

Overview



Mapping the market: market-literacy for agricultural research and policy to tackle rural poverty in Africa

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Introduction

Within policy, research and development agendas, there has been a re-emergence of interest in agriculture and pro-poor growth in rural areas. A number of multilateral and bilateral aid agencies, for example, the UK Department for International Development (DFID), the Asian Development Bank (ADB) and Swedish International Development Agency (Sida), have developed 'making markets work for the poor' conceptual frameworks and integrated them into their development assistance agendas at the country level. The Consultative Group on International Agricultural Research (CGIAR), a strategic alliance of members, partners and international agricultural centres that mobilises science to benefit the poor, now recognises that smallholder farmers' livelihoods depend on much more than the production of food staples. The CGIAR is now conducting research on how farmers can better access markets. Many non-governmental organisations (NGOs) that have traditionally focused on working with farmers to improve agricultural production and productivity are also broadening their activities to include processing and marketing.

In the recent past agricultural and rural poverty reduction policies have largely been influenced by one of two broad strands of thinking: trade liberalisation or technology-led solutions. The former seeks to stimulate demand for rural production through optimal allocation of resources in the agriculture sector (e.g., by removing the foreign exchange distortions, tariffs and subsidies that distort agricultural markets). The latter seeks to stimulate the supply side of the rural economy, through sustainable increases in agricultural productivity and value addition (e.g., through new varieties, improved cropping systems and better post-harvest processing). The preceding thematic papers have illustrated some of the challenges and issues that need to be addressed in order to make markets work for the poor. These include:

- Building linkages and enhancing trust between actors in the market chain (Best et al., this volume)
- Supporting small-scale producers to associate, collaborate and coordinate to achieve economies of scale in their transactions with buyers or suppliers (Biénabe and Sautier, this volume)
- Making channels of information and market intelligence accessible to rural producers (Marter, this volume)
- Enabling rural producers to understand and better satisfy the product, process or delivery standards required by buyers (Walker, this volume),

Trade liberalisation and technology-led solutions alone are unlikely to fulfil the agriculture sector's potential contribution to pro-poor growth in Africa. What is needed is a more comprehensive, market-literate framework; one that brings together and then builds on the technology-led and trade liberalisation thinking. Market literacy can be defined as the awareness, understanding and capacity to build the processes, institutions, competencies and relationships that enable market systems to work for poor producers. This paper presents a market-literate framework in the form of a Market Map. The Market Map serves two purposes: for the policy maker and rural development planner, it is a conceptual framework used to consider the commercial and institutional environment in which small-scale producers (including smallholder farmers) operate. For the practitioner, it is a practical and potentially participatory tool that can be used to facilitate pro-poor growth in rural areas through directly improving linkages and relationships between market-chain actors, and to prepare the ground for introducing or generating innovation in products, processes and market access.

Agriculture and pro-poor growth

Challenges facing smallholder agriculture

Despite rapid urbanisation, an estimated 70–75% of the world's poorest people live in rural areas where their livelihoods are largely dependent on agriculture. Many of the rural poor are smallholder farmers. In this paper, and based on Narayanan and Gulati (2002), smallholders are characterised as farmers (crop or livestock) who practice a mix of commercial and/or subsistence production, where the family provides the majority of labour and the farm provides the principal source of income. Such smallholders are often thought to be efficient users of resources, while their farming systems are often characterised as being a relatively equitable means of providing income and food directly to poor people (Kydd, 2002). Furthermore, smallholder farming is seen as strategically indispensable to development as a whole because:

- It accounts for a large proportion of agricultural production. Agriculture, however, is not only an economic activity and source of production and income; it is also an important part of rural peoples' culture and social organisation.
- Growth in this type of farming is linked to reductions in rural poverty and inequality. Growth in agricultural incomes is effective at reducing rural poverty because it has knock-on or multiplier effects on local markets for other goods and services provided by non-farm rural poor, such as construction, manufacturing and repairs (World Bank, 2001).
- These agricultural activities can provide such environmental services as the conservation of soil and water, the maintenance of bio-diversity, and a contribution to locking up carbon. These services are important to society in both urban and rural areas as well as locally and globally.

Smallholder farming is taking place in the context of a number of global drivers and meta-trends that are reshaping the global agricultural economy,

providing rural producers with new opportunities, but at the same time are placing the livelihoods of rural producers in the developing world under intense and increasing strain (see Table 1).

Table 1. Global drivers and meta-trends

Global drivers	Meta-trends
What drives globalisation?	Global and local trends independent of globalisation
<ul style="list-style-type: none"> • Trade liberalisation • Intellectual property rights • Food safety and quality standards • Foreign direct investment • Scale of agro-industry 	<ul style="list-style-type: none"> • Technological change • Urbanisation, increasing incomes, population pressure • Shifts in food consumption patterns • Environmental degradation

Source: Narayanan and Gulati, 2002

Faced with growing populations and inequitable land distribution, smallholders face the challenge of intensifying agricultural output without destroying the land resource (soil, water and land) upon which it all depends. Africa, however, is rather more fortunate than South Asia or Latin America, in that most countries have relatively equitable land distribution (InterAcademy Council, 2004). What is unequal in Africa is farmers' access to new technology and access to both input and output markets.

The achievement to date has not been particularly encouraging: it has been suggested that, worldwide, approximately 12×10^6 ha of arable land are destroyed and abandoned annually because of unsustainable farming practices (Pimentel et al., 1995)

A more recent threat to smallholder agriculture, especially in sub-Saharan Africa is the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) pandemic. The impact of HIV/AIDS in terms of morbidity and mortality is particularly severe in the agricultural sector in Africa. According to the Food and Agriculture Organization of the United Nations (FAO) some 7 million farmers and farm workers in 25 African countries had died of AIDS by 2000 and 16 million more will die by 2020 (FAO, 2001).

There is also the growing phenomenon of the rapid growth in demand from expanding urban populations in developing countries (FAO, 2004). As a result of this demand, food systems can no longer be viewed simply as a way of moving basic staples from farm to local plates. Producers now often supply long and sophisticated market chains, and market processed and branded products to mainly urban

consumers (Barghouti et al., 2004). This is particularly the case with the growth and increasing concentration of supermarkets (Weatherspoon and Reardon, 2003).

In the context of the global drivers and meta-trends outlined in Table 1, farming's capacity to provide the sole means of survival for rural populations is diminishing fast. There is, therefore, little justification for an exclusive reliance on primary agricultural development to improve the quality of life in rural areas (Dorward et al., 2004). Rural non-agricultural employment (RNAE) is re-emerging as a critical issue in sustaining viable rural economies and reducing rural poverty. The definition of 'non-agricultural' excludes primary production, whether in agriculture, fisheries or livestock, but covers manufacturing (including agro-processing) as well as such services as transportation (Berdegúe et al., 2000).

The contribution of RNAE to rural people's livelihoods should not be underestimated. In sub-Saharan Africa, a range of 30–50% reliance on non-farm income sources is common and it may attain 80–90% in southern Africa (Ellis, 1999). The importance of RNAE is likely to increase because agriculture today requires improved linkages with input supply systems, agricultural processing chains, and systems for the distribution of fresh and processed products, particularly when farmers move into higher-value crops (Barghouti et al., 2004).

As the four thematic papers have illustrated, if the rural agricultural enterprise sector (encompassing both primary production and value-added to agricultural products) is to continue to have a major role to play in pro-poor growth¹, a number of challenges have to be overcome, these include:

- Depressed international crop prices and unfair competition in domestic markets from imported products due to subsidised agricultural over-production in the developed world
- Physical and commercial isolation from the markets and potential channels of economic growth emerging in domestic or international trade
- Inadequate access to the knowledge, technology and skills needed to diversify rural livelihoods and secure markets for increased agricultural productivity (Marter, this volume). Farmers often find it difficult to meet the market demands for quality, quantity and continuity of production as well as the standards set by Organization for Economic Co-operation and Development (OECD) countries (Walker, this volume)
- Lack of trust within the market chain (Best et al., this volume) and also between producers (Biénabe and Sautier, this volume).

Faced with these challenges, there are those who question whether there is really any future for smallholder farming (Maxwell et al., 2001), but on the other hand, the United Nations Millennium Project Hunger Task Force was established to promote immediate action towards achieving the Millennium Development Goal (MDG) of reducing hunger by half by the year 2015 (The World Bank Group,

¹ Pro-poor growth is growth that is good for the poor (DFID, 2004). One definition of pro-poor growth considers only the incomes of the poor and the extent to which growth is 'pro-poor' depends on how fast the incomes of the poor are rising. Pro-poor growth can be seen as the average growth rate of incomes of poor people.

2004). The Task Force is emphasising the need to renew and increase support for smallholder farming (FAO, 2004). It is generally expected, however, that in the future a smaller proportion of the population will be involved in farming and that larger numbers of people will be employed in other parts of the rural and urban economy (Tripp, 2001).

If the collapse of rural economies is to be prevented then policy mechanisms must be found to enable rural populations to share in the potential economic growth created by some of the global drivers and meta-trends outlined in Table 1. In the recent past agriculture and rural poverty reduction policies have largely been influenced by one of two broad strands of thinking: trade liberalisation or technology-led solutions.

Trade liberalisation

Trade-distorting policies by OECD countries are particularly harmful to African agriculture because of agricultural production subsidies, limited market access and export subsidies (InterAcademy Council, 2004). The trade liberalisation approach aims to stimulate demand for rural production through a more optimal allocation of resources in the agriculture sector. This involves removing foreign exchange distortions, tariffs and subsidies that distort agricultural markets. These reforms reflected the principles of what became known as the *Washington Consensus on Agriculture* (World Bank, 2001).

The argument is that market liberalisation will enable African smallholder farmers to exploit their comparative advantages in land and labour and by so doing will be able to access growing northern markets. There is evidence to back up this assertion: using economic simulation models, Runge et al. (2003) have estimated that sub-Saharan Africa stands to benefit most from trade liberalisation in terms of the share of the value of agricultural production and of GDP that such economic benefits would represent. The authors calculate that trade liberalisation would lead to sub-Saharan Africa's exports increasing by US\$10.7 billion by 2025, a 45% increase. This is in contrast to the last two decades, during which Africa has lost ground in the global market place for its agricultural exports. The region's share of total world agricultural exports has fallen from about 6% in the 1970s to 3% today (Diao and Hazell, 2004).

It is also important not to focus exclusively on export markets: domestic and intra-regional food markets are another potential source of demand for Africa's agricultural products (Peacock et al., 2004). As Table 2 shows, the current value of sub-Saharan Africa's domestic demand for food staples is approximately US\$50 billion. This figure dwarfs the current value of the exports. Admittedly, only some of this output is sold, but domestic demand is a growing market and one that offers real income opportunities (Diao and Hazell, 2004).

World governments regularly sound the clarion call for market liberalisation but their actions belie their rhetoric (Oxfam, 2002). In addition, market opportunities do not necessarily translate into benefits for farmers: under the Lomé Convention, for example, the European Union (EU) gave preferential market access

Table 2. Size of sub-Saharan Africa's agricultural markets

Market size (US\$ billions)	East Africa	Southern Africa	West Africa	Total sub-Saharan Africa
Exports to non-African countries	4.0	5.9	6.7	16.6
Intra-African trade	0.4	1.1	0.4	1.9
Domestic market for food staples	17.6	12.1	20.1	49.7

Source: Diao and Hazell, 2004

to the African, Caribbean and Pacific (ACP) countries, and yet exports from these countries to the EU fell from US\$23 billion in 1985 to US\$20 billion in 1994 (DFID, 2000). Furthermore, new suppliers from Asia and Latin America are proving to be very competitive in the export markets for Africa's traditional export crops, and rich importing countries are becoming choosier about products quality and standards (Walker, this volume).

Others have questioned whether the *Washington Consensus on Agriculture*, with its emphasis on trade liberalisation, provides as many opportunities for small-holder development as is claimed (Kydd and Dorward, 2001; Wiggins et al., 2002). Specifically, market liberalisation may have removed price distortions, but it has done little to benefit most small-scale farmers, especially those living away from roads and markets' (InterAcademy Council, 2004). As Vorley (2003) writes 'much attention has been focused on market distortions caused by protectionist trade policies. But even if unjust trade rules were to be reformed, disparities in bargaining power, scale, market access, information or access to credit, may still entrench anti-poor and anti-rural bias in markets'. Major obstacles, such as poor road infrastructure [Africa's road system leaves about 70% of its farmers poorly connected to markets (InterAcademy Council, 2004)] mean that the rural poor are unable to build links with market chains in ways that will improve their livelihoods.

Technology-led thinking

Smallholder farming in many parts of the world reaches productivity levels that are only one third of the potential yield under optimum conditions (IFAD, 2001). Only 7% of the arable land in Africa is irrigated against 40% in Asia, and fertiliser consumption in Africa is only 9 kg/ha compared to 100 kg/ha in Southeast Asia and 206 kg/ha in industrialised countries (FAO, 2005). Meanwhile, each 10% growth in agricultural productivity in Africa has been shown to reduce poverty by 6%, with more than 110 million poor in Africa, a 10% increase in crop yields could

help almost 7 million more people raise their incomes above the poverty line of US\$1 per day (Thirtle et al., 2001 cited in InterAcademy Council, 2004).

Based on the above, another strand of thinking currently dominating agriculture and rural poverty reduction policy seeks to stimulate the supply side of the rural economy i.e., agricultural production, through sustainable increases in agricultural productivity and value-addition (e.g., through the use of new crop varieties, improved seed, and better crop, animal and land husbandry).

The technology-led approach, however, has certain limitations. In some cases, there is little point in pushing for higher-yielding technologies when markets do not exist for the increased outputs, or when increased productivity merely saturates existing markets and depresses farm-gate prices (Dorward et al., 2002).

Furthermore, an assessment of future agricultural technology policies for rural development emphasises that most of the new technologies that will become available to farmers will be 'information intensive', i.e., requiring increased levels of knowledge for appropriate management (Tripp, 2003). In addition to basic technical knowledge, the rural poor need to be able to operate in increasingly sophisticated input and output markets because of the global drivers and meta-trends shaping the world economy (see Table 1). As Best et al. (this volume) point out in their paper on building linkages and enhancing trust, there is growing evidence that attempts to alleviate poverty and hunger through interventions targeted at improving staple cash crop production alone are not working. This is one of the reasons why NGOs, along with bilateral and multi-lateral organisations, whose focus in the past may have been almost exclusively on increasing agricultural production, are increasingly looking at how to make markets work for the poor. There is an emerging consensus that greater market literacy is needed in development policy and practice.

Why 'market-literacy'?

Access to markets can be an incentive to improved land management and increased agricultural production and productivity but, as mentioned earlier, trade liberalisation and technology-led solutions alone are unlikely to fulfil the agriculture sector's contribution to pro-poor growth in Africa. Resource-poor farmers seldom understand how the market works. They have little or no information on market conditions, prices and quality of goods; they are not organised collectively, they have limited experience of market negotiation and little appreciation of their capacity to influence the terms and conditions upon which they engage with the market (IFAD, 2001).

What is needed is a more comprehensive market-literate framework, one that brings together and builds on the technology-led and trade liberalisation thinking. The objective of a more comprehensive approach is to bring about improvements in the livelihoods in terms of the secure income/reduced vulnerability of poor rural producers working in market-based production systems. The market-literate approach aims to promote the growth and improved functioning/performance (e.g., competitiveness, productivity, employment, value addition,

linkage coordination, efficiency) of market chains in ways that benefit poor small-scale producers.

The improved functioning of market chains includes:

- Identification of market opportunities
- Greater inclusion and empowerment of women
- Better access to appropriate processing technologies
- Implementation of effective business organisation practices
- More efficient farm to market channels
- Timely access to affordable financial and business services.

In this context, Dorward et al. (2002) pose some searching questions for pro-poor analysis of rural livelihoods and markets (Box 1).

Dorward et al. (2002) point out that the questions outlined in Box 1 are both complex and challenging and could become unmanageable. They suggest that it is useful to have a unifying framework for the examination of the way that particular markets work. In the following sections an example of such a framework, the Market Map is introduced.

Box 1. Questions for pro-poor analysis of rural livelihoods and markets

- Who are the poor, what are the assets that they hold, what activities are they engaged in, what are their aspirations and livelihood strategies?
- Which markets are important for the livelihoods of the poor (or should be important for them) now or in the future, directly or indirectly?
- How well do these markets currently serve the poor, in terms of ease, security and conditions of access?
- How do these markets fit into supply and value chains? How do these chains operate, where are the constraints, where are the high returns being made?
- What stakeholders are involved in these markets and what are their roles, interests, strengths, weaknesses, opportunities and threats?
- What are the barriers to entry and the transaction costs and risks for different stakeholders?
- What is the institutional environment like and what are its effects on key markets– is it enabling or disabling? How could these be developed or modified to improve market access for the poor?
- What institutional arrangements are currently in place? Why are they in their current form? How could this environment be developed or modified to improve market access for the poor?
- How are these markets changing and how are they likely to change as a result of wider, external processes of change? What opportunities are there for support to wider process of growth?

Source: Dorward et al., 2002

The Market Map: a framework for making markets work for the poor

Meeting a development need

Earlier it was argued that a strategy for rural African poverty reduction should not only rely on trade liberalisation and processes of technological development. It requires a better understanding of how markets for smallholder produce in rural areas actually function, and the identification of appropriate innovative responses to this at the level of services and institutions. This in response to the fact that while markets can indeed provide a very efficient mechanism for exchange, coordination and allocation of many resources, goods and services, they do not always work as effectively and efficiently as we would like.

The aim should be to focus more attention on the processes and institutions, competencies and relationships that enable markets to work for poor rural producers. Awareness and understanding of these issues are called 'market-literacy' for short, and it is argued that this is an important requirement in the design and implementation of both agricultural research and rural development programmes that aim to reduce rural poverty generally.

The Market Map serves two purposes. For the policy maker and rural development planner, it is a conceptual framework for thinking about the commercial and institutional environment in which small-scale producers (including smallholder farmers) operate. For the practitioner, it is a practical and potentially participatory tool that can be used to represent and communicate knowledge about specific producers, their market chains, and institutional environments and service needs.

The thinking behind the Market Map reflects changes in the policy context over the last 40 years. In over-simplified terms, there has been a change from an emphasis on supporting supply (through state provision of extension, input supply and credit services) to an almost exclusive focus on stimulating demand as part of structural adjustment and liberalisation (Peacock et al., 2004). The pendulum is now moving back towards a growing interest in institutional issues around market failures and service delivery problems facing smallholder producers.

The more market-literate approach illustrated by the Market Map provides development practitioners with a conceptual and operational tool to facilitate pro-poor growth in rural areas and to close the wealth gap between Africa and other parts of the world. As can be seen later, processes of elaborating the Market Map, if conducted in a participatory way, can be a vital intervention in themselves – directly improving linkages and relationships between market-chain actors, and preparing the ground for introducing or generating innovation in products, processes and market access.

Antecedents of the Market Map

One of the Market Map's strengths is that it is the product of an inter-disciplinary initiative drawing together practitioners from several fields, including small enterprise development, natural resource management, fair trade, agricultural mar-

keting and community development. It is considered that the Market Map will be particularly useful in broad-based multidisciplinary programmes, where winning adherence to a coherent shared conceptual framework can often be very difficult.

Practical Action (the new name for the Intermediate Technology Development Group, ITDG) developed the Market Map initially at a workshop involving international staff from Africa, Latin America and South Asia in 2002. Since then the framework has been adopted and adapted as training tool by such organisations as TraidCraft and Oxfam. These, and other experiences, will be discussed further in section 3. Readers will almost certainly recognise aspects of other tools and approaches in this work. The formative ideas that have contributed to Practical Action's thinking include:

- Sub-sector Analysis, as originally conceived (Haggblade and Gamser, 1991) and subsequently adapted (Lusby and Panlibuton, 2004)
- The Sustainable Livelihoods Framework approach² and the recognition that in the conceptualisation and application of 'livelihood approaches' there is often a lack of emphasis on markets and their roles in livelihood development and poverty reduction (Dorward et al., 2002)
- Value-chain analysis (Kaplinsky and Morris, 2005), particularly participatory approaches (Mayoux, 2003).
- The territorial approach to rural agro-enterprise development (Lundy et al., 2005) used by Centro Internacional de Agricultura Tropical (CIAT) and discussed in one of the thematic papers seminar (Best et al., this volume).

The Market Map: an initial orientation

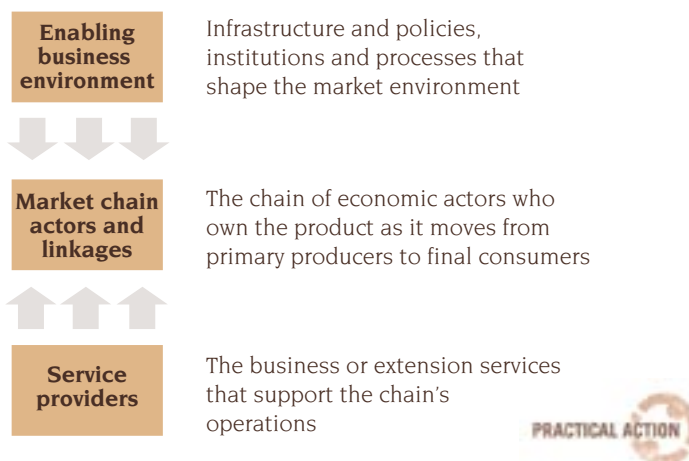
The Market Map is designed to be used after particular product groups (or sub-sectors), that appear to offer growth potential for poor producers/smallholders, have been identified. Appropriate criteria for selecting appropriate products or sub-sectors have been described extensively by others, e.g., CIAT (Best et al., this volume) and Action for Enterprise (AFE) (Lusby and Panlibuton, 2004) so these are not covered here. The Market Map is made up of three inter-linked components (see Figure 1).

The market chain actors

The central component of the framework is constructed by mapping the economic actors who actually own and transact a particular product as it moves through the market chain from primary producer to final consumer: smallholders and larger-scale producers, traders, processors, transporters, wholesalers, retailers etc., see Figure 2.

In many cases, the market chain comprises more than one channel and these channels can also supply more than one final market. A comprehensive mapping therefore describes interacting and *competing* channels (including those that perhaps do not involve smallholders at all) and the variety of final markets into which these connect. As far as possible, information about product volumes and values,

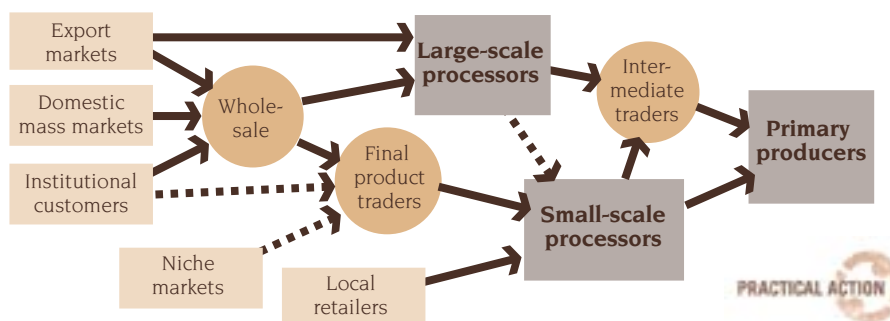
² e.g., DFID's version at Livelihoods Connect website www.livelihoods.org

Figure 1. The Market Map: an overview

Source: Albu and Griffith, 2005

and numbers of enterprises or livelihoods supported at each point in the chain is overlaid on the map – as for a standard sub-sector analysis (Haggblade and Gamser, 1991). Information about patterns and trends in the data is also incorporated.

Defying convention, the typified framework schematic (see Figure 2) reverses the direction of the chain. It shows the flow of *income* from markets along the chain to primary producers, rather than (as is conventional) the flow of *goods* in the opposite direction. This counter-intuitivism is introduced deliberately to emphasise a demand-led perspective. It provokes users of the Market Map to consider how market chain linkages and functions can be improved so as to facilitate the flow of income to target producers who are perhaps furthest from end-markets. Instead of asking ‘how can these smallholder farmers get more income for this crop?’ it suggests the question, ‘How might a greater share of (say) urban expenditure on this product reach these farmers?’ be asked This mindset can help preclude

Figure 2. Market chain actors and channels of demand

Source: Albu and Griffith, 2005

negative presumptions about the role of intermediaries, and increase understanding of competitive pressures from other channels.

A critical early step in applying the Market Map lies in selecting which markets and channels offer the best prospects for enhancing poor producers' livelihoods. This decision – informed by an overview of the prospects and relationships between competing channels – determines the focus applied to developing the Market Map further. At this stage, the potential for establishing new linkages in the market chain can also be considered.

Once the potential of a specific market channel (or a number of alternative channels) has been identified the analysis moves into a more-detailed consideration of how value accumulates along the market chain. By better understanding the contribution each actor in the chain brings to the product, the aim is to identify inefficiencies, inequities and losses that could be remedied, or added value that could be captured, particularly by poor producers. A comprehensive market-chain analysis will explore how the chain is 'governed' since this influences how profit margins are divided up through the chain, i.e., which actors or other institutions: a. define the conditions for participation in the chain, b. ensure compliance with these rules, and c. provide assistance with meeting these rules.

While many market chains are characterised by inequitable relationships between actors, a clear objective of the Market Map approach is to help stakeholders realise mutual benefits by improving the 'systemic efficiency' of the chain. Helping stakeholders become more aware of the functions and processes that are needed along the chain in order to satisfy more lucrative or reliable markets is key to this. The advantages and challenges of participatory approaches – in all aspects of constructing the Market Map – will be discussed.

The enabling business environment

The second component of the Market Map is a charting of the critical factors and trends that are shaping the market chain environment and operating conditions, but may be amenable to change. These 'enabling environment' factors are generated by structures (national and local authorities, research agencies etc.) and institutions (policies, regulations and practices), that are beyond the direct control of economic actors in the market chain.

The purpose of charting this enabling environment is not simply to map the status quo, but to understand the trends that are affecting the entire market chain, and to examine the powers and interests that are driving change. This knowledge can help determine avenues and opportunities for realistic action, lobbying and policy entrepreneurship.

In thinking about the very wide range of factors, it may be useful to distinguish those that relate to *market demand*, i.e., prices, quantities, qualities and timeliness of supplies required by buyers; those that bear on *transformation* activities, i.e., costs of producing, processing, storing and moving produce; and those that affect *transactions* activities, i.e., costs of doing business (Kydd, 2002). The latter include such costs as:

- **Contracting:** building linkages, agreeing terms, monitoring performance and enforcing contracts
- **Securing finance:** costs of providing (or not being able to provide) collateral
- **Legal recognition:** licensing and business formalities
- **Quality assurance:** information and skills needed to understand, monitor and certify adherence to buyer's standards.

Transformation costs are naturally a prominent theme in current policy initiatives on rural African poverty. It is widely hoped that agricultural productivity could be significantly improved by technological development – in improved seed and livestock breeds, farming inputs, storage and processing techniques – and infrastructure investment, e.g., in roads, electricity or irrigation.

However, in market chains based on smallholder agriculture, transactions costs can easily outweigh the potential benefits of participation in the market – and thus render irrelevant the productivity increases achieved by investment in infrastructure and technological development.

The costs of transactions in market chains in rural African economies tend to be adversely high due to: diseconomies of dispersed low-intensity production, inaccessible legal systems, unclear title to property, and low levels of trust generally. In contrast to more-developed economies, transactions-cost-reducing institutions and structures (e.g., contract enforcement mechanisms, communications infrastructure, land registries, trading standards, organisations of producer collaboration) are very weak.

Even more problematically, many of the institutions that do exist often hinder and block rather than facilitate people's own efforts to move out of poverty – being simply misused to extract administrative rents from producers, processors and traders. Some of these blockages are legally sanctioned, such as by-laws, licensing regulations and local-level taxes; and others take the form of arbitrary small-scale abuses of power by people in authority³. It is common to find abuse of procedures from authorities responsible for: policing transport, ensuring public health, licensing business premises, or protecting the natural environment, to identify just a few. As a result the local-level policy environment often remains inimical to self-employment and start-up business. Local enterprise often arises 'outside' the regulations, i.e., as an unrecognised informal-sector activity, and depends on paying off local officials to allow continued operation (Ellis, 1999).

A particularly pervasive institutional factor that needs to be considered often takes the form of socially enforced gender roles. In many communities, these roles obstruct women smallholder farmers and entrepreneurs from participating in certain kinds of financial transactions, block their access to markets and/or deny them ownership of property or control of income. To reiterate then, the factors that are

³ Ellis and Harris (2004), list for example: payments required in order 'to stay on the right side of authority' when in business; fake prohibitions on livestock movements or fishing boats created in order to extract fees; gratuities demanded by chiefs for rights of access certain resources; and fees required to secure public services that should be delivered free.

likely to be important in the enabling environment for specific agricultural market chains in Africa include those relating to:

Market demand

- Consumption trends (volumes, prices and quality expectations)
- Tax and tariff regimes

Transformation activities

- Infrastructure (constraints and investment policies)
- Technological development (seeds, breeds, inputs, processing etc.)
- Transport licensing and regulation

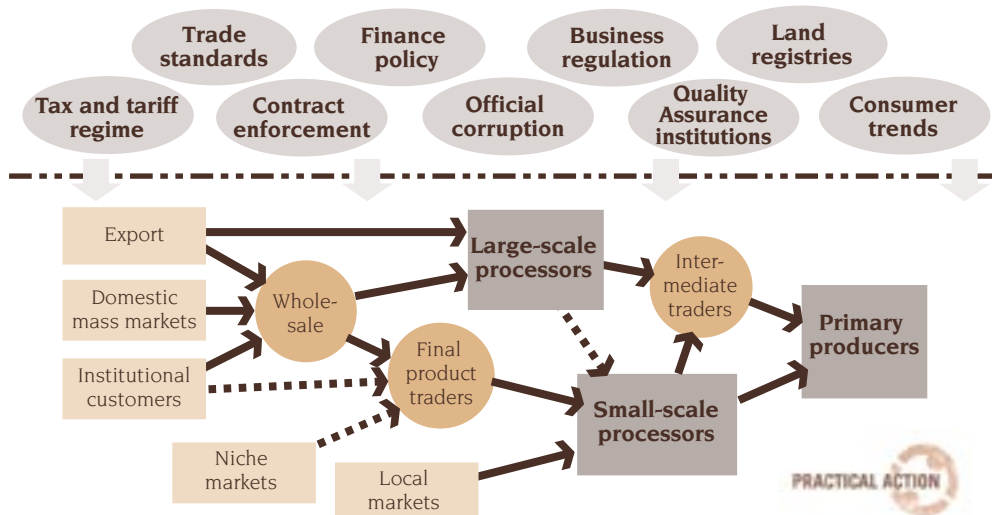
Transactions activities

- Systems for agricultural finance
- Gender roles in business and financial affairs
- Registration of land and property
- Commercial law and practices (including contract enforcement)
- Business licensing and regulation
- Product standards and quality assurance.

In using the Market Map specific factors, issues and trends that are identified as significant influences on market-chain operations are recorded above the market chain itself. Priority is given to identifying and unpacking issues that are likely to cause significant impact on market-chain operations or are relatively amenable to change themselves (see Figure 3).

As before, a key objective in applying the Market Map approach is to help market-chain stakeholders become more aware of these factors and trends. Action to improve the enabling environment usually depends on concerted lobbying, co-ordinated campaigns or advocacy.

Figure 3. Factors in the enabling business environment



Source: *Albu and Griffith, 2005*

Clearly, if the process of charting the enabling environment is participatory, it is more likely to build the trust, coordination and collaboration between actors in the market chain needed to achieve this.

Business and extension services

In most effective market chains the economic actors who actually form the chain (i.e., transact the main product) are supported by services from other enterprises and support organisations. As Best et al. (this volume) note, once an enterprise has been established, there is an on-going need for it to access services of different types, both market and technical, that will allow it to grow and maintain its competitiveness.

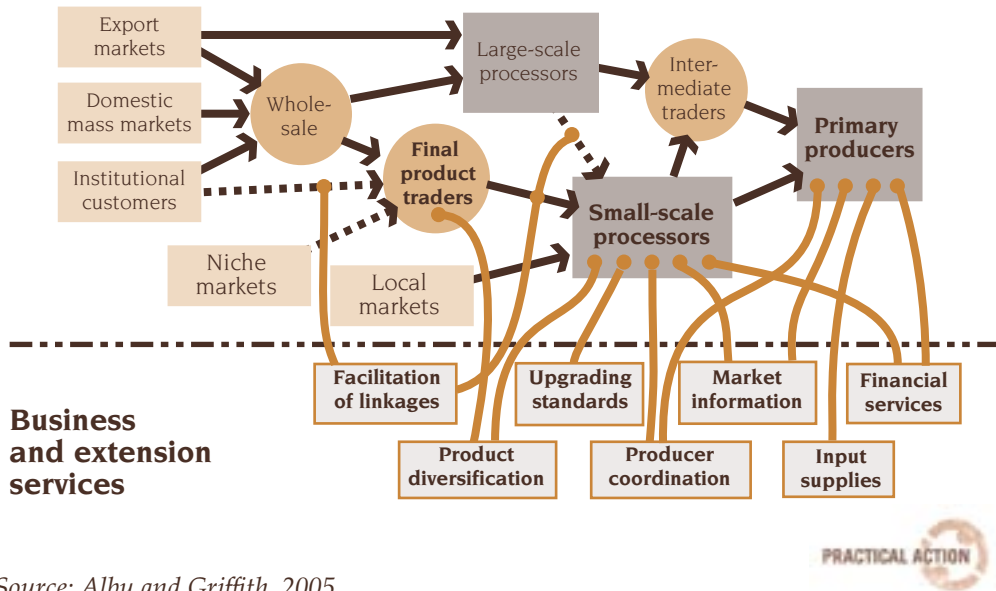
The third component of the Market Map framework is concerned with mapping those services that support, or could potentially support, the market chain's overall efficiency. Such services can be referred to as business development services (BDS), business services, or even livelihood development services (Miehlbradt and McVay, 2004). The range of services that can potentially add value is huge and includes:

- Input supplies (seeds, livestock, fertilisers, etc.)
- Market information (prices, trends, buyers, suppliers)
- Financial services (credit, savings or insurance)
- Transport services
- Quality assurance – (monitoring and accreditation)
- Technical expertise and business advice
- Veterinary services
- Support for product development and diversification.

Mechanisms of service delivery can differ substantially. In exploring what already exists, it is important to recognise that the options are not confined solely to conventional government *extension services* and private *fee-based services* or input providers. There are also *embedded services*, where services are incorporated within a commercial transaction for another product, e.g., pest control advice offered by a trader to a contract farmer. And finally there are *informally provided services* where the service, such as information or advice, is negotiated through social networks and reciprocal relationships, which may be 'invisible' to outsiders (Hitchens et al., 2004).

At this stage mapping 'services' involves identifying particular service needs and their locations within the market-chain in order to get an overall picture of the opportunities for using services to improve market-chain efficiency or equity (see Figure 4). This mapping is a precursor to subsequently assessing the most appropriate mechanisms for delivery of services, in terms of outreach, sustainability and cost-effectiveness.

Where fee-based service delivery looks broadly feasible, much can be learned from small enterprise development. Since the mid 1990s the BDS market development' approach to business services for small enterprises has accumulated a persuasive body of experience about creating diverse, sustainable, client-

Figure 4. Business and extension services

Source: Albu and Griffith, 2005

responsive services even where existing markets are weak or under-developed. The goal of the approach is to enable small enterprises to buy the services of their choice from a wide selection of (primarily) unsubsidised private-sector suppliers in a competitive and evolving market (Miehlbradt and McVay, 2003). The role of governments and donors is then seen to be one of facilitating this process through interventions that build sustainable market institutions and social structures – but not to undermine the emergence of these institutions and structures by directly delivering or subsidising services.

As a direct result of the emergence of the BDS market development field, significant work has been done to elaborate practical methods of assessing the market for services. These methods enable one to gauge what services are potentially viable and understand the demand or supply-side constraints that have to be addressed to develop a vibrant and sustainable market.

BDS market development approaches were initially applied most successfully to services needed by small and medium-sized enterprises (SMEs), often urban-based, rather than rural micro-enterprises or smallholder farmers. SMEs may, of course, be important actors in market chains that involve smallholder farmers and rural enterprises. More recently however, it has been suggested that BDS market development approaches have direct relevance even to rural producers in weak economic environments (Hitchens et al., 2004).

An important point is that even where fee-based services are not commercially viable – for example, because of the high transactions costs encountered in financing services and contracting services on a micro-scale, a market development approach may still be relevant. Embedding services within other commercial

transactions is a common and effective way to reduce transaction costs, particularly those related to financing inputs. Examples include:

- Inputs (seeds, fertilisers) provided by buyers of crops
- Advice on grading and packaging products from traders
- Training in pest management provided by input suppliers
- Contract farming in bananas, cacao and coffee.

But embedded services can create their own problems of control and coordination with associated risks for the service provider. For example, how does the trader who provides a farmer with valuable technical advice to improve his/her crop yield, ensure the crop is not sold elsewhere? It could be argued that these risks can be mitigated by building greater mutual understanding between actors along the market chain: greater awareness of the rewards of raising overall market chain (systemic) efficiency can contribute to achieving the necessary levels of trust and collaboration (see examples in the following section and Best et al., this volume).

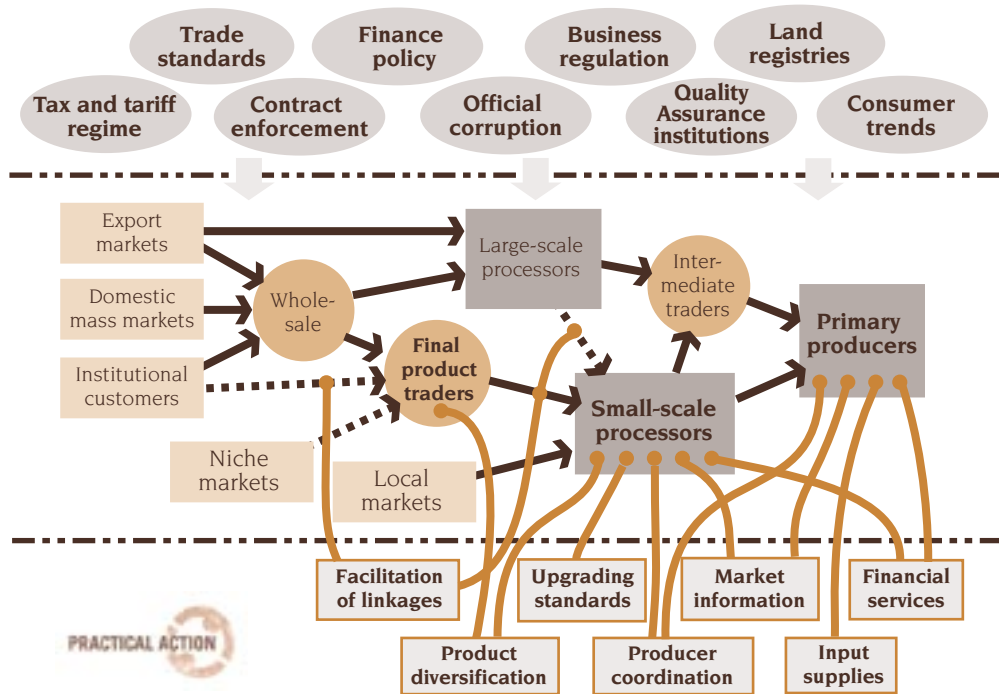
Finally, there are informally provided services. These are not merely reciprocal arrangements between individuals. In many situations, for example, the requirement for systemic efficiency is better collaboration between large groups of producers to achieve economies of scale in: bulk purchasing of inputs; assembling produce for storage and transport; group commissioning of specialist fee-based services, and access to intelligence on prices, market and technology trends (Biénabe and Sautier, this volume). This co-ordinating function is often best achieved informally by producers collectively working for themselves – as a kind of ‘service’ provided by their own social networks and institutions of voluntary collaboration.

The point to note here is that as one moves away from purely fee-based services to services that are embedded in other transactions or organised through collaborative institutions, there are substantial advantages to be gained by strengthening relationships and mutual understanding among small-scale producers and between actors along the market chain. The Market Map can be used to help this happen by: a. representing and communicating shared knowledge about specific market chains, and b. by fomenting on-going dialogues between different actors participating in the process of its research and construction.

Participatory Market Mapping

The Market Map in its entirety (see Figure 5) has proved to be a very useful way to visually represent and succinctly communicate knowledge about specific market chains’ actors, operations, contexts and needs to different stakeholders. These stakeholders include farmers, traders, project managers and policy makers.

Furthermore (and more importantly), the process of mapping the market-chain structure and actors, diagnosing the key enabling environment issues and assessing service needs can – if conducted in participation with market-chain actors themselves – be a powerful way to build understanding and trust between stakeholders. Best et al. (this volume) point out that following sub-sector selection, a more in-depth analysis of the supply chain for selected product or products is required, through which specific actors are identified and characterised, relationships

Figure 5. The Market Map complete

Source: *Albu and Griffith, 2005*

among actors are understood, bottlenecks are identified and actions proposed for overcoming them.

Participatory market chain analysis (PMCA) has been used by a number of organisations including the Centro Internacional de la Papa (CIP) in the Andes where it is seen as a method of involving market-chain actors in sharing knowledge and building trust in order to generate joint innovations (Bernet et al., 2005). Participatory approaches to market chain analysis contribute to Market Maps that are more likely to be accurate and to represent a wider range of knowledge. More importantly, the participation provokes interest and builds trust. Ultimately it can facilitate the collaboration that is necessary for improving linkages and efficiencies within the market chain, for effective lobbying on enabling environment issues, and for coordinating collective action around services (see Boxes 2 and 3).

The Market Map therefore needs to be seen as a tool for action as well as a framework for thinking about agricultural research agendas and rural development programme strategy. Application of the Market Map could be part of the process of institutional development that needs to happen (with smallholder farmers and others in the market) – introducing market literacy at all levels – alongside technological development and economic liberalisation. In the following section ways to make the map and framework operational and some of the challenges likely to be encountered are discussed.

Box 2. Blackberries and participatory market chain analysis in Colombia

There is a demand for blackberries as a fresh fruit and as an input to the growing fruit pulp industry in Colombia. In the Cabuyal watershed in 2001, blackberry production was managed by an estimated 65 small-scale producers located in and around four villages. Work by Corporación para el Fomento de los Comités de Investigación Agropecuaria, a local NGO, revealed a rustic production system with limited use of appropriate techniques, serious pest and disease problems, and low yields. Inappropriate post-harvest management and packing led to important product quality degradation, and as a result, much of the fruit produced did not meet quality standards for higher-priced markets. Furthermore, no local organisation existed through which support for blackberry marketing could be effected.

By bringing together producers, truck owners, intermediaries, and input providers, it became clear that a major limitation to improved competitiveness in the market chain lay in the lack of farmer organisation. A production system composed of individual farmers plays into the hands of intermediaries who can use their access to information to maintain low farm-gate prices, and also increases costs for such services as inputs and transportation, with few checks on the quality of the services. Interestingly, these points were raised not by the farmers but rather by truck owners, input providers, and intermediaries who said that they would be willing to provide better support services at more competitive prices if there were a local producer's organisation with which they could negotiate.

Following discussions, blackberry producers formed a community business organisation through which farmers would not only sell their fruit, but also access bulk quantities of inputs such as organic fertiliser, classify their production, and group their fruit for travel to the market.

Source: CIAT, 2001

The Market Map and operational challenges

The previous section explained how the framework has been developed for application and adaptation in different and unique contexts. By sharing learning about the application of the Market Map it is hoped that users, whether policy makers or practitioners, will be better able to adopt the principles of the framework. This section gives some examples of how the framework has been used to date (albeit in a limited way), explores challenges, and draws initial lessons from those experiences.

Making the Market Map work

Within Practical Action the Market Map has been an invaluable framework for strategic development of the International Markets and Livelihoods Programme. It has provided a common language and approach to develop coherent programme objectives. Operationalising it at project level has been challenging for the

Box 3. Bamboo and participatory market chain analysis in Ecuador

In Ecuador, local NGOs, government officials and larger entrepreneurs expressed interest in exploring the opportunities to reduce poverty offered by bamboo. Supported by the Netherlands Development Organisation [Schweizerische Normen-Vereinigung (SNV)] they came up with a strategy for supporting the entire bamboo production chain. This would benefit a range of market-chain actors, including smallholder producers and traditional bamboo gatherers, as well as small traders, lorry drivers, manufacturers and exporters.

SNV conducted an evaluation of the bamboo production chain. This diagnosis was based on the participation of actors across the chain and revealed a number of problems. The process and its findings encouraged the actors to jointly discuss their problems. The Ecuadorian Ministry of Agriculture subsequently institutionalised this forum by creating a Bamboo Advisory Council (CCB). This was a vital step, as institutionalisation meant that the forum was more resilient and also that the sector now had an official mechanism for influencing sector policy.

SNV organised a strategic planning workshop that was attended by the main market actors. The participants drew up a document setting out the CCB's strategic objectives, activities, values and principles, as well as the roles and responsibilities of the various actors. The PMCA brought together groups who otherwise may never have had an opportunity to work together. One challenging problem at the outset was to overcome the lack of trust between the actors. Used in a participatory way, the PMCA enables actors to have a shared understanding of the market chain in terms of costs and benefits. This creates transparency, improves trust and creates more equal relationships.

The SNV is now helping to forge an alliance between on the one hand, small-scale producers, whose assets are: land, labour and bamboo production skills, and agro-industrialists, with their management and investment capacities and commercial contacts, on the other. Such an alliance has much more viability and impact than a new market chain consisting solely of small-scale producers. SNV facilitates the drawing up of long-term contracts between small-scale suppliers and agro-industrialists. Both parties stand to benefit from these: the small-scale producers will benefit in terms of higher prices, security of sales, provision of inputs, and information. The agro-industrialists will benefit from a secure supply of inputs, i.e., produce of the right quality delivered in sufficient quantities and in time.

Source: Marlin, 2004

international team, since using the Market Map in the design and implementation of projects involves adopting a new approach and inevitably it takes time to build capacity. Progress is being made, evident in a recent project in Kenya and this section benefits from the emerging lessons of that work. By sharing the Market Map with other organisations Practical Action has also learned from its application in different ways (see Box 4).

Box 4. Using the Market Map

An early adaptation of the framework was for a study commissioned by the Southeast Europe Enterprise Development (SEED) programme of the International Finance Corporation (IFC) for work in the Balkans to support the medicinal plants sector⁴. The team⁵ responsible for making recommendations used the framework to look at the sub-sector in a holistic way and structure their proposals for interventions in the sector. Using the Market Map to guide an analytical process produced a set of issues affecting the market chains of medicinal herbs, for example, weak regulation of the sector. By developing an understanding of the market chains and the issues affecting the actors in those chains the team were able to make recommendations. For example, the team considered that the private sector should be engaged in ensuring better regulation of the trade since it has the leverage to promote better standards of practice (e.g., through embedded services). Therefore their recommendation was self-regulation by the private sector, including the development of best-practice standards for sustainable harvesting and fair trade. This included determining minimum prices to be paid to collectors for particular species.

Source: Donnelly and Helberg, 2004

Initial analysis and mapping

As discussed earlier one of the strengths (and indeed primary purpose) of the Market Map is that it lends itself to participatory analysis of market chains. For this approach to be effective a two-stage analytical process is helpful:

- Initial mapping by the facilitator – produces a Market Map that shows the market-chain(s) actors, the services they require (actual and potential) and the enabling environment issues. One way of gathering information is to create an ‘Interest Group’⁶ that consists of stakeholders and key informants. The information gathered at this stage is used to facilitate the PMCA.
- PMCA, bringing together the specific actors in the chain (see below).

In Kenya a new project in the herbal products sector is using the framework to explore alternative livelihood options for marginalised pastoralists (see Box 5). It is a learning project researching approaches that enable producers and other market-chain actors to identify solutions to market-chain issues, regulatory constraints and service needs. The project team have produced the initial analysis, created a Market Map (Figure 6), and are now proceeding to PMCA, where the mapping exercise will be completed with market-chain actors who will develop solutions and innovations.

The initial analysis produced a Market Map (see Figure 6) that will be further developed by the market-chain actors during PMCA. By beginning to identify costs and added value at each stage of the chain the facilitators can challenge commonly

⁴ Balkans Herbal Development Initiative – Phase 1 Final Summary Report

⁵ Robert Donnelly, Traidcraft, UK; Ulrich Helberg, Helberg Consult, Germany; Flora and Fauna International, UK; Dragana Pecanac, Bosnia and Herzegovina

⁶ CIAT Rural Agro-enterprise Programme have explored using ‘Interest Groups’ comprised of market actors; service providers and local decision makers.

Box 5. Market Mapping in the herbal products sector, Kenya

Context – improving livelihoods of marginalised pastoralists

Pastoralists in northern Kenya have been facing the long-term erosion of their traditional livelihoods as a result of declining livestock prices, environmental degradation and conflict. Technology-led solutions were failing to improve livelihoods in the experience of Practical Action who have been working with pastoralist communities in Kenya for over 10 years. The areas they inhabit contain potentially valuable natural resources, including herbal products that were showing increasing demand in export markets. In 2004 a project⁷ was initiated to learn about approaches to successfully integrating marginalised producers into viable market chains. For the first phase the project selected an area, West Pokot, which characterises the typical aspects of the product sector. The initial mapping exercise by the project team has highlighted a number of challenges and issues at each of the three levels of the Market Map.

Improving linkages in the market chain

The project team carried out preliminary research that identified herbal products as a viable and growing sub-sector. Further research identified a product group – aloe – as important to the livelihoods of communities, and that there is growing demand on world markets. The project approach is to:

- Enable producers (harvesters and boilers) in West Pokot to establish a ‘Market opportunity group’
- Facilitate further market exploration to select the most promising market channels
- Conduct a PMCA (with market actors in the selected channels) to identify and tackle bottlenecks and opportunities.

Challenges include:

- Harvesters of aloe are disparate and disorganised
- Harvesters have misconceptions about what happens to their product; its value and destination
- Market-chain actors are very secretive about the trade because of the unresolved regulatory issues.

Creating an enabling environment

Key issues have been identified by interviewing key informants (including market-chain actors), producing a preliminary analysis of the local policy and regulating issues preventing effective participation by the communities in trade in aloe. Research into international trade issues (regulations, barriers) has been initiated. Examples of issues emerging from the analysis so far include:

⁷ The project partners are Practical Action, Traidcraft and Kenya Gatsby Trust, funded by Ford Foundation and Comic Relief. The project includes coastal communities producing neem for export and learning about the approaches in different contexts.

Trade restrictions – The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) requirement on aloe export since 1999 has pushed the trade ‘underground’ and considerably reduced the earning potential. All exports now illegally go via South Africa ‘hidden’ with other products. The so-called ‘Presidential Ban’, which never actually became law, has created further confusion making market-chain actors even more secretive.

Corruption is endemic throughout the chain, adding costs and creating distortions of power and interests, e.g., boilers pay bribes to local chiefs to enable them to negotiate lower prices (chiefs negotiate prices on behalf of harvesters).

Prejudice against Somali traders causes a high degree of mistrust and a lack of co-operation.

Access to better business services

Initial analysis has indicated that some embedded services exist in the chain, for example:

- **Quality checking** – boilers have devised a system to test the sap before purchase (based on its absorption); they also advise on best harvesting methods
- **Storage and bulking** – urban traders buy regularly from many boilers, taking higher quantities in the rainy season
- **Market information** – an order from the exporter triggers action in the chain and information is passed down
- **Transport** – market-chain actors absorb the cost of transport.

Additional services which actors could require:

- **Harvester co-ordination** – the current arrangement of relying on the local chief leaves harvesters vulnerable to exploitation
- **Technical extension services** to harvesters, e.g., sustainable harvesting techniques (to protect supply since the source is getting depleted in many areas); advice on harvesting methods to improve quality, e.g., technology which extracts sap through gravity
- **Energy efficient technology** for boiling, to reduce fuel costs
- **Other stakeholders (such as the National Environment Management Agency (NEMA) require environmental impact assessment**
- **Certification** by Kenya Wildlife Service (KWS) to get CITES Appendix II.

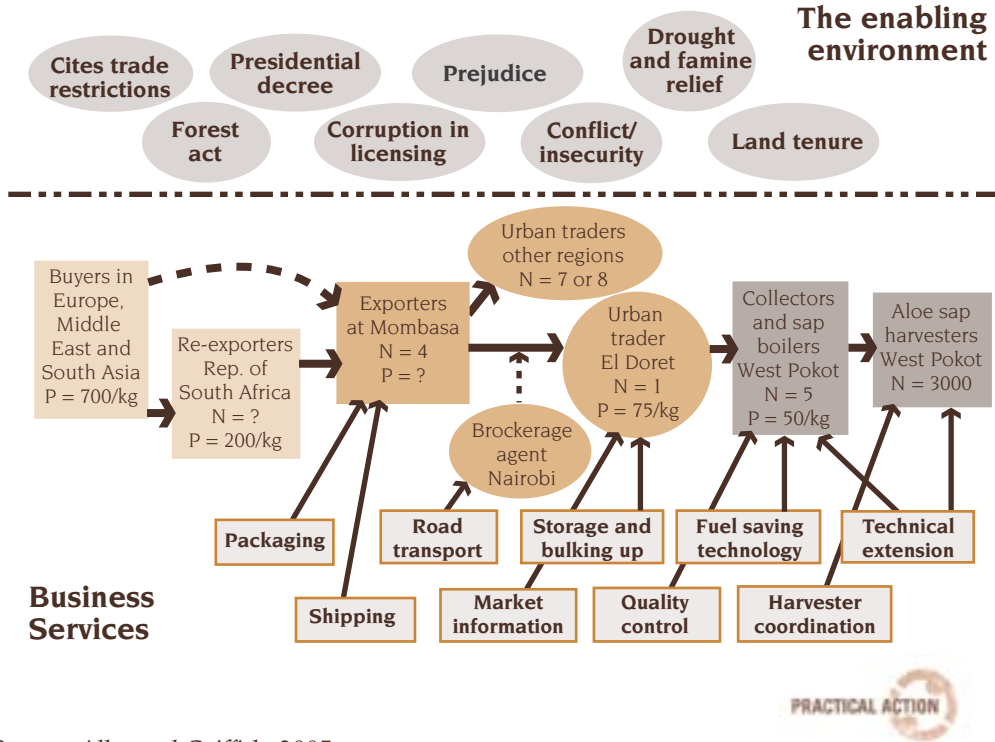
Potential for services (assessing potential demand and supply) will be explored during the PMCA.

held misconceptions around disproportionate shares of revenue in the chain, as highlighted by the example in Box 6.

The challenges encountered during the mapping phase have included:

- Developing the capacity of the project team to do the analysis (see below) – the approach was ‘learning by doing’
- Time and resources required to collate information about a market chain that stretches from remote northern Kenya to Mombasa and onwards to South Africa

Figure 6. Aloe market chain into West Pokot, Kenya



Source: Albu and Griffith, 2005

Box 6. Developing trust in the aloe market chain

Harvesters generally believe that boilers take an unreasonably high margin, whereas the reality is apparently quite different. The main issue affecting revenue and margins for actors in the chain is trade regulation (linked to 'unsustainable' supply issues). A strategy to tackle this problem is to apply for CITES certification, which requires a high degree of co-operation and co-ordination. In this case it would be in the interests of exporters and central agents to work with actors to address issues of sustainable harvesting at the other end of the chain, by for example, ensuring that harvesters and processors have access to the services they need to produce certified high-quality aloe.

- Building the trust of local stakeholders (particularly important because of the on-going conflict in the area)
- Managing expectations of not only the market-chain actors but also other stakeholders (e.g., those in the Interest Group). Producers often have an expectation of immediate benefits, such as higher prices. This can be partly mitigated by moving swiftly to the PMCA stage, taking account of the suggestions in Box 7.

The initial mapping of the aloe market chain enabled the project team to develop a systemic orientation and, more practically, prepare for the PMCA exercise. A key learning point to emerge is investment in this stage is important, since subsequent interventions will be more targeted and strategic.

Challenges and innovative approaches in PMCA

PMCA is at the heart of operationalising the market. It shifts from being an abstract framework and becomes a practical tool, which can facilitate improved efficiency (such as better co-ordination), innovation and improved trust within the market chain. However many practitioners are hesitant to try a PMCA approach because they believe that it will be difficult, if not impossible, to get market-chain actors together to achieve mutual objectives. Their reticence is not unfounded. Bringing together disparate, competing, demanding business people is undoubtedly challenging. This section shares some ideas on what the challenges are likely to be⁸ and offers suggestions on how to address those challenges. The boxed examples relate to the herbal products project in Kenya.

Attracting market chain actors – find a ‘Hook’. Very few market-chain actors (particularly those at the market end of the chain) are likely to attend a ‘development project’ meeting (even if they are being offered a free lunch). They are likely to be suspicious of the motives, e.g., they might suspect pressure to give their

Box 7. Finding a ‘hook’ in the aloe market chain

The aloe Market Mapping exercise identified two issues that the project team are now testing with market-chain actors:

- Exploring the potential for a specific market chain to acquire certification from sustainable harvesting to accredited exports. This involves all actors from harvesters in West Pokot to the exporter in Mombasa and a number of key stakeholders, such as the Kenya Wildlife Service (KWS) who manage CITES certification. The ‘hook’ in this case is that certified exports would enable direct sales to final buyers and therefore considerably more value will flow into the chain (US\$10/kg instead of US\$2/kg paid by the South African buyers). Exporters and agents cannot achieve this without harvesters and boilers following sustainable harvesting techniques
- Quality improvements: quality issues affect all market-chain actors, though there are certain stages in the chain where they may be critical. The processing stage (boiling) converts sap to bitters, which is the stable form of the product for export. Improvements in efficiency and subsequent increased revenue in the chain depends on this vital stage.

⁸ This section is based on a brainstorming exercise by the Practical Action International Markets and Livelihoods team in September 2004, using experience from Bangladesh, Kenya, Peru, Sri Lanka, Sudan and Zimbabwe.

suppliers a higher price. By identifying very specific common issues that concern all market actors, facilitators can turn these into an ‘offer’ that will ‘hook’ actors into the process (Box 7). Even if they are initially wary they will be more likely to attend if they can see a commercial benefit. Ideally the ‘offer’ should be achievable and directly relate to specific market-chain issues. Vague and overly ambitious offers such as ‘finding new markets’ may be less likely to keep actors engaged.

Balance of power in the chain. The actual and perceived imbalance of power within the value chain can be an impediment to PMCA. The perception that actors at the market end of the chain hold all the power is commonly held by facilitators, and very often by producers and small traders as well. They tend to believe that such an exercise would be a ‘waste of time’ because either the ‘big players’ would not be persuaded to come, or if they did, they would dominate the process.

This perception is not unfounded, but there are lessons emerging on how to create meaningful engagement that leads to positive changes. The more powerful actors in the chain often rely on the others further down the chain to provide a high-quality product, on time and to order, and they may need to invest to make this happen efficiently. Research in Kenya on smallholder co-operation and contract farming in the horticultural sector indicates that even the powerful actors (the contractors) needed to address issues of trust and collaboration, or else they could expect a high rate of default, which increases costs and reduces profit margins (Coulter et al., 1999). For a PMCA exercise facilitators can prepare producers in advance to understand their role in these events, and understand expectations of event results (Box 8).

Box 8. Preparing producers for a PMCA

Aloe harvesters are part of pastoralist communities (often the women and youth) who are living in relative isolation, with little exposure to commercial environments. The facilitator is working with them to create ‘Market Opportunity Groups’ which prepare the harvesters to engage with other market players in a constructive and informed way, and in time, to be proactive so they can explore new market links and respond to a dynamic market environment.

Mistrust between actors. Building up trust between market actors is important to facilitate open sharing of information. This is likely to take time and there may be a challenge to overcome hostility between different groups of actors. Possible strategies include:

- Facilitators visit and interview individual market actors as preparation for bringing the different groups together
- Facilitators adopt an incremental, iterative approach – engaging on one issue helps to build trust, information exchange and therefore further analysis of more complex or contentious issues.

Physical limitations to effective PMCA. When market chains stretch over long distances facilitators should consider several exercises in different places (Box 9).

Box 9. Challenge of a long-distance market chain

The aloe market chain is dislocated with actors spread over 1200 km, from remote northern Kenya to the coast, so the project is addressing this problem by holding initial partial market chain participatory meetings between such interacting actors as:

- Harvesters and boilers
- Boilers and traders/central agents
- Central agents and exporters.

These segments of the market chain overlap, so boilers, for example, will interact with both harvest and urban traders. The next step is to bring together as many representatives as possible from all groups in a central location to explore solutions and innovations to the issues they have identified in their market chain sub-section. This incremental approach also builds up trust (see above).

Minimising the impact of external influence, i.e., those not in the chain. To the extent possible it is important to try to minimise the ‘visibility’ of an NGO’s role as facilitator. Possible strategies could be to get key actors with power and influence that are well organised themselves (e.g., exporters’ federation) to organise discussions; however it would be important to mitigate for the dangers of introducing bias. Similarly it may be possible to exploit government agencies that have a mandate to promote particular sub-sectors, although the facilitator would need to be aware of perceptions of ‘political’ biases.

Establishing a local ‘Interest Group’ not only gives facilitators vital information for the initial mapping phase but also makes a clear and useful distinction between those actors involved in the PMCA, i.e., only those who are part of the chain, and the other key stakeholders who are vital players in that they create the enabling environment and provide services (Box 10).

Box 10. Aloe interest groups

The Aloe Interest Group is very focused but includes a wide range of local decision makers, service providers, research institutes, regulatory bodies, e.g., local chiefs, KWS, KEFRI, the Forestry Department, as well as selected market-chain actors (boilers and representatives from women’s groups involved in harvesting). The West Pokot Aloe Interest Group links with a national stakeholder group the Kenya Working Group on Medicinal and Aromatic Plant Species, which has a specific working group on aloe. These groups are distinct from, but will be vital to, the successful aloe PMCA.

Advice for facilitators of PMCA workshops. Facilitators should:

- Have a good overview/information about the sub-sector in order to anticipate conflicts and grievances but.....
..... beware of pre-empting what the map will look like
- Work ahead to 'sell' the advantages of participatory analysis to different market actors
- Anticipate complaints and grievances of particular groups that may dominate the interactions, so.....
..... negotiate 'norms' for running workshops through individual mediation, e.g., establishing clear agenda's in advance
- Understand that market actors may expect rapid results or changes as a result of the analysis process so.....
..... try to ensure interactions lead to rapid activities – gaining credibility for process
- Avoid being seen as 'extractive' process – drawing out knowledge from market actors, without giving much back

Developing 'in house' capacity for Market Mapping and PMCA

Market Mapping and the associated PMCA approach is likely to require investment in developing the necessary skills and experience within an organisation, particularly one that is focused on poverty alleviation and is used to directing its focus towards the needs poor communities. In the first instance there may be a need to explore misconceptions and/or a lack of understanding about how market chains work. To address this an interactive training tool for programme and field staff called the *Value Chain Game* has been developed by Traidcraft and Oxfam, using the framework of the Market Map (Box 11). The purpose of the training tool is to 'unpack' the framework for project managers and show how a holistic approach to market development involves a full understanding of all the actors in a value chain, and the issues that affect them, in terms of services and the environment in which they operate.

In some agencies there has been a tendency to promote alternative value chains, often on the premise that 'exploitative' middlemen are the primary reason for inadequate incomes at producer level. The training tool can be an important part in challenging that perception. It may also be necessary to challenge the inclination some agencies have to conduct the full analysis (often employing consultants for the task) so that they can decide what the interventions should be. To determine specific interventions a participatory approach has significant advantages (as discussed earlier), and it should be expected that the extra resources required would be justified by the quality of information and interventions that the process yields.

PMCA builds on the participation and facilitation skills that most development staff will already have acquired in other work, but with different actors. Beginning with the premise that it is the participants themselves who can most appropriately develop solutions and innovations, will be a familiar and comfortable approach (possibly unlike business consultants who are more likely to problem-solve on

Box 11. Value Chain Game

The Value Chain Game involves participants (development workers) mapping out a rice value chain and identifying the value added by each member of the chain. For example, a trader adds value to both the farmer, from whom s/he buys and the rice miller to whom s/he sells, for example:

Value added by a trader to a rice farmer:

- May often provide general market information, e.g., contacts, developments
- Will provide specific market information for the product s/he wants to buy
- Provides market for the product
- Often provides transport
- Will feedback on satisfaction with product and service.

Value added by a trader to a rice miller:

- Amalgamates small quantities into larger ones that make economic sense for the next buyer
- Often transports it to mill
- Carries out quality control
- Differentiates between different classes of product
- Presents product in form and at price specified by mill.

Some participants take the role of market-chain actors; others become service providers or actors in the operating environment (e.g., tax regulator). The service providers and regulators then approach actors in the chain to try and sell services or impact on their business with a 'requirement'.

The main messages participants receive from the training include:

- 'Middlemen' add value to the product and often have an important role in the chain
- Service provision is important at various points in the chain if it is to work efficiently and effectively, so when considering interventions don't focus just on the service needs of producers
- The enabling environment can seriously impede the chain and market-chain actors all have a strong interest to address this (leading to more effective PMCA).

behalf of the market-chain actors). Project staff may lack confidence with the bigger, more commercial actors in the chain but by employing the strategies described above they can develop confidence that they have positive reasons for engagement, taking an incremental approach to build up relationships.

The tendency to 'out-source' analysis and more commercial aspects of a project should also be challenged. Lessons from the BDS field indicate that there

are considerable benefits to staying involved in market assessment of, for example, services. In the process of gathering information about markets, practitioners build their understanding of how the market works and start to develop relationships with market players. There is increasing recognition amongst agencies that formal surveys conducted by research firms are less effective than positive engagement at a local level⁹. The learning for donors and practitioners then is to ensure that sufficient time is given to developing capacity for the processes involved in the analysis of and engagement with market chains.

Beyond analysis: challenges for developing interventions

The purpose of PMCA is to facilitate positive changes at the three levels of the market. The previous section described how the process of developing a Market Map through PMCA could result in changes to the functioning of the market chain, e.g., better co-ordination and improved linkages etc. Changes and improvements to the other two sections of the map, access to services and a better enabling environment, are more likely to require additional interventions over a period of time, involving facilitation of market-chain actors, service providers and decision makers. The PMCA process will be the first step in identifying what those interventions should be, and engaging actors in the potential solutions. The involvement of the market-chain actors is key since they will be the customers of services and the ‘voice’ of the affected. The final part of this section considers some of the practical issues and challenges associated with this.

Developing sustainable service markets. A challenge for practitioners is how to gather accurate information about weak service markets to make assessments that will stimulate the supply of services that are in demand. The PMCA is potentially a valuable way to conduct market assessment, particularly in market chains where there is usually a high incidence of embedded service provision. Practitioners are using different strategies to gather information in weak markets including focused interviews with market actors on problems, potential solutions, and business benefits that services can provide, rather than on actual services. This can then lead to product concept tests for new services in a group discussion setting¹⁰. The example given in Box 12 shows that the Market Map framework and subsequent PMCA process could be a way to achieve this engagement that leads to new services or service packaging.

Enabling environment analysis: developing a practical plan. Market Mapping and PMCA provide information about what is constraining the development of a particular market chain. To tackle those constraints and bring about systemic change

⁹ For example, Practical Action’s learning from Enterprise Development Innovation Fund (EDIF) funded Network Brokers project 2002–2004

¹⁰ Developing Commercial Markets for Business Development Service – Pioneering Systemic Approaches (Miehlbradt and McVay, 2004)

Box 12. PMCA and assessing service needs

Market information services in the aloe market chain are currently embedded; each market-chain actor passes down information to the next. The whole chain responds to orders from the exporter, although this becomes more dislocated further down the chain and is smoothed out by the actors who bulk and store. The initial analysis indicates that there is a need to improve market information services, highlighted by the example of a group of harvesters who, discovering the world market price of aloe bitters, refused to sell to the boilers at their offer price, even though in reality the boilers find it hard to make a profit. The PMCA process will facilitate the discovery of new solutions as the market-chain actors consider how information can be passed down the chain more accurately. It will be important to assess demand for 'stand alone' services to strengthen or complement the embedded ones, and explore how these might be developed as a commercially viable service. Members of the wider 'Interest Group' are key stakeholders in assessing the potential for developing market information services.

agencies need to develop strategies that target decision makers (local, national, and in some cases, international). In the natural resource and enterprise development fields learning is emerging about the potential effectiveness of advocacy activities that mobilise the voices of the poor and marginalised to bring about change. Examples include the donor community's growing interest in issues of governance as well as the increasing importance of farmers' juries as a means of rural producers to articulate their concerns, needs and frustrations (Coupe et al., 2005).

Policy implications

Market literacy at the micro, meso and macro levels

In the first section of this paper, it was argued that technological change and trade reform are not sufficient to generate poverty-reducing growth in agriculture. It was suggested that an injection of 'market literacy,' i.e., awareness, understanding of, and capacity to develop the processes, institutions, competencies and relationships that enable markets to work for poor producers – is necessary to realise pro-poor benefits.

In the next section a simple three-tiered framework called the Market Map that can be used for representing, analysing and planning interventions in markets that embodies this market-literate approach was explained. And in the third section three some examples of the application of market-literacy and the Market Map framework in the real world were described. These examples illustrate the benefits in terms of communicating knowledge and building linkages and coordination among diverse participants along actual market chains.

In this final section, the implications and challenges of adopting the market-literacy concept for policy-makers, organisations and programme managers concerned with pro-poor agricultural development are considered on three levels:

- **Micro** – strategies, alliances and practices of smallholder farmers, other producers and intermediaries, economic actors in the market chain
- **Meso** – strategies and operational structures of agricultural research institutions, government rural development agencies and NGOs
- **Macro** – broad agricultural and rural development policy, the operational approaches of multi-national agencies and national ministries.

Challenges for resource-poor producers and their economic partners (micro level)

The concept of market literacy as a key factor in development outcomes. It poses some major challenges for poor producers (smallholder farmers), other economic actors in market chains, service providers and other agencies working to encourage pro-poor growth. It emphasises that their fortunes are bound up with the capability of the whole market chain to respond (systemically) in a pro-active and agile manner to changes in the competitive environment and to emerging market signals (Best et al., this volume). Successful market chains that sustain, grow and generate income for producers will be ones that can find effective mechanisms for:

- Collaborating in production, procurement of inputs and services, and marketing activities, etc.
- Investing in market intelligence capabilities and market-information systems
- Communicating with and influencing the meso-level institutions that provide support services and infrastructure, or that can influence the business environment.

Market Mapping and PMCA provide information about what is constraining the development of a particular market chain. To tackle those constraints and bring about systemic change, agencies need to develop communication strategies that target decision makers. The preceding thematic papers outline many of the issues, challenges and ways forward with respect to each of the above points. Biénabe and Sautier (this volume) discuss the role of producer organisations. They emphasise the need to build organisational and negotiating capabilities over the long term. However, group formation is not a particularly useful strategy where this is independent of market-chain linkages. The most successful collaborative groups are formed around direct market linkages, for example, contract farming relationships. This gives producer groups a focus, reduces the demands of collective decision-making and makes it easier to define and absorb external assistance, e.g., help to achieve technical compliance with a buyer's contract.

In his discussion of market intelligence and market information systems, Marter (this volume) emphasises the value of involving producers in the design of systems, especially if they are to raise the confidence and negotiating skills of women. He notes the importance and difficulty from a sustainability perspective of establishing market mechanisms to pay for such semi-public goods. This raises

the question of how fundamental producer groups are in enabling smallholders not only to afford market information access, but also to have the skills to interpret and use information.

Best et al. (this volume) also recognise the value of market intelligence capabilities (as opposed to simply market information systems) at the micro-level. CIAT's agro-enterprise development approach employs a multi-stakeholder interest group to develop at a common vision and plan of action based on analysis of market opportunities. This paper compares various tools for achieving participation in market chain analysis – all of which implicitly value participation not only as a way to achieve better-informed analyses, but also as a means to build a form of indigenous market literacy. Box 13 outlines other approaches to empowering farmers to take advantage of market opportunities.

It is important to acknowledge that all these approaches take time and resources. Cost has been a major argument against wider promotion of FFS and CIAL approaches (see Box 13). CIAT's agro-enterprise development approach also requires methods that are intensive in the use of time and recognises the need for facilitation by persons with an appropriate level of technical knowledge and social skills. On a positive note, these costs can be seen as genuine investments in market development, with inherently more potential for reducing dependence and creating sustainable impacts than past strategies that created dependency on subsidised extension services. However, adopting market-literacy goals will clearly

Box 13. Empowering farmers

Experience in Latin America, with a range of participatory extension and research models such as farmer field schools (FFS) and local agricultural research committees *Comité de Investigación Agrícola Local* (CIALs) demonstrate that these may be effective in empowering farmers and providing them with some of the skills needed to take advantage of market opportunities. FFS is a training approach that was developed to help farmers understand integrated pest management as an alternative to chemical control. The format is now being extended to help farmers learn about market demand and product requirements as well as how to negotiate in new markets. CIALs develop farmers' research and learning capacities; they aim to encourage farmers to learn by doing, to criticise their own and others' work, and to adapt their processes to changing conditions.

These participatory methods can stimulate local innovation, because the emphasis is on principles and processes rather than recipes or technology packages. In some cases, farmers who participate in CIALs are learning how to manage funds, plan time, launch micro-credit schemes, prepare proposals to access external resources, and deal with outside agronomists and professionals on a more equal basis (Sherwood et al., 2000). A number of CIALs have launched small businesses involving the production and marketing of seed, and selling fresh or processed food products (Braun et al., 2000). Suitably empowered, farmers are better able to influence formal research and extension systems to their own benefit and to gain access to potentially useful skills, information and research products.

create major challenges for the people, skill-sets and structures of the meso-level organisations aiming to encourage pro-poor agricultural growth.

Challenges for agricultural research institutions and rural development agencies (meso level)

At the meso level a market-literate approach requires institutionalising a new way of thinking throughout organisations. Many meso-level organisations, such as NGOs, are shifting from a production focus to a market focus and this will require a new set of priorities (this also applies at the macro level – see Box 15 below). This commitment should lead to changes in allocation of resources. In the theme paper on linkages, Best et al. (this volume) suggest that meso-level organisations would find it useful to be clearer about their role as facilitators or providers, and in many cases where there is a change (usually from provision to facilitation) then there will be a need for support. Equipping staff to adapt to a market orientation is a process that will take time and needs commitment at all levels of an organisation. Priorities for organisations aiming to develop successful market chains that sustain, grow and generate income for producers include:

Using a systematic analysis of market needs and opportunities. A framework, such as the Market Map, used in different ways can assist organisations to design market literate programmes, projects and interventions.

Building capacity (people, skills and structures) for market-literate working practices. In the aloe example it was noted that a considerable challenge was building the capacity of the project team to conduct the analysis and facilitate the PMCA. Many organisations adopt a ‘learning by doing’ approach that has some drawbacks. It is important for practitioners to learn from others and also to invest in developing capacity to understand and apply a market-literate approach (including the use of appropriate analytical and participatory tools and methods).

Promote an inter-disciplinary ethos. New approaches in organisations can understandably be received with hesitance and scepticism. It is important to value and maintain the skills in, for example, natural resource management, but to complement them with stronger business and market skills.

Inform and influence at the macro-level. For example, in relation to identified enabling environment issues, in the second theme paper, Biénabe and Sautier (this volume) highlight the role of meso-level organisations acting as catalysts for producer representation on the specific issues affecting their product sectors and market chains.

Support and empower at the micro-level, e.g. participatory market-chain analysis. The third section discussed the challenges and innovation approaches to PMCA and ways to build the confidence and experience of facilitators so that the

Box 14. The market development approach to BDS

Donor and development programme strategies in the field of small enterprise development have radically altered since the mid-1990s – most dramatically in the realm of non-financial services (or BDS). Starting with a series of conferences sponsored by the Committee of Donor Agencies for Small Enterprise Development, the field coalesced around a set of core principles for BDS delivery, sometimes referred to as the market development paradigm. This reversed previous heavily subsidised strategies in which small enterprise support agencies typically tried to push free services out to their target clients. Instead, it rapidly came to be accepted that the role of donor-funded agencies should be to act as facilitators of the market for services – stimulating demand for a variety of services among customers and building the capacity of private service providers to fill that demand.

The widespread change in strategy among donors and practitioners, internationally, was achieved through a variety of ventures and activities that built momentum and enough consensus to support a new set of principles. The support for innovating and learning in this field is considerable, indicated by the new BDS Knowledge website (<http://bdsknowledge.org>), which contains information from over 100 agencies working in 70 countries. The initial investment required to bring about such a significant change was considerable and involved significant, co-ordinated and sustained support from donors. Examples of this support include the International Labour Organization (ILO) BDS seminar, which is an important annual event for practitioners from over 90 countries; practitioner learning programmes such as the SEEP programme on BDS Market Assessment funded by USAID; and comprehensive training programmes for decision makers, managers and specialists such as the Springfield Centre's 3-week intensive course that has trained over 300 people from 30 countries.

To stimulate parallel processes in the agricultural development sector might involve some of the following activities:

- Establish a supporting framework from key donors [e.g., USAID, DFID, Swiss Development Co-operation (SDC)] with resources to influence the field
- Cultivate an identifiable community of practice among policy makers, donors, researchers and practitioners to network innovation and experience about market literacy in the agricultural sector
- Build this community around a high-profile recognised annual event (e.g., a seminar)
- Allocate donor funds for action research that consciously brings together researchers and practitioners from around the world to share practices and stimulate South – South learning
- Establish a dedicated website to collate knowledge, papers and articles describing market-literacy practices, project experiences and toolkits
- Create high-quality training course(s) to disseminate knowledge among field practitioners and project managers, and establish benchmarks for best practice.

exercise develops relationships in market chains and results in tangible positive outcomes for producers.

Co-ordinate and collaborate. It is important to have a shared vision and objectives, for example, for a territory or sub-sector (Best et al., this volume) to ensure that the approach to market development is consistent (so that interventions to build a market are not undermined) and to negate to the extent possible gaps in, for example, service provision. Collaboration also promotes learning that is vital in a relatively new area. This can be formalised, through learning alliances or project partnerships, or it can be less formal, creating networks of those developing expertise in the area. A good example of this is the BDS market development field that has a variety of fora for practitioners to share learning. The lessons from the BDS market development field show how many macro- and meso-level organisations can work together to bring about a radical and lasting change in development approaches (see Box 14).

Challenges for governments and donor policy (macro level)

At the macro level, recognition of the market-literacy concept involves an orientation and commitment similar to that described for meso-level organisations above. Gibson et al. (2004) set out four clear priorities for governments and donors that involve embedding a more market literate-approach (Box 15).

Box 15 Making Markets Work for the Poor (MMW4P): an objective and an approach for governments and development agencies

While there are no easy formulae, there are clear priorities for organisations seeking to make sense of MMW4P in their work:

- **Recognise MMW4P as a key objective:** put MMW4P explicitly at the heart of organisations' strategies and aims; this is the first step to operationalisation
- **Understand the key stages in MMW4P as an approach:** build a thorough understanding of markets; develop a transparent (and shared) picture of how markets could work in the future; and ground interventions in these analyses is the essence of the MMW4P approach – in doing so, take cognisance of emerging principles of good practice
- **Internalise MMW4P:** take the broad objective and approach into organisations' realities. Using different tools (some of which are listed at the end of this paper), begin the process of aligning organisations' work with a credible view of market development
- **Engage with other players on this basis:** MMW4P requires that different players in markets know their respective roles and commit themselves to undertaking these effectively. Markets cannot be built by one organisation alone.

Source: Gibson et al., 2004

Lessons for governments and donors include:

- By introducing and emphasising ‘market-literacy’ in rural poverty-reduction policy it is possible, necessary even to make market analysis a prerequisite in agricultural research initiatives and rural development programmes (so that the analysis becomes as common-place and well established as environmental and social impact assessments)
- Embedding a market-literate approach requires investment and allocation of resources to develop the necessary skills
- Donors must be willing to lose some control over project design i.e., determining the specific interventions – these will not be known at the start of the project if the market approach (or similar) is taken, with full participation
- Investment in the analytical stage and in PMCA is important since subsequent interventions will be more strategic and targeted. Donor should encourage, rather than discourage, programmes that plan for this type of analysis.
- Consistency of approach is important. As Best et al. (this volume) point out ‘confidence is strained when conflicting approaches are espoused among and even within donor... agencies’
- Encourage joined-up government vis-à-vis enabling environment issues
- Developing-country governments need to be committed to confront inequality and find solutions (such as to corruption) –they need global institutions such as the World Bank, the United Nations, or the World Trade Organization (WTO) to tackle these issues – so that all move towards mutual understanding about the problems and how to address them (Best et al., this volume).

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