quality Control Division (QCD) of the Cocobod could move beyond its existing quality control role to the licensing and overseeing warehouse operators and collateral managers, with a view to ensuring their overall performance and fidelity.

Care needs to be exercised to ensure that the operating and regulatory systems are independent enough to be able to close down any non-performing warehouse. QCD is already known for its high standards and integrity, but in overseeing a wider range of private activities it will be subject to ever-greater pressures. For this reason, QCD would need to be given greater autonomy than it currently enjoys, for example by giving banks representation on its Board. Banks can play an important role in enhancing the credibility of the service, given that their own funds will be at risk. QCD could be upgraded to become a National Warehousing Authority, overseeing warehousemen storing a range of agricultural commodities. The additional volume of business will reduce per unit oversight costs, while development of warehouse receipt finance for other agricultural produce will benefit from the high reputation of the QCD. In addition, the National Warehousing Authority could assume responsibility for provision of market information to all players. Enhancing market information provision is essential to the management of trading and lending risks in the agricultural sector.

The system is not new in the cocoa industry in Ghana, as it builds on the existing CTOR system. It is also used extensively in the Greater Accra area, where collateral management is used for financing of a large portion of commodity imports, as well as some exports. There have also been pilot initiatives to introduce warehouse receipt financing for other agricultural produce in the interior of Ghana, associated mainly with the Agricultural Development Bank (ADB), Technoserve and the Natural Resources Institute (NRI) of the UK.

The benefits of the proposal include:

- With a reliable and internationally credible system of warehousing in cocoa buying areas, Farmer associations and LBCs could use warehouse receipts to obtain local finance as well as lower cost international finance.
- Quality control could be intensified in fewer locations (designated now as take-over points), helping Ghana to maintain quality and defend its price premium in the international market.
- Regulated warehouses could also be used as delivery points at the expiry of an international futures contract. Such changes would facilitate improvements in quality and contract integrity, reduce storage costs, encourage greater indigenous trader involvement, facilitate the greater use of risk management instruments and greatly increase the availability of finance.
- Opening up warehouses to all LBCs on a first-come-first-served basis would greatly reduce the duplication of facilities by LBC's who currently have to invest in their own proprietary facilities, even in the remotest producing areas.
- Warehouse receipts can be the basis of more sophisticated developments in trading, financing and risk management. For example, they can be used to create investor paper – similar to treasury bills - acceptable to pension funds and other institutions.

*Purpose*

The aim of the study is to develop a reliable and internationally credible system of quality control and warehousing in Ghana's cocoa buying areas and ports. This would help to maintain Ghana's price premium as well as enable farmer association and trading companies to be issued with warehouse receipts, thus enabling them to obtain credit as well as facilitate quality control and provide independent assurance of contract performance.

*Activities*

The case study will do the following:

- Devise a cost effective quality control system.
- Develop an outline design and business plan for the warehouse receipt system.
- Assess the financial feasibility of the quality control and warehouse receipt systems.
- Assess the institutional feasibility of the systems, including the willingness of relevant stakeholders to sanction their operation, and provide financial support.
- Indicate the scope and appropriate role for farmer organisations in the cocoa marketing process, and division of labour with the private trading sector.
- Propose a strategy for the development of farmer organisations and risk-management instruments for use by producers.

The above activities will be conducted through UK based desk research and field visits to Ghana.

*Outputs*

A report of findings and recommendations for future action

*Beneficiaries*

Almost one million Ghanaian cocoa producers along with cocoa traders.

*Team*

The study will be carried out by a team including
- staff of the Natural Resources Institute, with extensive experience in marketing policy reform, trade finance and cocoa marketing in Ghana;
- an individual with a background in cocoa trading and detailed knowledge of the operational procedures used for management of exchange warehouses.
- one local consultant, nominated by the Cocobod with detailed knowledge of the Ghana cocoa sector.

*Timing*

The study will be undertaken over a period of 4 months and involve inputs from two international consultants and one local consultant each for 6 weeks.

*Estimated cost* - £ 50,000

# Case Study H

## Improving Marketing Systems through the Development of Contract Farming and Outgrower Schemes

*Background*

The development of contract farming and outgrower schemes has the potential to substantially improve the livelihoods of many smallholders. Not only can they facilitate the marketing of smallholder produce and overcome the problems of scale economies in the processing of higher value products but also they can be used as important vehicles for obtaining inputs and the delivery of services (see Case Study F). There are a number of examples of outgrower and contact farming schemes, such as palm oil in PNG, cotton and vegetables in Zimbabwe. Outgrower schemes often involve smallholders supplying raw materials to a local processing operation, including on a nucleus estate; some have been in existence for several decades and have often involved land settlement schemes. The price the smallholder receives is often based on an agreed price fixing formula and such schemes, if fairly devised, can help the functioning of markets to the benefit of the farmer

*Purpose*

The aim of the study would be analyse a number of these schemes with the objective of finding suitable models, which represent a net improvement in both efficiency and in distributional terms.

*Activities*

The above activities will be conducted through UK based desk research and field visits to selected countries in sub-Saharan Africa and Asia. Following an initial identification of relevant schemes there would follow an analysis of the costs and benefits of a number of operating contract and outgrower schemes with the aim of identifying best practice. Conclusions would be drawn about the impact, cost-effectiveness and social inclusiveness of specific schemes. In appraising each scheme consideration will be given to its potential for replication in other countries and commodities as well as its sustainability and potential for growth. Experiences of different schemes and cases will be compared, and lessons drawn regarding best practices.

The above activities will be conducted through UK based desk research and field visits to selected countries in Africa and Asia.

*Outputs*

A report of findings and recommendations for future action.

*Beneficiaries*

Small scale producers of food and cash crops in sub-Saharan Africa.

*Team*

The study will be carried out by a team including staff of Natural Resources Institute, with extensive experience in commodity marketing and institution. In each country selected a local consultant would be used.

*Timing*

The study will run for four months and involve inputs from two international consultants and approximately three local consultants. Each consultant would be employed for 6 weeks.

*Estimated cost* - £ 55,000

# Case Study I

## Improving Systems of Quality Control under Liberalised Marketing Regimes

*Background*

The abolition of parastatal marketing organisations often led to a weakening of quality control systems. There are several instances where the quality of cash and export crop production deteriorated during the initial stage of market reform e.g. cocoa production in Cameroon and Nigeria, coffee production in Cameroon, Madagascar and Uganda. In part, this was the result of the failure of government to make provisions for the continuation of quality control services following the abolition of quality controls on exports, partly because of exchange rate distortions and partly because of the fierce competition among traders – many of whom had recently entered the business - to obtain products of any quality from farmers.

Following liberalisation, various schemes have been devised for the provision of quality control services. In some cases it has been left to the private sector either in the form of individual companies undertaking their own QC or companies using specialist companies, such as SGS or Cornelders to provide quality assessments. Sometimes public services have continued to undertake quality-monitoring activities. The ability of the private sector to provide QC systems (as well as other services previously provided by parastatals) is a key factor behind the success of market reforms.

Many factors will affect the ability of the private sector (or the public sector) to provide QC in a liberalised market environment. These include the nature of the commodity, the role and strength of the private sector prior to reform,

*Purpose*

The objective of the study would be to assess for various commodities and countries the systems of QC that have been developed since market liberalisation. From this analysis best practice guidelines could be devised which would accelerate the process of learning and assistance in the promotion of systems and strategies to improve cost-effective systems of QC. For these reasons the proposed study aims to accelerate the learning process and disseminate guidelines of best practice. The purpose is to effectively promote strategies to accelerate and enhance the process of innovation in the development of agricultural services provided to African smallholders. By improving the functioning of markets this will increase incomes and food security.

*Activities*

The above activities will be conducted through UK based desk research and field visits to selected countries possibly Cameroon (coffee and cocoa), Ghana (cocoa), Kenya (coffee, tea and horticultural products), Uganda (coffee).

*Outputs*

A report of findings and recommendations for best practice and future action

*Beneficiaries*

Small scale producers of food and cash crops in sub-Saharan Africa.

*Team*

The study will be carried out by a team including staff of Natural Resources Institute, with extensive experience in marketing and quality control policies along with a local consultant in each of the selected countries.

*Timing*

The study will cover a lapsed time of five months and involve inputs from at least two international consultants and several local consultants, with time inputs ranging between 2 and 6 weeks.

*Estimated cost* - £ 45,000

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