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## Community access to marketing opportunities: options for remote areas in Sub-Saharan Africa. Literature review (NRI report no. 2459)

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NATURAL RESOURCES INSTITUTE

**NRI Report No. 2459**

**Project A0769**

# **Community Access to Marketing Opportunities:**

## **Options for Remote Areas in Sub-Saharan Africa**

### **Literature Review**

**Andrew Goodland and Ulrich Kleih**

**March 1999**

*This report is an output from a research project funded by the United Kingdom Department for International Development (DFID) for the benefit of developing countries. The views expressed here are not necessarily those of DFID. R7148 Crop Post-harvest Research Programme.*



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## **ABBREVIATIONS**

|       |  |
|-------|--|
| CBO   | Community Based Organisation                         |
| DFID  | UK Department for International Development          |
| GRCO  | Gurage Roads Construction Organisation, Ethiopia     |
| IMT   | Intermediate Means of Transportation                 |
| ITDG  | Intermediate Technology Development Group            |
| MIS   | Market Information System                            |
| NGO   | Non-governmental Organisation                        |
| NRI   | Natural Resources Institute, University of Greenwich |
| UNCDF | United Nations Capital Development Fund              |

## **ACKNOWLEDGEMENT**

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## SUMMARY

This literature review was carried out as part of the research project “Community Access to Marketing Opportunities”, which was funded by DFID’s Crop Post-Harvest Research Programme from April 1998 to March 1999. The objective of the project was to establish a complete picture of agricultural market access related issues in remote areas of sub-Saharan Africa, with a strong emphasis on policy and institutional aspects.

A holistic approach is required to improve market access for farming communities in isolated areas. The main elements to consider include, developing an enabling economic environment for marketing activities, public and private investment in transportation, improved provision of related rural services (including market information systems, research and extension, and rural finance), and institutional development, including community based organisations. Institutional issues need to be considered in the context of the on-going decentralisation efforts in many African countries, which are highly significant for improved market access. This project complements other work in market access issues, and this review focuses on the following key aspects: decentralisation and institutional development, transportation (i.e. roads and means of transportation), and market information.

There are two key requirements for promoting marketing: increasing market opportunities (i.e. through economic liberalisation; market orientation; etc.); and, through increased market access to those opportunities. In this paper it is assumed that market opportunities exist in the form of demand on domestic and international markets. Increasing market access for remote communities requires a reduction of the costs involved in marketing activities. This paper identifies the most critical marketing constraints for remote communities as information costs and transportation costs, and the route to increasing market access involves lowering these costs.

Transportation costs are high due to, amongst other things, large distances, weak infrastructure, and the small volumes of produce transported. Costs can be reduced by optimising the provision of transportation infrastructure, i.e. providing infrastructure which is appropriate to users’ needs and means, and which can be constructed and maintained at low cost. The need for close consultation with affected communities, and instilling a sense of ownership, suggest that a decentralised authority may be best placed to oversee infrastructure provision at the local level, whilst private contractors carry out the actual construction and maintenance work.

If local transportation systems allow the accumulation of marketable surpluses in sufficient quantities, whether at periodic or fixed markets, private traders will be encouraged to participate in marketing. Such economies of scale may be achieved through marketing groups at the local level.

Lack of information limits market access by increasing transaction costs and risk. Producers are disadvantaged by information asymmetries. Traders are put off from dealing with small farmers in remote areas by the high identification and screening costs. An appropriate market information system (MIS) will improve the market

orientation of producers, and enable them to develop marketing strategies. Such a MIS needs to be sympathetic to the needs of remote communities with respect to the type of information and the media used to communicate the information.

Private sector participation is vital. Improving the infrastructure, information systems and institutional aspects of marketing will lead to increased volumes of trade, and encourage deeper penetration of private traders into more remote areas. The forging of linkages between the private sector and remote communities can be enhanced through group actions at the local level.

### **Way forward**

The paper points into the direction of a number of researchable areas for fieldwork to be carried out as part of the project in Malawi, Mali, and Uganda. This includes the following:

- a) Rural transportation policy in target countries, especially the role for decentralised authorities, and the extent of public participation.
- b) Examples of successful self-help groups involved in infrastructure services (e.g. construction and/or maintenance of roads and markets).
- c) Means of transportation: are communities adequately served by public transport and/or private transport? Are there any policies / programmes for the promotion of intermediate means of transport (IMT) ? To what extent has research been done in the target countries into IMT ?
- d) Market information systems. What exists and is it appropriate for remote communities?
- e) Policies promoting self-help marketing groups? Are there any successful experiences with marketing groups - especially those linked to the private sector?
- f) Co-ordination between ministries and between donors on market access related issues.
- g) To what extent do policies related to market access take account of issues such as rural poverty alleviation, gender and the environment?

## INTRODUCTION

### Background

The goal of this project is “to provide guidance for policy makers by establishing a complete picture of market access related issues and the options available, with special emphasis on institutional issues<sup>1</sup>.” There is general recognition of the role that improved market access can play in enhancing rural development and poverty reduction, though there is limited information on the extent and nature of the problem and of options for developing appropriate mechanisms to enable rural communities to take advantage of market opportunities. The focus of the project is on remote communities in sub-Saharan Africa, though experiences from around the world will be drawn upon to deepen understanding and provide approaches to overcoming constraints. This first activity of the project aims to identify the key issues and experiences relating to community access to market opportunities by way of literature review.

A draft of the report was produced in August 1998 as the first project output. The current version incorporates comments received on the draft plus some additional references obtained prior and during project work in Malawi, Mali, and Uganda.

### Definitions

Before embarking on a discussion of approach and survey design, it was deemed necessary to define the following key concepts:

Market Access: Farmers have sufficient information and the physical, financial and social means to purchase inputs or food, and sell agricultural produce on favourable terms.

Consequences of lack of market access: Low volumes of buying and selling transactions and unfavourable terms for the farmers, leading in turn to:

- Low yields and low production of cash and food crops,
- Low income, and
- Poverty, also in terms of food insecurity and access to basic services such as health and education.

Remote areas: In the context of this report, these are areas where,

(a) Transport costs per unit of produce are high, which is the result of several constraints, including:

- Inaccessibility, as a function of distance, road conditions, terrain, and climatic

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<sup>1</sup> Here, institutional issues refer to organisations belonging to the formal and informal private sector, public sector, NGOs, and donor community, and their responsibilities in the light of decentralisation.



conditions,

- Inadequate and inappropriate means of transportation, and
- Low volumes of produce available for transportation, preventing economies of scale.

(b) Producers lack information on not only markets but also other aspects of their business as a result of:

- lack of communication infrastructure,
- insufficient movement of people, and
- limited sources of information.

### **The Role of Marketing in Rural Development**

An efficient marketing system is a key component of rural development. From the perspective of rural communities, marketing provides the opportunity to sell produce and purchase goods and services, thereby linking small producers and consumers into the wider economy. By forming these linkages, marketing “creates and activates new demands by improving and transforming farm products and by seeking and stimulating new customers and new needs, ... it guides farmers towards new production opportunities and encourages innovation in response to demand and prices” (Abbott, 1993, p68). There is considerable evidence that improved marketing leads to increased agricultural productivity (see Nweke (1997) and von Oppen et al (1997)), and therefore offers the potential to improve rural livelihoods.

Market access relates to the ability of producers/consumers to take advantage of market opportunities. Market opportunities exist when buyers and sellers are willing to exchange goods and services at a given price. The market potential of a product or service will therefore depend upon the final price of that product, and the costs of production and marketing (including processing). If the production and marketing costs together are lower than the price of the product, or can be lowered to such a level, then marketing becomes a profitable activity.

There are four critical elements in marketing: a) identifying, locating and negotiating the buying and selling of goods/services; b) the physical movement of goods; c) facilitating functions, including financing, processing and storage; and d) an enabling regulatory and economic environment.

(a) Identifying, locating and negotiating the buying and selling of goods/services. A pre-requisite for participating in marketing activities is awareness of the marketing opportunities by those to be involved in the exchange. Participants require market information regarding prices and where, when and who to trade with. From the perspective of the producers, they need to know that they can take their produce to a certain place at a certain time and be relatively confident that they can sell it at a reasonable price.

(b) The physical movement of goods.

Those involved in the market exchange need to be able to reach the point of exchange with their goods. This requires that transport infrastructure is in place, and means of transportation are available and accessible.

(c) Facilitating functions

i. Storage: allows greater flexibility in the timing of marketing. At the local level, storage enables producers and traders to delay the marketing of produce in order to take advantage of seasonal price fluctuations. In the context of remote communities, storage periods are likely to be longer owing to the lack of marketing opportunities. In addition, it may be necessary to bulk up produce prior to selling in order to achieve economies of scale for transportation. At a national level, governments may retain reserve stocks to stabilise prices and to counter periods of food shortages.

ii. Processing: can range in scale from household level, low technology processing, to fully mechanised factories. Farming communities lacking opportunities to sell their produce in fresh form are often forced to endeavour in processing activities (e.g. drying of fruits and vegetables, smoking of meat). With respect to marketing, processing serves two main functions:

- it can add value to the good, thereby increasing the potential marketability and profitability of the product; and
- processing can preserve the produce, thereby increasing the time available for marketing.

iii. Finance for marketing:

- Finance is necessary for capital investment: for example storage facilities, vehicles and processing facilities.
- Finance improves responsiveness to market opportunities; producers, traders and processors need capital for production and marketing activities, for example, credit in order to benefit from seasonal price fluctuations,

iv. Training and extension for improved marketing/business skills.

(d) Conducive environment for marketing activities:

i. Economic environment: maintaining a stable macro-economic environment, which provides a good investment climate for those involved in trade.

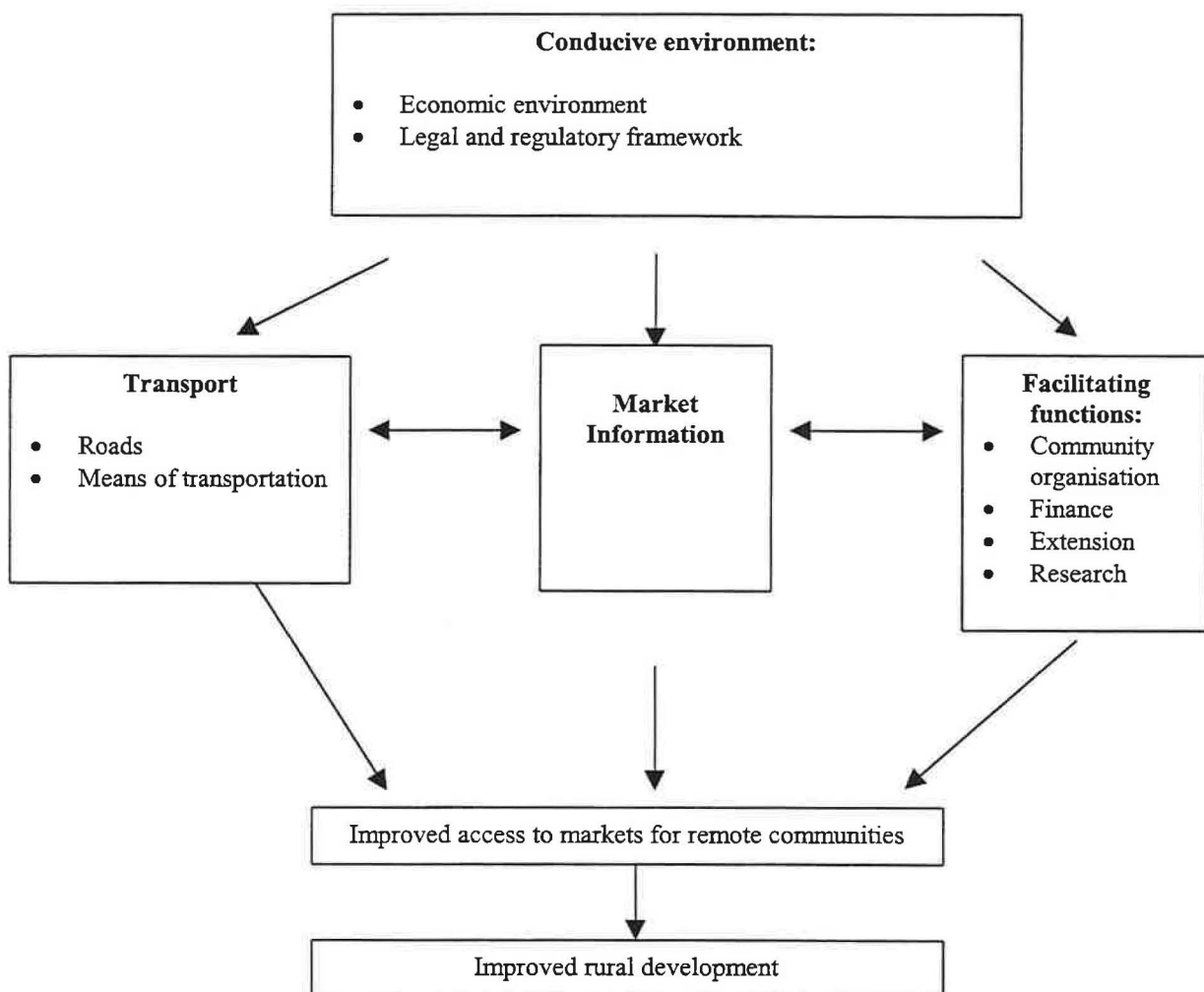
ii. Legal and regulatory framework - recognition and protection of property rights; quality control; standardisation; contract legislation;

Marketing cannot occur in the absence of the components (a) and (b) above: the awareness of market opportunities, and the ability to physically transport goods to the point of exchange. Component (c) relates to increasing market opportunities and the capacity to take advantage of opportunities, whilst (d) is vital for encouraging private sector involvement. Even though these latter two groups of functions are important for an improved marketing system, they apply to all areas, whilst (a) and (b) are more important issues for remoter areas (i.e. see definitions above). Although it is recognised that all of the above functions interact to promote marketing, this paper will focus on components (a) and (b).

## A Framework

Based on the above, Figure 1 provides a framework for analysing market access issues in remote areas. The analysis is based on the premiss that only the existence of an enabling environment can ensure that interventions aimed at reducing transport and transaction costs will succeed. The framework also demonstrates the interactions between issues related to transport, information and facilitating functions. For example, increased traffic volumes are likely to lead to an improved flow of information. In addition, it is also recognised that, owing to transport and information constraints, services related to facilitating functions are less likely to be available in remote areas.

**Figure 1: Community Access to Marketing Opportunities:  
a Framework**



## **UNDERSTANDING MARKET ACCESS**

### **Marketing Costs**

The ability to exploit market opportunities can be viewed from a cost perspective. Following the definitions above, transport and transaction costs are the main costs involved in 'making an area a remote one'. Marketing access will be enhanced if these costs can be reduced. If these costs are prohibitively large, the producer will be unable to take advantage of market opportunities.

According to Jaffee and Morton (1995), transaction costs involve the following costs:

- (a) searching for marketing opportunities and exchange partners;
- (b) screening information about the products/parties that an individual wishes to deal with;
- (c) bargaining over the terms of trade;
- (d) transferring the goods, services, titles cash etc.;
- (e) monitoring the exchange to assess whether the agreed terms are adhered to; and
- (f) enforcing these terms;

All of these activities require appropriate institutional arrangements. Institutions involved in the marketing system will include both formal and informal, private and public, depending upon the nature of the service or good, and on the prevailing socio-economic, cultural and political conditions.

### **Marketing Constraints in Remote Communities**

Small producers in rural communities face considerable marketing constraints, including:

- (a) Inadequate orientation of small-scale production to the demands of the market. Market orientation refers to the degree to which producers are responding to consumer demands. Inadequate orientation can be attributed, in part, to the failure of market information systems to provide producers with current market trends and consumer preferences. Producers are unaware of marketing opportunities and therefore are not producing the right products for the market.
- (b) Inability to take advantage of seasonal price fluctuations. Small, resource-poor producers tend to market their production surpluses soon after harvest when markets are over-supplied and prices are low. To be able to take advantage of seasonal price fluctuations requires producers and traders to be able to store their produce, and to have sufficient liquidity to make necessary payments (e.g. consumption, purchase of farm inputs, repayment of debt). Also, reliable market information is required. Delaying the sale of produce is a risk for small producers and entails storage and credit costs.
- (c) Marketing costs may be prohibitively high for small producers who are marketing their goods individually and in small quantities. For small volumes of trade, the fixed costs of marketing can form a high proportion of total transaction costs per

unit marketed. The distance to points of exchange may be far, resulting in high transport costs, and higher if infrastructure is poor. Poor infrastructure may also increase transportation losses.

- (d) In remoter areas there is likely to be relatively few traders purchasing farm produce or selling farm inputs. This limits the choice and therefore limits competition between traders, contributing to lower prices for produce and high prices for inputs.
- (e) Moral hazard: “Moral hazard arises when an individual takes an action to maximise his own welfare that is to the detriment of others in situations where informational problems prevent the assignment to the individual of the full damage caused by his action.” (Hoff et al, 1993, p5). With respect to marketing, traders may deliberately adjust prices against information-poor producers who are unaware of prevailing market prices.
- (f) Transportation difficulties: the greatest transportation difficulties facing rural communities are local: moving goods (inputs, produce) to and from fields, or to storage facilities, or to local markets. In these instances there is a dependence on walking and headloading as modern alternatives such as motorised transportation are neither practical nor realistic (for examples see country case studies in Agricultural Rural Transport Project for East Africa, 1997). Infrastructure and vehicles are far too expensive. Transportation on foot is expensive (time consuming) and leads to losses due to lower carrying capacities (Sieber 1997).
- (g) Large distances must be travelled to access the markets - this cost of doing so increases the pressure to sell once at the market: this may lead to farmers undercutting one another to sell their produce.

These constraints are compounded in more remote areas. The more remote the areas the higher the marketing costs. In addition, remote, low potential areas tend to suffer from:

- (a) sparse population, as land required to support a household is relatively large - hence reducing possibilities of achieving economies of scale in marketing, and increasing the distances between the household and the farmers’ fields.
- (b) high production risks (for example, due to climatic variability and poor soils). These risks tend to favour farming systems in which a relatively large percentage of resources are used for providing food for the household, reducing the potential for marketing surpluses.
- (c) low productivity (i.e. high per unit production costs as a result of expensive inputs).

In general, remoter areas are less attractive to private sector service providers as costs of providing services are higher, the risks involved are greater, and the purchasing power of potential clients lower.

## **Market Access in the Context of Economic Liberalisation**

In recent years, many developing country economies have been through structural adjustment programmes, which have included some degree of market liberalisation. With respect to agricultural marketing, the effect has been the reform or abolition of state monopolies which were previously dominant in many countries. Highly centralised systems of marketing were characterised by low, pan-seasonal and pan-territorial prices. These prices were justified by their protection of urban consumers, but provided little incentive to producers (and traders where they were permitted) to invest in marketing infrastructure or services. (Mittendorf, 1988). Producers often had no alternative but to join marketing co-operatives, which had the responsibility of purchasing and marketing all farm produce. Such co-operatives were typically grossly inefficient and a drain on the national budget. The withdrawal of the state and the growth in the role of the private sector has had a mixed impact. In remoter areas, where the costs of marketing are high, the withdrawal of the state has often left a void which the private sector has not filled (Carney (1995a)).

State intervention was justified to prevent exploitation by private traders of small farmers, to stabilise domestic prices, and to protect urban consumers. These policies resulted in artificially low prices for agricultural produce. Prices today in theory more accurately reflect market demand than pre-liberalisation (though this presumes that the private sector is relatively well developed and well informed). A feature of the withdrawal of state intervention in price setting is that greater seasonal and annual fluctuations of prices may occur. This increases both the challenges and the potential profitability of marketing. Quality of produce is of increasing significance in an open, competitive market place, with prices varying according to the quality of the product and also according to the degree of processing of the product (i.e. the amount of value added).

The assumption of this paper is that market opportunities exist, and that there is confidence that opportunities will continue to exist. This medium term perspective is essential if capital investment in improving market access is to take place. Governments have the responsibility to manage their economies to continue and enhance market opportunities, through the sound operation of tools such as exchange rate policy, and monetary and fiscal policy, as well as providing the regulatory framework for private marketing to grow.

### **Institutional Responses to Liberalised Markets**

The new economic environment which has appeared as a result of liberalisation, brings with it both opportunities and challenges. Domestic and international markets have opened up and provide increasing production options though with increased competition, which demands that greater attention be paid to the efficiency and quality of production and marketing systems. The withdrawal of the state from both production and marketing related activities requires that the roles of the private and public sectors be re-examined, and for institutions to develop in order to respond to the new economic conditions.

In redefining the role of institutions, specifically the relative responsibilities of the public and private sector in increasing access to markets, there are a number of possible options. For example, the World Development Report (World Bank, 1994) identifies four possible approaches for the provision of infrastructure services:

- public ownership and operation by enterprise or department;
- public ownership with operation contracted to the private sector;
- private ownership and operation, often with regulation;
- community and user provision.

Carney (1995a) identifies the three critical characteristics for developing sustainable institutional arrangements for the provision of agricultural services. These are effectiveness, efficiency and accountability:

(a) *Effectiveness*

Effectiveness is the ability to meet goals and objectives. Improving effectiveness is highly dependent on a better understanding of the needs of remote communities. This ties in with increasing public action and participation, for instance through decentralisation. Solutions to remote area constraints may have to be state led, given the reluctance of the private sector to service such areas. As a complement to government and the private sector, a greater role for NGOs and community organisations may be envisaged, though this role must be set in the context of a supportive environment provided by the state, whether in direct partnership or in providing the appropriate legislative framework and political will. Membership organisations, ranging in size from individual villages to nation-wide programmes have a role, though many are localised, community organisations and only cater for a small proportion of farmers.

(b) *Efficiency*

Efficiency considerations largely concern the cost of goods and services. The lower the costs of services, the greater is their applicability to remote areas. It has been widely held that public provision of services has resulted in high costs for the consumer, because of over staffing and low productivity. Increased involvement of the commercial sector provides, in theory, an approach for increasing efficiency. This can be not only for the provision of “private goods”, but also, in partnership with the public sector, in the provision of “public goods and services”.<sup>2</sup> Privatisation of goods and services which have public good characteristics can be done with close monitoring and regulation to ensure access for all and at a reasonable cost. A more feasible approach is through contracting of state services to the private sector.

(c) *Accountability*

Accountability is “institutionalised responsiveness to those who are affected by ones

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<sup>2</sup> Goods and services are commonly described as public goods or private goods, depending on their properties. The two key properties that determine the division are *excludability* (the degree to which potential users of a good or service can be excluded from doing so) and *subtractability* (the degree to which the use of the good or service reduces the availability to another). Goods that are both highly excludable and highly subtractable can potentially be provided by the private sector and are known as private goods.

actions” (Carney, 1995a, p7). As such, it is closely associated with effectiveness, public action and participation. Cost recovery schemes increase accountability of goods and services by creating interest in, and/or a sense of ownership of, the service or good provided. Kullenberg and Porter (1998) describe lessons from the UNCDF’s District Development Projects in Uganda, and the importance of adequately addressing the issue of accountability. According to them, specific *accountability relationships* include, (a) the accountability of local politicians to their constituents, (b) the accountability of technical staff to their political authorities, and (c) mutual accountability of local government and central governments.

The remainder of this paper will concentrate on the institutional aspects of improving market access of remote communities within the context of economic liberalisation, and the institutional challenges thrown up by the reforms of the public sector typical in the majority of developing countries.



## **IMPROVING MARKET ACCESS OF REMOTE COMMUNITIES.**

### **Reducing Transportation Costs**

A better transportation system is a clear encouragement to increased production because:

- inputs are available at lower cost;
- marketing margins are increased, encouraging higher productivity;
- more fertile, but remoter areas can be farmed;
- pest damage and spoilage at crop harvest time may be reduced as goods can be transported more quickly;
- labour is available for other activities.

Reducing these costs can be tackled from a number of, often complimentary, approaches:

- developing low-technology, low-cost transportation systems;
- benefiting from economies of scale in transportation;
- appropriate institutional frameworks for the construction and maintenance of transportation infrastructure;
- encouraging competition amongst transporters (i.e. deregulation of the transport sector);
- bringing markets closer to producers

### **Appropriate Transportation Systems**

The key to improving rural transport infrastructure and transportation services is the development of low cost solutions (Sieber, 1997). Government funds for investment are limited, as is the potential of mobilising local funds. The private sector is unlikely to be interested in investing in either infrastructure (essentially a public good) or transportation services in areas where the population is relatively sparsely distributed and infrastructure is poor. This highlights the need to seek for alternative approaches to providing transportation services. Intermediate Means of Transport (IMT) “are defined as those means of transport which are intermediate in terms of initial cost and transport characteristics... between the traditional methods of walking and headloading and conventional motor vehicles [and] intermediate in time, i.e. they are a stage in the process of developing a traditional to a modern transport system” (Howe 1994, quoted in Sieber 1997).

The majority of transport in rural communities in Africa is carried out on paths and tracks, and the most prevalent form of transportation is by headloading (for example, see Box 1). Estimates of the costs of transportation show that headloading is expensive when compared with other intermediate forms of transport (Sieber 1997). Relatively small investments can transform paths into tracks suitable for donkey and oxen drawn carts. Data shows that shifting from headloading to animal traction can reduce costs per unit transported significantly - by 60 percent for donkey carts, and 90

percent for oxen cart. Basically, IMT can increase carrying capacity and speed of transportation, with animal drawn carts being most suitable for carrying big loads over short to medium distances. Although there is a continued role for trucks and motorised forms of transport, these are cheapest if operated on good roads over long distances and have a high capacity utilisation.

**Box 1: The role of rural roads and transportation services: A case study from Uganda**

As in the majority of African countries, roads are the dominant form of transport, with over 90 percent of passenger and freight traffic. The majority of roads are feeder roads or community roads - these lesser grades of roads provide the key to market access for rural communities. Walking with head loading is the most common way of moving goods along the community roads, though they can also take animal cart and motorised transport. Hire services may occur, where passengers and/or their loads ride on the back of motorbikes or bicycles. Marketing activities are predominantly carried out by women, who headload goods to and from local markets. However, the majority of farmers sell their produce at farm gate, sometimes at low prices due to the high cost and risk of marketing.

The improvement of rural roads has been a priority of government in recent years. Feeder road rehabilitation and maintenance programmes aim to improve / upgrade existing roads in order to “unlock areas with potentially high agricultural surplus”. In addition, Uganda is implementing a strong decentralisation policy. The Local Government Act of 1997 limits the role of central government policy formulation, with monitoring and support to local governments, which are responsible for the majority of planning and implementation of policies.

With respect to the provision of transportation services, the government has withdrawn and the private sector has been encouraged to provide these services. However, in the pursuit of profit maximisation, these private services tend to focus on those routes between major centres which provide high returns, and more remote rural areas are left unserved. The Poverty Eradication Action Plan, developed in 1997, recognises head-loading as an inefficient form of transportation, and sees animal traction as a possible way forward. The objective is to provide rural communities with affordable, low-technology solutions for overcoming transportation constraints. The key strategies in promoting animal traction include training in the use of animal traction technology; training artisans in cart fabrication and repair skills; establishing a database on animal traction technology.

This program for promoting animal traction will be accompanied by the continuation of the rural feeder road rehabilitation and maintenance scheme. The focus of this scheme is on the decentralisation of responsibilities to local governments and to local communities.

(Source: Akidi et al, 1997)

Therefore investments in roads may be not only costly, but also have limited impact in addressing the needs of communities. Hine (1993) reported that investments in improving roads from an earth to a gravel surface in Ghana had very little knock on effects on producer prices, though converting footpaths into roads had benefits to the order of a hundred times greater.

Sieber (1997) runs different scenarios for transport systems to connect villages to a market centre. Highest transport costs occur when trucks or pick-ups visit all villages to collect produce. The best cost efficiency is achieved when a combination of animal traction is used with truck transport. Ox carts can transport loads on poor roads to collection points, where trucks carry bigger, aggregated, loads to the marketing centres. This is backed up with empirical evidence from Tanzania, where marketing revenue is substantially higher for households owning donkeys (ibid).

The main constraint to access to IMT for resource poor households is the initial capital expenditure - appropriate credit schemes would be necessary for households to be able to pay for donkeys/carts etc. Evidence from Kenya showed that farmers were able to pay off their loans for ox carts after only one harvesting period (IT Transport, 1996). In addition, access to credit is equally important for workshop owners or artisans in order to stimulate the creation of a local manufacturing and repair industry.

A broader approach is required to transportation and marketing for rural communities. Although roads and motorised transport clearly have an important role, especially further up the marketing chain, when volumes of trade increase, consideration needs to be given at the same time to local constraints, for which roads may not be the answer.

### **Institutional Aspects of Transportation Infrastructure Provision**

The construction and maintenance of roads normally fall under the jurisdiction of the state. This is because it is considered a public good. Toll roads, which display excludability, can be considered as a private good, though these have only been successful on trunk roads with heavy traffic. However, the record of the public sector in providing rural roads in developing countries has been poor. The World Development Report (World Bank, 1994) is dedicated to infrastructure development issues. A particular problem with respect to roads is inadequate maintenance which is found to be "almost universal". It is estimated that timely maintenance expenditures of US\$12 billion would have saved road reconstruction costs of US\$45 billion in Africa over the past decade. Instead, maintenance spending has often been cut: though this is a false economy.

The failings of the state are attributed to:

- Lack of competition: monopoly of the state in service provision;
- Centrally managed services may fail to address the needs of local communities;
- Those responsible for infrastructure are rarely given the managerial and financial autonomy that they require. Also, public providers are rarely held accountable for their actions.
- Users of infrastructure do not have the opportunity to make their demands felt - price mechanisms are not utilised to gauge consumer demand. Consumers are not involved in design and implementation.

Three instruments are considered necessary for efficient infrastructure: commercial management; competition; and stakeholder involvement. Although pro-market approaches to infrastructure development may be of limited applicability to the provision of rural roads, given the limited potential for direct user charges, there are important lessons for how the public provision of roads can be made more efficient and cost effective.

### **Corporatization<sup>3</sup>**

A major challenge in the rural roads sector is achieving financial autonomy. Reliable revenue sources are a must to maintain service provision. Obviously, financial self-sufficiency is desirable, reducing the amount of budgetary transfers and outside influence. But for public works, such as roads, it is difficult to measure and price individual use. User charges are difficult to implement in the case of rural roads - toll charges can possibly be used for major roadways. Systems therefore need to be designed to ensure regular and consistent budgetary allocations from government, though this can be combined with attempts to increase the amount of self-generated revenue. License fees, tolls, petrol taxes can contribute: such funds can be specifically used for recurrent costs.

Management autonomy can be increased by providing public enterprise status to highway-roads departments. Corporatization is achieved when the enterprise has full independent status and is subjected to the same legal requirements as private firms. Corporatization needs to be combined with changes to management practices for the benefits of the organisational change to be realised. Incentives is the key word. The starting point for improving accountability is to set targets. This may be achieved through performance agreements, in which the managers of infrastructure providers will be committed to achieving certain pre-agreed performance targets. In the case of rural roads, specific indicators, such as the condition of roads, need to be designed. Also, within the agreement, incentives have to be built in, rewarding those who achieve their targets - both workers and managers. There has been some experiences of these reforms in highway departments in Africa, though with limited success due to the difficulties that governments have in developing appropriate reward systems (World Bank, 1994). Also, performance agreements will only work if managers have the capability to implement them: they assume managerial competence.

### **Using the private sector**

An alternative approach is to contract out management responsibilities to the private sector - this may be a more effective means of achieving the same goals as in performance agreements. However, unless the management contract covers all aspects of management - including hiring and firing, raising capital and so on - the management contractor cannot be held fully accountable for the performance of the agency and the system breaks down.

Specific services may also be contracted out. The advantage of contracting out is that the agencies can receive high quality expertise without the permanent expense on the payroll. Incentives are high. This is a popular approach for maintenance services. Brazil has managed to reduce road maintenance costs considerably by contracting out. These types of contract ensure competition for the market, though not in the market, in which service providers are competing directly for a market share.

Although the provision of public goods, such as rural roads, may be most appropriately provided by and maintained by the public sector (possibly through the

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<sup>3</sup> In this context, insulating agencies from government pressures and constraints.

use of contracts - see above), other services may be opened up for competition. For example railways, and also road transportation services. With the rail sector, services provided may be “unbundled” and divided amongst different providers. However, on the whole, the provision of market infrastructure services to remote areas is likely to remain within the public sector.

### **Increased public participation**

The market cannot solve problems of public goods or always provide socially desirable outcomes. However, even where a clear case for public involvement is argued, centralised bureaucracies have consistently failed to provide adequate infrastructure services. Typically, priorities in developing rural infrastructure will be decided centrally - with little responsiveness to local concerns and needs. “... road design in Africa is often more sensitive to technical, as opposed to service, considerations. This leads to excessive rural road width and cost and hence fewer roads.”(World Bank 1994). And without local sense of ownership, maintenance of local infrastructure is neglected.

### **Decentralisation**

Decentralisation is one possibility for improving public good provision - transferring responsibility to independent sub-national government. Experience has shown that decentralised infrastructure projects can reduce costs and, as they are more closely tailored to local needs, improve both the effectiveness of the infrastructure and its maintenance. “A review of forty-two developing countries found that, where road maintenance was decentralised, backlogs were lower and the condition of roads was better... But decentralisation was also associated with higher unit costs of maintenance (partially reflecting the higher share of paved roads) and with wider differences in quality across regions (reflecting inter-regional differences in institutional or human capacity).” (World Bank, 1994).

Decentralisation is considered as a means for increasing the effectiveness of the public sector. This is achieved by better information to policy makers about local problems, preferences, and opportunities. Targeting of resources requires detailed information about who and where the poor are, and what their needs are. Local government may be better placed to gather this information. Sub-levels of government are better placed to respond to the needs of local communities, so local development is enhanced and results in more equitable allocation of resources among districts and groups. Bridging the gap between the central state and local communities is essential. Strong local institutions exist in Africa; for the state to plan and implement policies it has the choice of co-operating with local institutions or suppressing them (Griffith et al,1999). Decentralisation is important for the state to have a constructive relationship with groups in society.

In general, as yet, there are few positive experiences of decentralisation, in whatever form, in sub-Saharan Africa. The interesting case of Ghana (see Box 2), has yet to succeed but gives many useful pointers. Uganda also, where a process is in its early stages, deserves careful attention.

### **Box 2: Incorporating local needs into district planning: A case study from Ghana**

A renewed effort to decentralise was launched in Ghana in 1988 as a response to the inability of the centralised system to overcome poverty. Although the decentralisation policy has succeeded in transferring power from the centre to the district level, it has yet to develop mechanisms for the integration of local peoples needs into district planning, and thus limited its potential impact on poverty.

Reasons for failure (and lessons):

A lack of resources has constrained the planning process in district authorities.

Lack of training at the local level has hampered the collection of revenues, whilst funds from central government have been limited.

Human and physical resources are lacking.

A further constraint is the incompatibility between the new political-administrative boundaries and traditional boundaries.

Information flows between different levels of the administration have been fraught with problems.

Horizontal information flows are a problem with a lack of co-ordination between different sectors.

Local people are not sufficiently aware of the planning and decision-making process, and may be hesitant in involving themselves, especially women and the poorest.

The conclusion to be drawn from this is that a learning process is required to involve local people.

Recommendations:

the government needs to provide a strong legislative framework, together with financial and human resources;

improved information flow, both vertical and horizontal;

the functions and skills of Assembly Persons must be redefined and improved, especially in methods for contact with communities. They must become accountable to the communities, and their work

transparent;

greater awareness building is required at the local level, with people encouraged to participate and speak out;

mechanisms for including all of the community need to be developed, for instance, the establishment of women's groups.

(Source: Schiewer, 1995)

Many decentralisation reforms in sub-Saharan Africa have in effect been exercises in deconcentration, without any significant power being relinquished by the centre (Griffith et al, 1999). Local governments have not only lacked power and real decision making, they have also lacked resources, and have typically been unable to raise revenue independent from central government, which continues to hold the purse strings.

Local authorities require strengthening and developing before they can fully utilise local knowledge. Local officials often lack skills in methods for increasing community participation in decision making and resource allocation. There is a view that only at the centre is there the sufficient quality of staff for decision making. i.e. the quality of governance will decline as a result of decentralisation. Furthermore, decentralisation can often reduce equity as local governments can easily be captured by local elites. Small elite groups based at the local level will be in a better position to influence local officials.

**Box 3: Transportation infrastructure and the consequences of over-decentralisation  
A case study from China**

Transportation infrastructure is obviously vital to a country the size of China. The economic reforms which began in the late 1970s have seen a gradual loosening of state controls over production and marketing. The response was impressive with production increasing rapidly during the 1980s. This has put new demands on the rural transportation infrastructure, though evidence suggests that systems in place for the construction and maintenance of roads have not been adequate to respond to these new challenges (Benziger, 1993).

Two key issues are illustrated well by the Chinese experience. Firstly, the need for co-ordination in planning to form an effective network of roads. Secondly, the fundamental requirement is for a sufficient and secure source of funds for construction and maintenance.

Benziger concludes that "at all but the national level, the responsibility for roads was overly decentralised". This is evidenced by the failure to co-ordinate road construction between adjacent provinces, counties and even townships, with roads frequently coming to an end at administrative borders.

The funding system is based on the Road Maintenance Tax (RMT). The RMT was based on percentage of revenue for commercial vehicles and a fixed rate for other vehicles, dependent upon the size of the vehicle. Taxes were collected by local authorities and then channelled up to the provincial level, where decisions were made about where to allocate the money. However, little or no money was returned to local authorities for the construction and maintenance of local roads. Instead, these authorities could retain funds collected from the RMT on tractors and animal carts, and keep a proportion of the taxes collected from other vehicles once their planned revenue targets had been exceeded. Although this system allowed for planning at the provincial area, with money channelled into roads which planners considered to be most beneficial, this in practice has meant a focus on roads around and between major urban centres, at the expense of rural areas. The official policy for rural roads is "self-building, self-maintenance: the people build and the state assists" (Liu, 1985, p. 31, quoted in Benziger).

Funds are insufficient to enable investment on rural roads. The RMT is based on current road usage, limiting the amount of investment available for planning for future increased use of roads. The poor condition of roads prevents usage and limits RMT revenue. In addition, the central government has stuck by the principle that road users should pay for roads, thereby ignoring the wider benefits of the road network to the economy and denying access to funds from general taxation. The funds retained by local authorities are inadequate for the maintenance of local roads serving remoter communities - new sources of funds need to be found. Road tolls have been tried in many locations, though tend only to be successful along heavily used routes.

Attempts have also been made to attract private sector funding into road construction and maintenance, though again, this is only applicable to specific circumstances when a private entity stands to benefit substantially from a good road, for instance to connect a factory to main highway. This "many channels" approach has failed to provide sufficient funds - what is required is a system that provides a secure source of funds. A recognition of the widespread benefits of improving the rural road system may give rural roads a higher priority in attracting a greater slice of the RMT.

It is difficult to evaluate the impact of decentralisation: problems are not due to decentralisation per se, but to more general administrative, economic and development factors (Conyers and Kaul, 1990).

## **Community action**

Participation is widely recognised as an important contributor to sustainability of projects. Three keys to using participation: involve the beneficiaries directly; seek early consensus on the project; mobilise cash or in-kind contributions from them. There may be a tendency for such approaches to throw up approaches with a higher service priority than technical priority - low cost technologies, possibly more labour intensive (e.g. village access roads in Korea see World Bank 1994 p77). Contributions to construction and maintenance also lowers cost and increases ownership.

The Gurage Roads Construction Organisation (GRCO) was founded over thirty years ago to improve and maintain roads and bridges in the Sebat Bet Gurage region of Ethiopia. It has mobilised funds and labour from local residents, and has financed improvements on over 350 kilometres of roads (World Bank 1994, p78). Local participation in the identification of transportation needs has been shown to lead to lower cost, lower technology solutions. Labour intensive public works programmes are common in other parts of the world (such as India and China (von Braun, 1993)) where they have performed well in providing an employment based safety net, though they tend to be considered primarily as a mechanism for combatting food insecurity and only secondarily as a means for overcoming infrastructure constraints. Maxwell (1993) notes some potential problems with such schemes: they may only take place in times of great food insecurity and therefore cannot be viewed as a continuous programme for infrastructure development; they may be poorly managed with very low labour productivity; they may have no maintenance component. However, where they are well (and locally) planned and managed and involve local communities they have good potential, and merit further research.

## **Reducing Distances to Markets**

A reduction in the costs of transportation can be achieved through several means. Improving transport infrastructure and transportation services can reduce costs per unit of distance. Increasing the quantities being transported can reduce costs per unit of produce transported, for instance the formation of group marketing activities may benefit from these economies of scale. Alternatively, costs can be decreased by reducing the distance to be travelled.

The physical location of the marketplace - the point of exchange - is also important. The first point of exchange for many agricultural commodities will be at local intermediate / assembly markets, where producers may sell to traders and wholesalers. Remote communities do not have the volume of trade to supply permanent markets. In many countries of sub-Saharan Africa a system of periodic markets has developed, in which markets occur at regular intervals at a number of different locations. Market days may occur in small villages or even at road / track cross-roads - places in which



permanent markets would not be feasible due to the low volume of trade. Such markets play a vital role in increasing market access for remoter communities, and many communities may depend exclusively on periodic markets at their point of contact with trading partners.

Much of the research into periodic market has been conducted by geographers, with a focus on the location of the markets and the application of central place theory. Less research has been carried out into the economic aspects of the markets: the benefits that such markets provide to remote communities or to traders; market efficiency; how the markets are organised; or the role of the state in promoting such markets. These markets appear to be highly dynamic (Porter, 1986), moving to different locations or different days according to the changing socio-economic environment. As infrastructure in such markets is minimal - generally a collection of cheaply constructed stalls - there are few investments which tie the markets to a specific location. Porter (1986) has researched the negative impact on periodic markets from the construction or rehabilitation of roads. Increasingly, markets are moving road-side, and there is evidence that this is occurring at the expense of remoter periodic markets. Remoter communities which are far from these new road-side markets are therefore losing their marketing outlets.

Periodic markets are important for increasing market access, though no evidence has been found of governments taking an active role in promoting them. Many periodic market systems date back at least to the last century, especially in West Africa, and elsewhere have been introduced by colonial powers (e.g. Kenya). However, sustaining them in a liberalised economic environment may be difficult. Government involvement in physical market structures is typically restricted to permanent markets in larger urban centres. Investments in storage facilities, retailing facilities etc. is difficult to justify when throughput is low. However, the existence and sustainability of periodic markets seems to depend on factors other than market infrastructure such as accessibility and catchment area. Porter (1986), in her study of Borno, North East Nigeria, reports that "the markets that have thrived best in Borno over the years have, on the whole, been those located by good roads; though there are still some healthy bush markets which continue to grow because they supply a population far from any road, have a good water supply, a long-standing reputation or specialise in a particular local product which attracts purchasers from elsewhere."

## **Market Information**

### **Facts about information**

Market information is a vital component in the marketing system. The reform and abolition of parastatal marketing agencies and the shift on onus onto the private sector requires the state to create condition for an efficient and competitive marketing system. The market system can only work well with the availability of market information. "Up-to-date, or current, market information enables farmers to negotiate with traders from a position of greater strength. It also facilitates spatial distribution of products from rural areas to towns and between markets. Well-analysed historical market information enables farmers to make planting decisions, including those

related to new crops. It also permits traders [and producers] to make better decisions regarding the viability of intra and, perhaps, inter-seasonal storage.” (Shepherd, 1997). Increasing the negotiating strength of farmers is as a result of addressing information asymmetries, and should allow producers to get higher prices for their produce (assuming a market with sufficient competition). Market information will encourage new market entrants as it enables the identification of income-generating trading activities.

For information asymmetries to be reduced requires that both parties in the exchange have access to the information. For this reason, market information can be considered a public good, to be provided by the state. However, the states record in the provision of market information has been poor. “Market Information Systems (MIS) have repeatedly proven to be unsustainable and where they have endured they have often failed to provide commercially useful advice, confining themselves to the gathering of, frequently unused, data” (ibid).

According to Robbins (1998), “farmers need to be able to compare local market conditions with those further away, ... prices between one grade of product and another, ... and they need information on individual traders’ track records so that they can avoid those that are untrustworthy”.

For remote communities, information is required to inform production and marketing decisions. From a marketing perspective, farmers need to know where they can sell the produce or purchase inputs. Also, they need to know when to sell in order to maximise returns. Information must be reliable, easy to interpret, up-to-date, and broadcast to all areas. This requires a market information system, which collects relevant information, puts this into an understandable form, and disseminates it widely, accurately and rapidly.

Based on survey work in Mali, Galtier *et al.* (1998) suggest several tracks to be pursued beyond the traditional Market Information System. In particular, this would require tackling of the problems causing high transaction costs (i.e. high cost of partner search, high negotiating cost, high opportunistic risk), lack of innovations, low investment and inadequate storage facilities. For example, the high costs of partner search could be reduced through the establishment of fairs or the broadcasting of advertisements specifying the specific needs of buyers and sellers in terms of quantity, quality, price, terms of payment, and so on.

### **Means of Communication**

“Radio is clearly the most effective and appropriate means of communicating information in remote areas to farmers many of whom have poor literacy skills.” (Robbins, 1998). This certainly also applies to the dissemination of market information.

Findings from survey work as part of a workshop organised by CTA and GRET in Mali in 1997, highlight the importance of “staying in touch” with the audience (Sultan, 1998). For example, it was found that women prefer to have “their” programmes broadcast during the evening hours after 8pm, when they have more

time, as compared to the rest of the day. Another lesson drawn was the fact that “listeners frequently regard a radio station as their ‘property’ and, therefore, tend to use the language of the ‘stakeholder’, when talking about the subject”.

**Table 1: Information Needs of Stakeholders in Ghana**

| <b>USER GROUP</b>          | <b>PERCEIVED INFORMATION NEEDS</b>  | <b>WHO TO PROVIDE</b>  |
|----------------------------|---|--|
| Farmers                    | Market outlets, current prices, demand, quality preference, credit availability, trends in consumer preference, farm inputs   | Government agencies, NGOs, private companies, banks, extension agents, district assemblies, churches                 |
| Traders                    | Supply, demand, price trend, current price, production forecasts, quality preference, credit availability, packaging, quantities stored, transport data, consumer preference      | Government agencies, District Assemblies, trade associations, banks, consumers, transport unions                     |
| Exporters                  | Supply, export demand, current prices, price trend, future market potential, importers, packaging, export tariffs and taxes, crop forecast, consumer preference                   | Government agencies, foreign trade partners, exporter and producer associations, customers/importers                 |
| Processors                 | Raw material availabilities, prices, production trend, packaging, credit availability, quality  | Processor associations, producer associations, customers, NGOs   |
| Planners and Policy makers | Production and price trends, current production and prices, production and price forecasts, consumer preferences, credit availabilities, input availabilities, transport, quality | Government agencies, District Assemblies, NGOs, International agencies, news agencies (newspaper, radio, television) |
| Bankers                    | Prices, yields, margins, insurance  | Banks, customers, Government agencies  |
| Consumers                  | Current prices, supply, location, supply and price forecasts, quality   | Traders, processors and public services  |

Source: Robbins (1998)

Myers (1998) describes the successful use of local radio broadcasting in an NGO project promoting reforestation around Douentza in Mopti Region. The success of the radio campaign was due to the following factors:

- “Firstly, the radio campaign did not stand-alone; it backed-up an on-going extension programme of face-to-face contact between development workers and villagers.

- Secondly, the radio promoted ideas and techniques, which were not totally new to listeners; it intentionally built on traditional knowledge and recommended small adaptations to what people were already doing.
- Thirdly, the campaign benefited from being attached to a popular local radio station which people trusted.
- Fourthly, the campaign was run in a relatively remote area where people do not have access to much information or entertainment.
- Finally, and crucially, the radio campaign provided new information with which listeners could make their own decisions”.

This suggests that not only market information as such but also technical information can be successfully broadcast to target population groups. As a consequence, extension services should be encouraged to make wider use of local radio stations, especially in remote areas which, as yet, have been neglected by projects and extension services.

Based on project experience in Meru District in Kenya, Lloyd Morgan and Mukarebe (1998) describe “how audience research and imaginative programming have enabled radio to reach women farmers”. The project was in support of Kenya’s Agricultural Information Centre (AIC), trying to develop new approaches to radio programming in order to meet rural women’s needs.

In the first step, the AIC radio research team, which was based on 13 Technical Assistants from the Ministry of Agriculture, was trained in Participatory Rural Appraisal techniques. This helped the team to undertake both quantitative and qualitative audience research on issues such as: radio ownership, access to radios within households, liked and preferred programme content, style (including language), time and duration.

Based on the research findings, a soap opera was produced, which was supposed to be entertaining as well as able to raise awareness. The fact that different population groups of the target area are represented in the drama significantly contributed to its success. In addition, the soap opera was supported through a sister magazine programme, offering factual messages related to issues raised in the soap opera. The 13 technical assistants collected all the material for the programme, while ensuring constant feedback from the audience. The programmes reached a weekly listenership of 23 percent of the target population.

Following an evaluation, a similar approach has been taken in developing two programmes that are broadcast on the KBC National Service in Ki-Swahili. As for financial sustainability, a commercial company, which, at the same time, was advertising its product, was found to cover the expensive airtime on KBC. In addition, development organisations such as Plan International, GTZ, and CIP use the radio programme to transmit their messages on a commercial basis.

Admittedly, the project benefited from donor support, as a result of which there were sufficient resources to produce well-presented programmes. The question remains to what extent such an approach would be feasible without initial external sponsorship.

Radio ownership and availability and cost of batteries can be a problem in remote parts of Sub-Saharan Africa. The latter constraint led to the invention of the clockwork radio by Trevor Baylis in 1993, which is now manufactured by BayGen in South Africa (Myers, 1998, P30). The idea was to provide poor people living in remote areas with a cheap communication tool not requiring batteries. “The energy storage and release mechanism is based upon energising a steelspring by winding it from one spool to another” (Robbins, 1998). Thirty seconds of winding are required to have a listening time of 30 minutes. A new version of the radio using a built-in solar panel, has recently been developed (ibid).

Due to its energy saving characteristics, the radio was well received by Governments and donor agencies alike. However, despite its good intentions, there are a number of problems, which need to be resolved to make the radio more accessible for resource poor farmers. This includes in particular its relatively high price and a design default, which can lead to broken springs if the radios are wound up the wrong way around. Table 2 summarises the pros and cons of the clockwork radio.

**Table 2: Pros and Cons of Clockwork Radio**

| <b>Pros</b>   | <b>Cons</b>   |
|---|---|
| The radio does not need batteries, hence no energy costs and environmentally friendly                       | Purchase price of \$40 – 60 in Africa (excluding retailers’ mark-up), which is high for resource-poor farmers                                   |
| The radio is best suited not for individual ownership but for group listening                               | Design fault, i.e. handle must be turned clockwise otherwise it will break. Once the radio is broken it is not repairable except by specialists |
| The clockwork radio has good sound quality and volume   |   |
| If not mishandled, they are sturdy and hard-wearing. The radio is well equipped to deal with dust and heat. |   |
| They can receive short wave as well as FM and MW frequencies.   |   |

Source: Myers 1998, Robbins 1998.

Means of communication other than radio, include dialogue (i.e. used at workshops, seminars, and demonstrations), the printed media (i.e. newsletters, bulletins etc.), audio-visual tools (e.g. mobile video vans), and new communication techniques such as cellular phones and internet.

Dialogue, printed media (e.g. literacy and language problem, supply delays), and mobile video vans (i.e. difficult to use in areas where access is a problem) have all their limitations when it comes to reaching large population groups in isolated areas. Modern communication technology such as cellular phones can be very useful,

however, Bay Petersen (cited in Robbins, 1998) reminds us that "in our enthusiasm of what electronic information systems can do, we must not forget the problem of equity. If this is overlooked, it seems likely that unequal access to highly effective information systems is going to follow and reinforce the present inequalities of wealth. If we emphasise electronic technology too much in agricultural information we may find that we are helping only those who already have the best access to information to get more of it."

Considerations for developing appropriate MIS (based on Shepherd, 1997):

- How many products should be covered and which varieties? This is of importance to remote communities, which may be more heavily engaged in subsistence crops as opposed to cash crops. [it should be noted that areas in which households are poor, and which have poor market linkages, households may tend to have a food-first priority in production decisions, even where market opportunities exist for non-food crops. Marketing may be considered risky, and the consequences are more serious for resource poor households. MIS should therefore consider both the crops that farmers grow, as well as the crops with most market potential.]
- What weights and measures will be used? Many small scale transactions are conducted in traditional weights and measure: bags, bundles, cups etc. Farmers need to be able to understand the units used in Market Information Systems.
- What media is most appropriate for the dissemination of the information? The media used must be accessible to the user. Farmers may be illiterate, limiting the use of the written word. Access to televisions may be restricted. Radios possibly offer a more promising alternative.
- Will farmers be able to use the information effectively, or is some sort of marketing extension service required to assist them?

The possibility of decentralised Market Information Systems should be explored (Robbins, 1998).

### **Self-Help Groups**

Group action by farmers has considerable potential for increasing market access in that both transaction and transport costs can be reduced. Co-operative action can be defined as "a group of economic entities who agree to act collectively in order to further their joint and individual private interests". (Jaffee and Morton, 1995). With respect to market access, the advantages of group actions are as follows:

- counter problem of lumpy investments in infrastructure and services: costs can be shared and access to value adding activities enhanced. Individuals are unable to make relatively large capital investments, especially in the absence of credit sources. By pooling funds, groups can make joint investments in processing facilities, storage facilities, transport infrastructure or vehicles, and so on.
- they can internalise certain externalities and therefore allow for the private provision of certain public goods.
- they can reduce risk by pooling individuals risk (though this may lead to unwise and over-risky decisions).
- can lower transaction costs: e.g. by performing screening roles; gathering and

disseminating information about members;

- co-operatives can exercise or counter market power: collective negotiations; controlling with-holding members supply to the market and so on.
- economies of scale can be realised by joint activities, for instance the purchase or marketing of goods.

Although the potential advantages of farmer co-operation have long since been recognised, implementing group formation and operation has proven far more difficult. Reasons for failure:

Groups have been formed too quickly and too much has been expected of groups too soon.

Responsibilities given to the groups have exceeded their capacities. Responsibilities range from co-ordination of activities, such as marketing, to the joint ownership of assets, such as vehicles or storage facilities. Evidence shows that the former tend to have better chances of success as skill and experience for such activities are typically less complex (Stringfellow *et al*, 1997);

- Groups which have been formed in communities where there is not a culture of co-operation often fail, especially if the management of jointly-owned assets is involved. This stresses the need to understand local social and cultural conditions prior to attempting to foster co-operation.
- Co-operation has been enforced in some cases, especially when justified on ideological grounds. When these approaches have failed, it has led to a general resentment and suspicion of the concept of externally-led co-operation initiatives. Groups only succeed when their members perceive the benefits of co-operation and then come together in a group over which they have a sense of ownership. Self-selection is important for peer pressure to be effective.
- Potential problems of group activities: free-rider problem - this occurs when an individual from inside or outside the group is able to capture the benefits of the group without contributing to the costs.
- Size of group may be important: small groups may have advantages over larger groups as they are easier to manage.
- Subsidised activities or donated equipment may undermine farmer groups. Groups may form merely to access to subsidies, and quickly disband after the benefits of forming a group have been reaped.

Linkages between the groups and the wider economy will determine the potential benefits of co-operation, and the chances for the success of the group. Stringfellow *et al* (1997) identify two types of relationship that groups have with other market entities. Firstly, there are those which are termed “linkage-independent”, where groups act independently in forging economic relations with other market intermediaries. For example, groups may make bulk purchases from input suppliers. The second type are “linkage-dependent” which are dependent upon an outside agency which has a heavy involvement in the activities of the group.

This latter type includes credit groups and outgrowers schemes. Marketing frequently plays an important role in these groups (see examples in Stringfellow *et al*: UVAN Ltd. Uganda; ITDG, Chivas Region, Zimbabwe). They are based on the understanding that both sides - the group members and the private company - benefit from the

linkage. Farmers may benefit from having a secure market for their produce at a pre-determined price. Companies benefit from having a secure supply of raw materials which may be produced at lower cost than by the company using employed labour. Companies also benefit from a lowering of transaction costs - transactions are interlocked (Dorward *et al*, 1997). Risks and costs to the private company are reduced as:

- communication with the producers is facilitated by channelling information through contact farmers;
- peer pressure amongst the members may prevent producers from reneging their contracts.

Even though these linkage-dependent marketing-based groups provide a potential means of increasing market access, their applicability to remoter areas is probably limited. The transportation costs may dissuade private companies from engaging with remoter communities, and limit the amount of supervision.

Contract growing arrangements are often in place in the case of export crops. This is favoured by the fact that export commodity chains tend to have fewer players at least at some point of the marketing system. Given that contract farming often entails a number of services such as input supply, extension and marketing, traders need to have a minimum business size to be able to enter into these arrangements with farming communities.

The challenge is how to better integrate the domestic food crops commodity systems. These systems tend to be characterised by a large number of often small operators. This makes it particularly difficult to implement contract farming arrangements in the case of staple crops such as cassava, sweet potato, beans and maize. Large numbers of farmers are faced by large numbers of traders. As a consequence it is suggested that farmers who predominantly grow these crops need to become commercially more proactive. This involves attempting to find group solutions to typical constraints such as input supply, transport or marketing.

In the case of a CARE project in Southwest Uganda, collective marketing was suggested by a number of individuals and farmer groups who were consulted during the establishment of a marketing strategy for the project (Kindness, 1998). It was felt that this would increase bargaining power, and allow them to use more expensive forms of transport enabling them to access more distant markets. From CARE's experience in that project, it is preferable to work with groups, which have a common interest, instead of entire communities.

Research by the Plunkett Foundation and NRI identified market linkages as one of the success factors of groups, especially with commodities with relatively undeveloped markets (i.e. mainly those not covered by the parastatals). (Stringfellow *et al*, 1997,). The performance of village associations has been poor where the membership includes the majority of villagers and where multitudes of social and economic activities are undertaken. There is a tendency to advocate away from large multi-purpose associations towards more specialised, smaller, enterprise groups.

In northern Tanzania, the NGO FAIDA plays an active role in seeking out both groups



and private companies, and helps to forge relationships between them. By acting as a neutral facilitator, the NGO can reduce transaction costs involved in the identification, screening and negotiating between buyers and sellers, and in the case of FAIDA, to draft contracts between individual farmers and private companies (Ellman, 1998).

*Policy implications:*

The state may have a role to play in facilitating the formation of self-help groups and by forging relationships between these groups and other market actors. There is a clear need for training in business and management skills. The provision of training itself requires careful consideration, as financial self-sufficiency (through, for example, charging groups for training) is likely to be difficult unless groups are well-established and see the benefits in receiving such training. Donor assistance may be necessary, possibly channelled through local NGOs.

### **Increasing the Role of the Private Sector**

The reduction of state intervention in marketing activities was justified by the perceived efficiency of a competitive private market. Where the private sector was relatively well developed (in countries with less interventionist policies, and areas in countries with good marketing infrastructure and marketing opportunities), it has responded rapidly to fill the gap left by the public sector (Thomson and Terpend, 1993). However, in areas where suppression of the private sector had been more apparent, and in remoter areas with little private sector activity, the withdrawal of the state may have left communities with few traders. The state can play a role in encouraging greater private sector activity. It is important for remote communities that there is a relatively well-developed private sector, implying that there is competition between market actors, giving remote communities a choice.

Private traders can be encouraged to play a greater role in agricultural markets and thus make marketing opportunities more accessible to remote communities. Private sector requires confidence in the government and an appropriate regulatory and legislative environment in which to operate. The government has to reach a balance between allowing a free reign to the private sector, which may compromise social objectives, and regulation of the private sector without repression. In addition, the state is responsible for the provision of public goods - such as some elements of marketing infrastructure.

At the macro-economic level, exchange rate policy, monetary policy, and financial market regulation can all play a vital role in creating incentives for the private sector to enter agricultural marketing.

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