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**Community Access to  
Marketing Opportunities:  
Options for Remote Areas**

**Malawi Case Study**

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*September 1999*



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## LIST OF ACRONYMS

ACDI	Agricultural Co-operatives Development International
ADD	Agricultural Development Division
ADMARC	Agricultural Development and Marketing Corporation
APIP	Agricultural Productivity Investment Programme
APRU	Agricultural Policy Research Unit
DEMAT	Development of Malawian Enterprises Trust
DFID	Department for International Development
DRIMP	District Roads Improvement and Maintenance Program
EPA	Extension Planning Area
EU	European Union
FINCA	Finance Co-operation Agency
GDP	Gross Domestic Product
GOM	Government of Malawi
HDR	Human Development Report
IFPRI	International Food Policy Research Institute
ILO	International Labour Organisation
IMT	Intermediate Means of Transport
INDEFUND	Investment Development Fund
IRDP	Integrated Rural Development Programme
MASAF	Malawi Social Action Fund
MIS	Market Information Services
MMF	Malawi Mudzi Fund
MoA	Ministry of Agriculture and Irrigation
MoLG	Ministry of Local Government
MRFC	Malawi Rural Finance Company
MRTTP	Malawi Rural travel and transport programme
MRTTP	Malawi Rural Travel and Transport Project
MSSPD	Malawi Smallholder Seed Development Project
MUSCO	Malawi Union of Savings and Credit Co-operatives
NABW	National Association of Business Women
NASFAM	National Smallholder Farmers' Association of Malawi
NGO	Non-Governmental Organisation
NRA	National Road Authority
NRDP	National Rural Development Programme
NRI	Natural Resources Institute
PAP	Poverty Alleviation Programme
PIRTP	Pilot Integrated Rural transport project
RDP	Rural Development Programme
RGC	Rural Growth Centre

RNRKS	Renewable Natural Resources Knowledge Strategy
SACA	Smallholder Agricultural Credit Administration
SACCO	Savings and Credit Co-operatives
SADP	Smallholder Agribusiness Development Programme
SEDOM	Small Enterprise Development of Malawi
SRL	Sustainable Rural Livelihoods
UNDP	United Nations Development Programme
UNDP	United Nations Development Programme
UNESCO	United Nations Education Scientific and Cultural Organisation
USAID	United States Agency for International Development
VARBAU	Village Access Roads and Bridges Assistance Unit

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## SUMMARY

The findings of this research are based on the results of a project funded by DFID's Crop Post-Harvest Research Programme between April 1998 and March 1999, with fieldwork taking place in Malawi, Mali, and Uganda. The project was mainly concerned with policy and institutional aspects. It was concluded that holistic approaches are required to improve community access to marketing opportunities in remote areas of Sub-Saharan Africa, but that initiatives needed to be prioritised.

During the field survey in six districts (i.e. Chitipa, Mangochi, Mzuzu/Rumphi<sup>1</sup>, Nsanje, and Ntchisi) poor roads, inadequate market information, and lack of means of transportation were identified as key constraints to market access, and sources of high transport and transaction costs in remote areas. At the same time, many producers and district officials also suggested that production constraints are currently more important for Malawian farmers than issues related to output marketing. In particular, cost and inadequate supply of inputs, and lack of access to credit were mentioned as major bottlenecks.

An enabling environment is a key condition for the development of agricultural commodity systems including remote areas. The economic environment is characterised by the liberalisation process, which took place during the 1990s, and the overall success of which has been mixed in Malawi. Investors require a minimum of security in order to commit themselves in remoter parts of the country. This entails political stability, a favourable investment climate, and legal protection for contractual arrangements.

Market liberalisation makes it necessary for farmers to adopt a more commercial approach in pursuing market opportunities. In particular, they need to develop a reputation for good quality and build up supply volumes, so as to attract traders. As a consequence, and in the light of farmers' risk aversion, a careful balance between diversification and specialisation is needed.

The closure of some of the "uneconomic" ADMARC markets has made it difficult for remote communities to have access to input and out-put markets, thereby contributing to household food insecurity. At the same time ADMARC still dominates the market through, amongst other things, the subsidised sale of imported maize, which hampers the development of a private trading sector.

Decentralisation offers a chance for hitherto disadvantaged districts. However planning and implementation capacity, funding, and accountability need to be improved at local government level. More emphasis needs to be put on governance at community level.

The scale of the road network in Malawi is generally adequate, but maintenance is often lacking. Given the donor commitment to improve the rural road network, it is first and foremost government co-ordination that is required. It is expected that the newly created National Roads Authority will improve the situation. Given the

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<sup>1</sup> Whilst the district workshop took place in Mzuzu, part of the fieldwork was carried out in remote villages of Rumphi.



shortcomings of the current situation regarding the responsibility for construction and maintenance of feeder and community access roads, new institutional arrangements at district level ought to be elaborated and promoted as a matter of urgency. Guidelines are required for the construction and maintenance of community roads. Participatory approaches should be encouraged to ensure that roads reflect community needs.

Aside from motorised transport, more emphasis needs to be put on intermediate means of transport (e.g. animal carts or bicycles). These forms of transportation are sometimes considered out-dated technology but are often the only means of transport available to the poorer segments of rural society. Owing to the findings of the Pilot Integrated Rural Transport Project (PIRTP), which was carried out in three Rural Growth Centres during the first half of the 1990s, there is a good understanding of rural transport issues. There is need for increased government and donor commitment in terms of financial and logistical support to the Malawi Rural Travel and Transport Programme (MRTTP)

Lack of information is another characteristic of remote areas. This is often influenced by poor roads and low traffic volumes, in particular, in areas where there is no telephone or other communication infrastructure. Given the limited impact of the central Market Information Service, decentralised systems should be developed, involving relevant local stakeholders. A pilot project is required to identify how efficient information delivery systems should be set up at District level.

Farmers and traders require other information in addition to prices. For example, information on supply and demand, trade contacts, technical matters and the new institutional arrangements brought about by decentralisation. More prominence should be given to cheap mass media (i.e. local FM radio stations), in disseminating information in rural areas.

Farmers should be encouraged to organise themselves into groups or co-operatives so as to reduce their constraints to market access, while taking care to avoid past mistakes in co-operative building. Relevant projects should pay close attention to farmers' capabilities and needs. Market integration and linkage building are important, but were only indirectly touched upon in this project given that DFID have recently funded other research in this field. Contract farming and out-grower schemes can overcome some of the constraints related to agricultural service supply. They tend to work best when there are fewer, relatively large, players at some point in the marketing chain, and there is scope for interlocking transactions involving input supply and output marketing. Whilst export commodity chains of cash crops often fulfil this requirement, it is difficult to implement similar schemes with food crops. Non-governmental organisations may have a role to play in getting farmers to take the initiative in improving the commodity chains for such crops.

Rural finance, research and extension services have a facilitating role to play in improving community access to marketing opportunities in remote areas. Needless to say that a functioning credit system is a necessary condition for an efficient marketing system. Agricultural research and extension services tend to be biased towards technical and production aspects but, due to market liberalisation, there is need to focus more on commercial and post-harvest issues.

## **INTRODUCTION**

### **Background to the project**

This research project was funded by DFID's Crop Post-Harvest Research Programme (part of RNRKS<sup>1</sup>), and managed by the Natural Resources Institute, with collaborators in Malawi (Agricultural Policy Research Unit, Bunda College of Agriculture), Mali (Institut d'Economie Rurale), and Uganda (Agricultural Policy Secretariat, Ministry of Finance, Planning and Economic Development).

Given that two other market access projects funded by DFID and carried out by the University of Durham and Wye College/University of London were focussing on micro- and meso-levels, this project had its emphasis on policy and institutional aspects using the macro-level as an entry point. The project started in April 1998 and finished in March 1999.

The project had the following research objectives:

- Policy recommendations to improve community access to marketing opportunities in remote areas
- Identification of sustainable institutional solutions
- Contribution to poverty alleviation in rural areas

### **Justification of the Research**

The need for a better understanding of community access to market opportunities in the countries concerned was expressed at various levels. Following the liberalisation of agricultural markets in Malawi, it was observed that farmers in rural areas where ADMARC withdrew its services faced difficulties in purchasing inputs and food, and selling produce (Marsland and Golob, 1996). Both Mali and Uganda have been able to increase their agricultural production throughout the 1990s but in particular in remote areas farming communities lack access to marketing opportunities. In the light of these and other country specific experiences, a workshop on research priorities, organised by DFID's Crops Post-Harvest Research Programme in 1997, identified market access as a priority for further research.

### **Activities**

During the first phase of the project a literature search has been undertaken, which was followed by the development of a conceptual framework. In both Malawi and Uganda, the total amount of survey time was of the order of two months spread between October 1998 and March 1999. In both countries, the fieldwork consisted of the following two main elements:

- In the capital (and Blantyre in the case of Malawi), discussions with key informants of Ministries, donor institutions, NGOs and private sector companies.

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<sup>1</sup> Renewable Natural Resources Knowledge Strategy

- Five one-week visits to selected Districts (i.e. in Malawi: Chitipa, Mangochi, Mzuzu/Rumphi<sup>2</sup>, Nsanje, Ntchisi) with isolated farming communities facing problems related to market access. The main elements of these visits included workshops involving various stakeholders of the private and public sector with an interest in market access related issues. In addition, discussions were held with key informants and Rapid Rural Appraisal type exercises were carried out in at least one village per District.

A two-week visit to Mali was carried out in January 1999 with a view to complement the research with findings from West Africa. This involved mainly discussions with key informants in Bamako and Ségou.

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<sup>2</sup> Whilst the district workshop took place in Mzuzu, part of the fieldwork was carried out in remote villages of Rumphi.

## METHODOLOGY

### Definitions

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

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 production of cash and food crops,
- Low income,
- Poverty, also 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 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.

### A Multi-Sector Approach

The above definition of market access implies a multi-sector approach to improve the terms on which farmers participate in the marketing system. Given that single interventions alone are unlikely to succeed, it is felt that a holistic view of the subject is required.

Needless to say that the most basic of conditions for market access is the existence of market opportunities for produce potentially coming from remote areas. Owing to factors such as demographic growth, increasing urbanization, increasing purchasing power, and changing consumer preferences, it is assumed that demand exists either on domestic, regional, or international markets. Provided there is a demand, there are three main options, by which the competitiveness of agricultural suppliers in remote and other areas can be improved,

- (a) Reduction of marketing costs,
- (b) Productivity increases leading to lower production costs per unit of output,
- (c) In the case of domestic markets, protection through tariffs.

In the context of this study, the emphasis is on (a). The importance of (b) is recognised and will also be touched upon. In the light of international efforts to liberalise agricultural markets, the scope for (c) has been deemed to be very limited and, hence, not been further investigated.

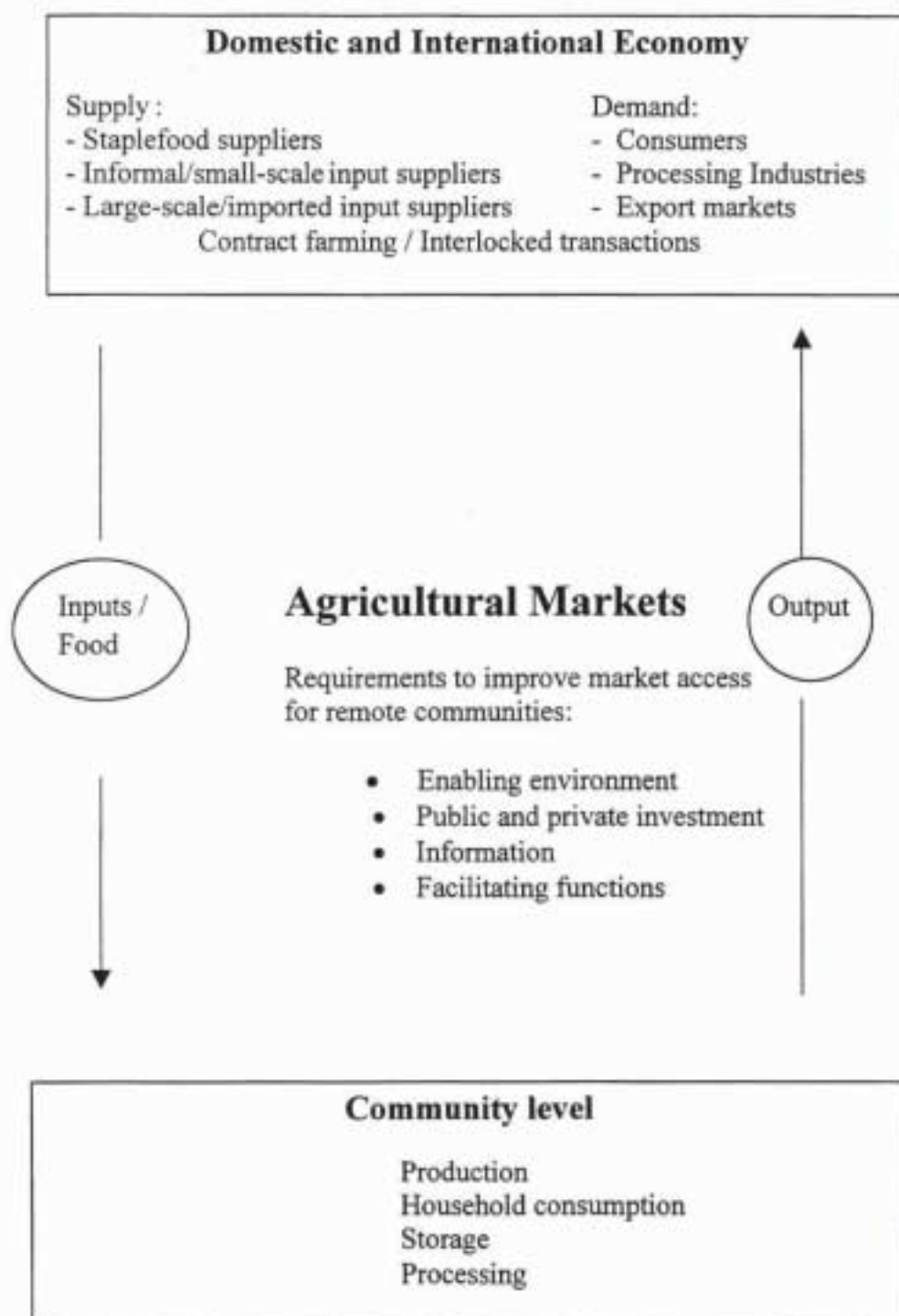
Efforts to reduce marketing margins involve looking at the various elements of marketing costs. As already indicated, it is mostly high transport costs that make a community "remote". Availability and prices of inputs as well as output prices have a bearing on the farming system. The scissors effect of high input costs and low output prices results in decreased financial incentives for agricultural producers, which leads to more extensive production systems than in areas with better access (Risopoulos, no date). The consequence is lower production of marketable produce (for both cash and food crops), and even subsistence production if transport costs are prohibitively high (thereby leading to negative gross margins).

Transaction costs include costs related to the search for trading partners, negotiating, opportunistic risk, and contract enforcement (Galtier and Egg, 1998). These costs are generally difficult to measure and, due to their 'invisibility', may in certain cases be confounded with traders' profit. Although, in one way or another, they form part of most trading deals, transaction costs are likely to be higher in remote areas. Amongst other things, this is due to a lack of information by which communities in remote areas are characterised. Information is an integral part of all decision-making processes, and as such also essential for farmers and traders operating in isolated areas. It is therefore required to shed light on the types of information required and means of communication suited for these areas. There is a link between transport and information since increased movement of people tends to improve the flow of information. This can particularly be important for isolated areas where there is no telephone or other communication infrastructure.

Storage and processing can improve farmers' options in remote areas. For example intra-seasonal storage may allow a farmer to sell a crop which would be non-tradable during parts of the year when roads are impassable. Similarly, processing can render a bulky crop into a low volume-high value commodity, as a result of which it can become tradable.

Capital cost forms an integral part of all marketing transactions. Farmers require access to credit to purchase capital equipment such as means of transportation, and inputs for agricultural production. At the same time, the efficiency of a marketing system depends on the amount of liquidity available in the system. However, remote areas tend to be characterised by a lack of credit facilities.

**Figure 1: Flow of physical agricultural inputs and outputs**



Social issues are important in the context of market access. Equity plays a role insofar as not all community members may benefit to the same degree from market access. Those who benefit more are likely to have priorities different from those expressed by the poorer members of the community.

Given the role of women in marketing of agricultural produce in many parts of Africa, suggestions to improve access ought to take this fact into account. Although women do not always play a major role in the selling of produce such as cash crops, they usually carry the main burden (i.e. headloading) when no improved means of transportation are available.

Figure 1 illustrates the physical flow of agricultural inputs and outputs, and the requirements that need to be in place to improve community access to marketing opportunities in remote areas. It shows that marketing and market access cannot be dealt with as a stand-alone issue. It has to be seen as an integral part of the commodity system. On the one hand, producers ought to know where they will sell their produce prior to starting production, on the other hand adequate supply in terms of quantity and quality is another prerequisite for an efficient marketing system.

Improving linkages between the different players of a marketing system, namely traders and farmers, is important in the context of market access. However, given that other DFID funded research projects have already looked into this aspect in detail in the context of interlocking transactions and contract farming (e.g. Poulton et al, 1997; Gordon and Goodland, 1999), this will only be touched upon indirectly. At the same time it is expected that improved transport and better flow of information will also improve linkages.

Needless to say that the most basic of conditions for market access is the existence of a demand for produce potentially coming from remote areas. In this study it is assumed that demand exists either on domestic or international markets.

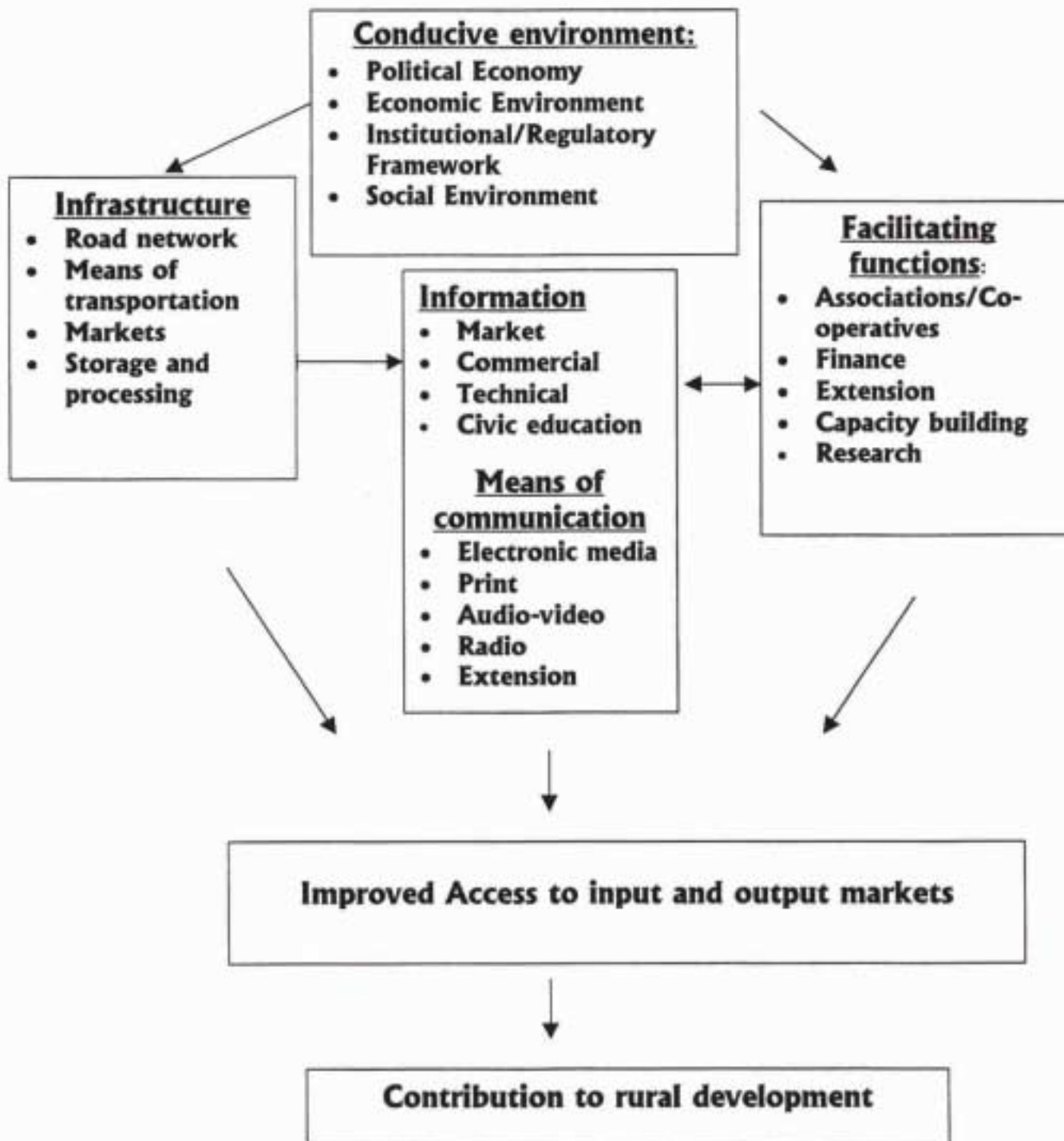
Given the complexity of the subject, an integrated approach seems appropriate to examine the issues related to market access for rural communities. In the light of decentralisation policies, currently being pursued by many countries in Sub-Saharan Africa, an integrated, multi-disciplinary approach appears justified. This bears similarities with the Sustainable Rural Livelihoods (SRL) approach which is also based on a holistic framework stressing that the livelihoods primarily depend on five types of asset, namely: human capital, natural capital, physical capital, social capital, and financial capital (Carney, 1998). In addition, the SRL framework, which lends itself to an areas based approach, also identifies the external context, the transforming processes and institutions.

At the same time, it is important to avoid the shortcomings of the Integrated Rural Development (IRD) approach, which was the mainstay of rural development during the 1970s and early 1980s. These shortcomings included:

- Absence of an enabling environment (i.e. political, economic, and institutional).
- Top-down approaches without the participation of the concerned population groups.
- Lack of institution and capacity building on a sustainable basis.
- Dissemination of inappropriate technologies

If an integrated approach is to succeed then these constraints need to be avoided. In particular institutional solutions need to be sought. Decentralisation efforts by the Government of Malawi are key in this context. Figure 2 illustrates the relationships of the issues involved in an integrated approach examining community access to marketing opportunities. Aside from an enabling environment, the study will concentrate on transport infrastructure, means of transportation, information, and the role of community organisation. The other issues will be dealt with but not in detail.

**Figure 2: Conceptual Framework For Analysing Market Access**





## THE SURVEY

### Site Selection

The study sites were selected based on advice given to the APRU Research Team from ADMARC and through discussions with some Ministry officials. The criteria used to select the areas were:

- **Production:** To qualify for selected, the areas had to be a surplus production or potentially surplus production area in major food and cash crops.
- **Access:** In addition, the area must have poor infrastructural development in terms of roads, markets and bridges. The remotest site or EPA where the village level focus groups were later held was identified during the briefing meeting with staff from the RDP.
- **Security:** The security of the area was also considered an important parameter in selecting the sites.

Based on these criteria, the sites were selected as follows in Table 1.

**Table 1: Survey Sites**

ADD	RDP	EPA
Karonga	Chitipa	Nthalire
Mzuzu	Rumphi – North Mzimba	Mphompha
Kasungu	Ntchisi	Chikho
Machinga	Mangochi	Mpilipili (Makanjira)
Shire Valley	Nsanje	Zunde (Chididi)

These areas are generally high production as well as high potential areas. Thus, while based on the ADD crop production estimates figures these areas are relatively high producing areas, the areas can also produce a multitude of crops that have not been promoted in the areas. In all the areas, maize is grown as the main staple food crop. However, there are variations in the cash crops grown. Table 2 below describes the sample sites based on the above criteria.

### Research Team

The study was conducted by a Team of Researchers from the Agricultural Policy Research Unit comprising Mr. C.B.L. Jumbe as the Team Leader, Mr. H. Tchale (Research Fellow) and Mr. N. Shawa (Senior Research Technician). The Research Coordinator, Mr. U. Kleih, and the Team Leader developed the research tools for the study. The initial study in Mzuzu and Rumphi (Mphompha) was used to modify the checklist of the study tools.

**Table 2: Characteristics of Survey Sites**

RDP/ District	Description of the area	Road And Market Conditions	Main Food Crops	Main Cash Crops
Chitipa (Nthalire)	High producing and low accessibility	<ul style="list-style-type: none"> <li>No feeder roads</li> <li>Poor state of secondary roads and bridges.</li> <li>Scattered seasonal markets</li> </ul>	Maize	Tobacco, groundnut
Nsanje (Chididi)	Low potential for annual crops and low accessibility	<ul style="list-style-type: none"> <li>Have only one feeder road which is impassable during both the dry and rainy season</li> <li>Only ADMARC operates in the marketing of inputs and purchase of agricultural produce</li> </ul>	Maize	Citrus fruits
Mangochi (Makanjira)	Medium potential and relatively medium accessibility	<ul style="list-style-type: none"> <li>Only one secondary road and few feeder roads in poor condition.</li> <li>The roads are seasonal with poor state of bridges</li> <li>Only ADMARC operates in the area</li> </ul>	Maize	Tobacco
Rumphi (Mphompha)	High producing and relatively medium accessibility	<ul style="list-style-type: none"> <li>Poor state of feeder roads hardly passable during the rainy season</li> <li>No available market infrastructure in the area</li> </ul>	Maize	Coffee, sweet potato

**Field Work**

The actual fieldwork was conducted in the selected districts (RDPs) between the months of October and December in 1998. The fieldwork took at least 5 days per District and it consisted of the following main elements:

Briefing Sessions at ADD Headquarters. Briefing sessions were held in each of the ADD Headquarters of the selected Districts or Rural Development Projects (RDPs) in order to collect relevant information on agricultural activities of the selected districts. In some instances, a staff from the ADD Headquarters accompanied the Team to the RDP.

Briefing Sessions at RDP Headquarters. Briefing sessions were held at RDP headquarters to discuss the project objectives and to decide on the remotest EPA in

the RDP where the village level focus group discussions were to be held. In addition, logistical arrangements for the village-level focus groups discussions and District workshops were made during the briefing meeting.

Informal Discussions. Discussions with key informants from various government ministries, donor institutions, farmer representatives, NGOs, and private sector companies based in the study area. A checklist was prepared to guide in the discussions.

Rapid Rural Appraisal. Rapid Rural Appraisals (RRA) were held with farming communities facing problems related to market access in one EPA in each of the selected RDPs. Farmers grouped by gender and a checklist was used to guide the discussions.

District Workshop. In each RDP, a one-day district workshop was held after the village-level discussions. The workshops involved stakeholders from different government ministries, farmer representatives, local transporters, NGOs, parastatal organizations (e.g. ADMARC, DEMATT, SEDOM), businessmen, representatives from associations (e.g. NABW), and in some instances, donor institutions working in the area (e.g. EU). These workshops helped the Research Team to have an overview of the various initiatives being undertaken in the area to improve market access of remote communities, identify areas of conflicts and complementarity. The inclusion of farmer representatives was crucial to the workshops as critical issues affecting farmers were discussed and the results of the village level RRAs could be validated.

Key Informant Interviews. In addition to the field survey, the Research Team held discussions in Blantyre and Lilongwe with key informants involving various government ministries and institutions (e.g. Agriculture, Works/DRIMP, Local Government, MRTTP), financial institutions (e.g. INDE

## Summary of Results

As indicated in earlier sections on the approach to the study, field level RRAs and district level workshops were conducted to identify, through a participatory process, the factors that affect access to market opportunities in the rural areas. This section presents the overview of the results from the workshops and the RRAs.

**Table 3: Summary of Results of District Workshops**

### Ranked Constraints to Marketing of Agricultural Produce

		Mzuzu	Chitipa	Ntchisi	Mangochi	Nsanje
1	Poor roads	1	1	2	1	1
2	Low produce prices	4	2	1	2	2
3	Lack of means of transportation	3	3	5	2	4
4	Lack of Information/Education	2	6	4	2	
5	Markets (infrastructure and distance)	5			6	3
6	Lack of buyers	8	4	3		
7	Lack of Credit / capital	11	5		7	
8	Lack and/or cost of inputs	8			5	
9	High transport costs					5
10	Lack of farmer associations	5				
11	Gvt Policy	5				
12	Lack of appropriate technology				7	
13	Insufficient production	10				

Note: Figures represent ranks of constraints identified at District level workshops. Scores were converted into proportions, for which averages were calculated for each category. Some of the original scores obtained during the course of the workshops have been combined. For detailed results including scores see Appendix 4.

As Table 3 indicates, poor roads, lack of means of transportation, lack of market information, and inadequate markets (i.e. lack of infrastructure and distance) have been identified as the main constraints to market access in remote areas.

At this point no attempt will be made to discuss all the constraints in detail. A detailed discussion will follow the framework presented above. Some of the points identified (e.g. high transport costs, low produce prices) are the result of marketing constraints and, hence, will not be dealt with separately.

It is, however, worth noting that during the course of the survey many farmers and district officials suggested that production constraints are currently more important for Malawian farmers than issues related to output marketing. In particular, cost and inadequate supply of inputs, and lack of access to credit were mentioned as major bottlenecks. In addition, the poor road network and inappropriate means of transport were also identified as constraints to production.

It is also worth noting that in addition to the "classic" marketing constraints, other constraints were also mentioned. For example, "low quality and quantity of production" was constantly mentioned as having an impact on marketing opportunities for rural communities. Low volumes and poor quality of produce for sale discourage traders to travel long distances to remote areas since this is likely to increase risk, transaction costs, and transport costs per unit of produce.

Although it is acknowledged that markets ought to exist before production can start, **adequate supply (hence, sufficient quantity and quality) is a necessary condition for the efficient functioning of commodity chains.** This calls for specialisation of farm production. In Malawi, efforts are underway to diversify the farming system in order to reduce the country's heavy reliance on maize for food and tobacco for foreign exchange earnings. However, diversification into too many crops, resulting in small volumes traded, might hamper the efficiency of the marketing system. Given the risk inherent to smallholder agriculture, it is important to get the balance right between specialisation and diversification.

To improve market access, the crops to be produced for sale by farmers in remote areas should have the following characteristics:

- Low volume/weight (i.e. not bulky),
- High value,
- Low perishability.

This should lead to reduced per unit transport costs, and, if storability can be increased, allow producers some flexibility in their sales transactions. Processing may be required for certain types of crops such as roots and tubers. Obviously, lack and/or cost of agricultural inputs, directly influences levels and quality of production.

## IMPORTANCE OF AN ENABLING ENVIRONMENT

### Political Economy

#### Background

Compared to its neighbours Zambia and Zimbabwe, with whom it shares a common history (i.e. as part of the Federation of Rhodesia and Nyasaland), Malawi has a less developed infrastructure and manufacturing industry (Pryor, F.L, 1990). The root causes for this trace back to the colonial period and include lack of natural resources such as agricultural land and minerals.

After independence in 1964, political decision making continued to be top down and centralised. The combination of a population increasingly disillusioned by poverty and lack of political freedom, and donor pressure during the early 1990s led to political change, which culminated in the multiparty elections in 1994.

#### Decentralisation

Following the downfall of President Banda's regime in 1994, the government started democratisation through a Decentralisation Program that is being supported by the donor community. This led to the Local Government Act, which became law in December 1998 (Republic of Malawi, 1998).

General issues. Decentralisation is one possibility for improving public good provision, that is 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 of increasing the effectiveness of the public sector (Goodland and Kleih, 1999). 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 a more equitable allocation of resources among districts and groups results. 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.

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 independently 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.

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 1990).

The situation in Malawi. According to Hebblethwaite *et al* (1999), the present system of Local Governance is based on:

- (a) Traditional leadership, whereby chiefs are in charge of Traditional Authorities and chair Area Development Committees, and village headmen are responsible for co-ordinating Village Development Committees.
- (b) District Commissioners to whom the TAs are responsible, and who are appointed by central government (i.e. Office of the President and Cabinet). Amongst other things, they chair the District Development Committees (DDC). Since 1994; in addition to government officials, the DDC members include local MPs, the chairs of district Party offices, NGO and business representatives and the Traditional Authorities. District Executive Committees are formed by government officials and heads of NGOs working in the district.
- (c) Local Councils were dissolved in 1995 and will be replaced by new Assemblies composed of newly elected Councillors. According to the Local Government Act, three City Assemblies, one Municipal Assembly, eight Town Assemblies, and twenty-six District Assemblies will be set up.

The implementation of decentralisation covers a four year period from January 1999 to December 2002. The success of the decentralisation programme depends on issues such as the financial policies and procedures regarding transfers from the centre to Local Government, the extent to which Assemblies will be in a position to raise revenue at local level, and the institutional capacity of Local Government including financial management and accountability.

Hebblethwaite *et al* (1999) identify the following initiatives "for new or additional attention within the Local Governance and Development Management Programme "of GM / UNDP:

- "The need for a focus on governance at village level;

- The need for capacity at the district level in interpretation, adaptation and application of policies;
- The need for attention to technical capacity at district level;
- The need to bolster the capacity of the Assemblies in working with the private sector in promoting economic development;
- The need for support for the Association of District Assemblies”.

The situation in other countries – the example of Uganda. Uganda is internationally considered a model for the implementation of decentralisation. According to Musa (Decentralisation in Uganda, Another leap in the Dark, 1998), decentralisation was well-received by the population. It is seen as a vehicle for greater participation of the people at the grass-roots. Although it is acknowledged that financial management practice has improved at district level (Musa, 1998), it still seems that a lot more needs to be done in the more remote, newly created, Districts. Aside from improved accountability, the capacity of LG needs to be improved to be able to absorb funds. This requires adequate planning and implementation capacity.

It is often implied that decentralisation will lead to improved financial autonomy of LGs, however this is only partly true, since in reality the Districts still depend largely on transfers from the Centre. There is a particular shortage of funds at LC3 level (i.e. sub-county level). Although 65% of local revenue remains at the lower councils (i.e. graduated tax), the resulting funds are insufficient, owing to a small tax-base. There is even a danger that this shortage of funds might lead to efforts by the LC3 to introduce taxes that can become a constraint to agricultural marketing. For example, high taxes on vehicle ownership or movement of goods are likely to have detrimental effects on market access by farmers in remote areas. In particular the taxation of movement of goods at LG boundaries ought to be avoided since it can create significant extra marketing costs.

At present, conditional grants are still the main source of funding of LG government. Agriculture is one of the priority areas with particular emphasis on extension services at sub-county level. However in most Districts agriculture lags behind the other three priorities, i.e. roads, health, and education. Equalisation grants, the objective of which is to reduce inequalities between Districts, are to be introduced in the FY 1999/2000.

As for the transfer of funds to Districts, which are earmarked for specific activities, a lot can be learned from World Bank funded health projects (e.g. District Health Services Project). A significant part of their funds included capacity building, which included training of finance officers and accountants. Watertight accountability and control mechanisms had to be put in place.

The creation of certain new institutions at LG level is required by the Local Government Act, however, some of them such as the LG Public Accounts Committee and the LG Tendering Board are in some Districts either not in place or not fully operational (Musa, 1998). “New” Districts and those that are located in remote areas without adequate infrastructure are less likely to attract qualified and experienced staff. Inevitably this will have its bearings on the quality of public services. This includes services required to improve market access for farming communities in remote areas (e.g. agricultural extension, market information services, etc).



To sum up, Uganda has embraced decentralisation in a positive manner, however it must be recognised that the country is only in the early stages of implementing this policy. Decentralisation is a long-term measure and there is still a long way to go.

### **Economic Policy**

Malawi's nominal per capita income of US\$170 in 1995 (UNDP, 1998) is one of the lowest in the world. The agricultural sector is the main provider of employment and export earning. The narrow resource base is among the most serious challenges facing Malawi's economy. The agricultural sector is dualistic in nature comprising the smallholder sub-sector and the estate sub-sector.

Malawi, like many Sub-saharan countries implemented a Structural Adjustment Programme since the early 1980s in order to correct the structural rigidities in the economy. The major objectives of the structural adjustment reforms were to diversify the export base; encourage efficient import substitution; ensure appropriate price and incomes policy; improve public sector's financial performance; and strengthen Government of Malawi economic planning and monitoring capabilities.

In 1990, the Malawi Government started the implementation of the Social Dimensions of Adjustment (SDA) Project aimed at minimising the adverse effects of SAPs on the vulnerable groups of the Malawian society and strengthening the capacity for the integration of the poor in the national development planning process.

Despite the various economic reforms that have been implemented in the country over the years, the economic environment has not changed much over the performance of the 1970s. Since 1988, Malawi's economy has shown uneven signs of recovery. GDP has fluctuated between negative growth of -7.2 percent in 1992 to positive growth of up to 10.8 percent in 1993, before falling to -11.6 percent in 1994. The figure rose again to 9.0 percent in 1995 and is estimated to be 8.8 percent in 1996. (Economic Report; various issues). Some of the contributory factors are as follows:

- (a) The removal of subsidies on agricultural inputs came at a time when the economy was deteriorating, and, combined with the devaluation of the currency, most smallholder farmers were unable to afford the inputs.
- (b) Market liberalisation has probably been the single most detrimental reform on poor households since these have traditionally depended on ADMARC. The closure of some of the "uneconomic" markets has made it difficult for remote communities to have access to input and out-put markets because of low private trader participation. This has contributed to widespread households' persistent food insecurity. In other words, the implementation of this policy was rushed through without putting mechanisms to encourage private sector participation in agricultural input and output marketing.
- (c) The low linkage between the dominant smallholder agriculture in remote areas and formal sectors has led to low multiplier effects even in years of good economic performance.

- (d) Labour productivity in the smallholder sub-sector has remained low forcing smallholders to offer themselves as casual workers (*ganyu* labourers), estate workers, tenant farmers and urban job seekers.

In the context of market access, economic policies have a bearing on demand for agricultural produce, which, in turn, influences the marketing opportunities for the farming communities. As a result, Government and its various agencies should stimulate domestic and external demand for fresh and processed agricultural produce. This should not be interpreted in the sense of Keynesian policies, but in the sense of guidance at the sector level and provision of favourable investment conditions (e.g. low interest rates, low inflation). As for the domestic market, demand patterns are likely to shift with increasing purchasing power and consumer education. Development of agro-industries should be promoted to increase domestic markets for agricultural produce including food crops such as cassava, sweet potato, plantain, grains, legumes, fruits and vegetables. In this context, decision-makers ought to recognise that traditional food crops are also cash crops for farmers who depend on their sales for income.

At the same time, it appears that current and potential agricultural demand is not sufficiently known. **Market demand studies** are required to improve this understanding, based on which adequate measures can be taken.

**Export and cross-border trade** should also be promoted. The latter is likely to have a strong impact on remote Districts, which often tend to be located close to neighbouring countries. Elements that require improving in this context are:

- Bilateral trade negotiations to improve access,
- Better infrastructure links with neighbouring countries in border areas,
- Better information exchange,
- Better linkages between traders on both sides of the borders,
- Better legal protection of traders who operate in neighbouring countries.

## **Agricultural Marketing**

### **Pre-liberalization period**

Before the liberalization of the agricultural market, ADMARC was the only official buyer and seller of agricultural commodities in the rural areas. As a result it was the sole controller of smallholder crop marketing i.e. major buyer of output and seller of inputs and food. Apart from the marketing function, ADMARC also had a developmental function. It thus heavily taxed smallholders by offering prices below parity levels in order to generate revenue which could be used for development purposes. ADMARC used to administer government determined prices on almost all commodities produced by the smallholder sub-sector.

### **Post-liberalization period**

During the late 1980s, following the conditions stipulated under the Structural Adjustment Programmes (SAPs) which Malawi undertook under the auspices of the

International Monetary Fund (IMF) and the World Bank to correct its macro-economic imbalances, the Malawi Government introduced the agricultural market liberalization policy. Under this policy, private traders were supposed to compete with ADMARC in buying and selling agricultural commodities (both inputs and output). However, due to the poor accessibility in most parts of Malawi, the private traders have not been able to enter the agricultural market on the same scale as ADMARC. As a result the remote areas have been left with no markets especially that ADMARC had to close off its non-economic markets in order to improve its efficiency and competitiveness. Agricultural productivity has been affected as most farmers are unable to afford agricultural inputs with the removal of the input subsidy to the smallholder sub-sector.<sup>3</sup>

### **Current market situation**

ADMARC still controls a substantial share of both inputs and outputs markets. It is supported by Government to carry out a social function of protecting the maize price band. It thus maintains a pan-territorial and pan-seasonal pricing for maize in its wide network of markets and depots covering most of the country. In addition, in years of low domestic supply, ADMARC imports maize from neighbouring countries such as Mozambique and sells it below parity levels.

As a result there is no incentive for many private traders to engage in marketing especially in remote areas or to engage in storage for profit. This means private sector development has been hampered and most areas where ADMARC closed down its markets have virtually no markets for agro-produce, inputs and food.

### **Social Context**

In most parts of Sub-Saharan Africa, including Malawi, women play an important role in agriculture. Traditionally, they are particularly involved in the production and processing of food crops, and, significantly, contribute to the transportation of inputs and outputs around the farm through headloading.

Although women are slowly beginning to play a more prominent role in private business, there are still plenty of traditions and cultural believes that prevent them from exploiting their full economic potential. As a consequence, more interventions are required to strengthen women's role:

- Sensitisation through projects and mass media,
- Creation of educational opportunities for girls and women,
- Provision of women with better access to finance and other production factors,
- New technologies should take women's needs into account.

The new government after the multiparty general elections has made poverty alleviation a number one priority. The Government had formulated a Poverty

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3. Along with the agricultural liberalization policy, the Malawi government also floated its foreign exchange regime and removed the input subsidy. This means that input prices were subjected to changes in the value of the domestic currency relative to the US dollar especially that Malawi imports most of its agricultural inputs such as inorganic fertilizers. Smallholder farmers have not coped with the input subsidy removal because they are having to face input prices that respond almost instantaneously to exchange rate changes against output prices that take a considerable lag to respond to the same changes.

Alleviation Program whose primary objective is to transform economic structures to meaningfully contribute towards raising people's standard of living. Other priority areas such as health, education and agriculture are expected to feed into the programme. Directly or indirectly, this can be expected to have a bearing on equity issues in communities. As already discussed above, not all members of a farming community will equally benefit from policy measures affecting access to marketing opportunities. The success of these policies will depend, amongst other things, on the extent to which all community members will be able to participate in and influence Local Government decision-making.

### **Legal and regulatory framework**

There is a lack of standards (e.g. weights, quality grades) applied in particular in the domestic agricultural marketing chain. However, although the standardisation of weights and measures seems important, decision makers ought to bear in mind that similar interventions have often failed in the past due to lack of demand by the players in the marketing chain or lack of enforcement. As a result, it seems appropriate to study this issue carefully prior to implementation.

The efficiency of agricultural marketing depends on how contracts are respected and enforced. If contracts are not respected and law enforcement is insufficient, this will inevitably increase risk and ultimately marketing costs. In this context, better enforcement of contracts and a reform of commercial laws are required.

## INFRASTRUCTURE

### Poor Road Network

During the course of the survey, poor roads were identified as the key constraint to agricultural marketing.

#### Background

The road network in Malawi is classified into the main, secondary, tertiary, district and other unclassified roads. Main, secondary and district roads constitute over 68% of the classified road network in the country. Table 4 below presents the overview of the road network in Malawi. The road network decreased by 3.26% from 17,006 km in 1996 to 16,451 km in 1997 because of the decrease in the gravel road network in 1997 (Malawi Government, 1998). The table also indicates that over 90% of the total road network consists of seasonal roads that become impassable in the rainy season (i.e. the bitumen road network comprise less than 10% of the total road network). Most of the seasonal roads connect the urban to the rural areas and during the rainy season access to the rural areas is drastically affected.

Up until 1994, the main, secondary, tertiary and district roads have been under the jurisdiction of the Roads Department in the Ministry of Works. Most of the village access roads have been maintained by the district council under the Ministry of Local Government and donor funded road projects such as the Village Access Roads and Bridges Assistance Unit (VARBAU) and the District Roads Improvement and Maintenance Programme (DRIMP) both of which have since phased out. Currently all the designated roads are to be maintained and rehabilitated by the National Roads Authority while the non-designated roads are maintained through food and/or cash for work projects by MASAF and other community level interventions under the umbrella of the Poverty Alleviation Program (PAP)<sup>4</sup>.

There have been debates on the changes in government policy towards road maintenance in Malawi from as early as 1993 when the country's political system was changing to a multiparty democracy. This led ultimately to the passing in parliament of the National Roads Bill in 1997. This, in turn, has led to the formation of the National Roads Authority (NRA) in 1998, whose ultimate aim is to form a dedicated road fund that will ensure adequate funding for the maintenance and rehabilitation of the road infrastructure in the country. The road fund is based on the fuel levy with the understanding that funds generated from the road transport sector should be utilised within the sector for maintenance and rehabilitation of the road network. The NRA is also mandated to control vehicle overloading on the public roads and ensure appropriate collection of the fuel levy. The NRA has thus replaced the Roads Department in the Ministry of Works and Supplies.

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<sup>4</sup> Poverty alleviation is the central theme of the current government's development agenda since 1994.

**Table 4: Inventory of road network (km) in Malawi, 1990-1997.**

Road type	1990	1995	1996	1997
Bitumen				
Main	2123	2564	2564	2702
Secondary	285	285	285	415
Earth/gravel				
Main	1093	1956	1956	1818
Secondary	2161	2483	2483	2353
Tertiary	-	4119	4064	4214
District	4224	5465	5465	3723
Other	189	189	189	1226
Total	10075	17061	17006	16451

*Source: Economic Report, 1998.*

### Survey results

The results of the district workshops and field level RRAs indicate that while the setting up of the road fund will improve the availability of funding for road works, the fund has several operational weaknesses. It is perceived that the problems arise from the use of contractors for road maintenance and rehabilitation as opposed to having full time road work teams as was the case with the Roads Department. Since contractual arrangements are handled by the Centre, the district level road supervisors are unable to efficiently discharge their duties especially when they are sidelined in the hiring of contractors. Roads that are rehabilitated by contractors do not have a provision for maintenance because after rehabilitation the contractors no longer have any contractual obligations for maintenance activities.

Major factors contributing to poor road network include lack of maintenance funds as a result of the change in government policy towards road maintenance, poor road design especially bridges coupled with excessive truck overloading exceeding design limits and the reduction of community self-help spirit which used to be important for the rehabilitation and maintenance of village access roads.

During the one-party era, the rural/village access roads, which are seldom rehabilitated by public funds, were under the responsibility of the communities through what was referred to as the "Youth Week". With the coming of multiparty democracy, this self-help spirit has drastically been reduced. However, various donor efforts are trying to revive the self-help spirit through food or cash-for-work

programmes such as MASAF's<sup>5</sup> Public Works Programme, EU funded rural infrastructure development efforts, etc. Through these initiatives a lot of rural access roads have been rehabilitated although the maintenance of such roads will not be guaranteed after the projects have phased out.

Apart from the lack of funding and the operational weaknesses of the NRA, the poor road condition is exacerbated by the limited design capacity of the roads and the bridges. Most roads in Malawi have timber-decked bridges whose load capacity does not exceed 10 metric tones. However, due to the absence of mechanisms to enforce the loading limits, trucks far exceeding the design limit use these bridges. This often leads to irreparable damage.

Through the village and district level workshops and consultations, a number of **solutions** to the poor road condition in Malawi were **suggested**. These include:

The need to routinely maintain the feeder and village access roads through community self-help initiatives. However, civic education should be enhanced in order to restore community self-help spirit to ensure sustainability of the road maintenance activities.

In order to ensure availability of road funds it was suggested that in view of the on-going decentralisation process, the district assemblies should engage in sourcing funds for district roads maintenance and rehabilitation. Subscriptions from the district level associations, road user taxes, property rents, withholding taxes etc should all be put in the district development fund to be used for development activities within the district.

It was suggested to revive the concept of VARBAU and DRIMP in current or potential road projects. Although community self-help spirit is important and should be revived, government and donor efforts are needed to ensure grading of the earth/gravel roads at least once before and after the rainy season including the construction of bridges. This is important because community effort is limited in these instances. This should also include the review of the current government policy of road works especially with the idea of improving the weaknesses that have already been pointed out. The idea of upgrading all the timber decked bridges to concrete or metal decked bridges should be considered in order to improve the life of the bridges.

### Way forward

In the context of improving road access for isolated communities, the following points need to be addressed in particular.

Given the shortcomings of the current situation regarding the responsibility for construction and maintenance of feeder and community access roads, new institutional arrangements ought to be elaborated and promoted as a matter of

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<sup>5</sup> Malawi Social Action Fund (MASAF), funded by the World Bank, aims at ensuring equitable rural development through the provision of social service infrastructure such as roads, bridges, school and health clinic blocks etc. MASAF implements these activities through two sub-projects: the Community Sub-Projects (CSP) and Public Works Programme (PWP). The roads and bridges projects are under the PWP which uses the cash-for-work to involve the local communities in rehabilitating their rural access roads and bridges.

urgency. As for the role of Local Government “there can be considerable benefits from having a small roads unit operating in the Assemblies’ Department of Works, rather than relying on the National Roads Authority to undertake all work at district level” (Hebblethwaite and Fuller, 1999). This would require adequate mechanisms for the transfer of funds from the National Roads Authority to Local Government.

The harmonisation of approaches regarding the involvement of communities in the construction and maintenance of rural roads and tracks is required. Obviously, it is important not to obstruct priorities and practices to be established by local councils, but to bear in mind that in the past different donor funded projects employed different, sometimes conflicting, approaches. This concerned areas such as technologies (labour-intensive versus capital intensive), and remuneration of local communities (i.e. self-help versus cash or food for work). In this context, it is important that Government Departments and donors agree on a standardisation of approaches that would still allow decentralised government authorities to implement their priorities within a specific context.

Greater involvement of the private sector and local communities in road and track maintenance should be encouraged. It is recognised that besides an inventory of potential operators, this would require awareness building, and training.

Guidelines should be developed for different levels. Whereas design criteria for national and regional roads should be centrally established, village access roads should be designed at community level, taking into account local requirements. Planning to this end should involve the traders, and other potential users of the roads/tracks. Design of roads and tracks should reflect current and potential volume of traffic (i.e. vehicles per day).

It ought to be recognised that road/track construction by local communities may have its limits, particularly in more difficult terrain (mountains, wetlands, etc). Under these circumstances external assistance is required for the construction of bridges and other major pieces of infrastructure.

Co-ordination at different levels is required. Prioritisation by local councils is important but this has to take place within District or even regional priorities. As compared to other rural infrastructures, where less co-ordination is needed at local level, roads and tracks linking up several communities need more planning at a higher level.

Particularly, in areas where population density is low, it is important to identify inexpensive approaches. Local participation in the design of transport infrastructure has been found to lead to lower cost, lower technology solutions. CARE Zambia used an approach where communities provided materials freely and let road workers use their water supplies. As a result, feeder roads were rehabilitated relatively cheaply at \$3000 per km, including the costs of water crossings (simple culvert \$700, drift \$400 – 700). CARE Zambia has now increased the use of private contractors to provide training and advice for small-scale contractors who carry out construction and maintenance work at the local level (Hine, *et al* 1998).



Based on case study work in Ghana, Hine (1993) argues that "it is estimated that replacing a footpath by a vehicle track may have a beneficial effect to the farmer of over a hundred times more than improving the same length of a poor earth track to a good quality gravel road". At the same time he suggests that there is a need for new roads "to open up remotely located agricultural areas". According to the Transport Research Laboratory, UK, spot improvements may be more beneficial than extensive road construction and maintenance works (Pers. comm. S Ellis and J Hine).

In the local context, it might be appropriate to put more emphasis on means of transportation (see section below), e.g. combinations of so-called intermediate means of transportation (IMTs), and trucks. (Sieber, 1997). It is argued that combining IMTs (for short distances) and motorised transport (over long distances) should lead to lower total transport costs.

Greater use of labour intensive methods appears to be justified given the erosion of wages of unskilled labour in most Sub-Saharan African countries including Malawi (Von Braun, 1993). In this context, the Malawi Government launched the Public Works Programme under the World Bank funded Malawi Social Action Fund (MASAF). Through this programme, community access roads and bridges were rehabilitated and new roads opened. Although participatory methods are used to elicit community priorities and vulnerable groups employed as the main workforce, an evaluation of the programme indicates that the construction and rehabilitation of roads were inappropriate to resolve people's overriding predicament, which is chronic food insecurity (Zgovu, et al, 1998). With this, it is unlikely that the communities will maintain roads after the project, which would call for Local Government to find appropriate maintenance arrangements.

As for the issue of paying workers on Labour Intensive Public Works Programmes in the form of cash or food for work, there is no blueprint formula. On the contrary, this depends very much on the conditions encountered by targeted population groups. However, decision-making should be based on a sound knowledge of the food and labour markets, in order to avoid distortions of these markets (von Braun, 1993). At the same time, the MASAF programme prefers cash-for-work arrangements since food-for-work payment requires more logistical preparations (e.g. timely delivery of food as payment).

There is the danger that the use of conflicting approaches in relation to the payment of unskilled workers can damage the drive for self-help initiatives in villages. As a consequence, co-ordination between government departments, donors and NGOs is necessary. The result of this consultation should be guidelines to be used by Local Government.

Technical standards of roads should reflect the real needs in terms of potential vehicle usage. Where this is not the case and where standards are set by central government departments and donors without taking into account real service consideration, the result is excessive roads width and cost and, hence, fewer roads (World Bank, 1994).

Self-help in the construction and maintenance of roads is most likely to succeed when the project carried out by the community is relatively small-scale, and to its direct and exclusive benefit (World Bank, *ibid.*). This may be the case for village access roads

required by farmers for the sale of their produce. Trunk roads and feeder roads, which serve a wider public, require contractual arrangements with paid labour.

There is the issue of barriers to close roads after rain in order to avoid damage. Although similar arrangements are often abused by the services supposed to enforce them, problems with corruption should be easier to handle following decentralisation. Transparency and awareness building at local level is required.

To sum up, some points to improve the situation of community access roads in remote areas:

- Given the donor commitment to improve the rural road network, it is first and foremost government co-ordination that is required. It is expected that the newly created National Roads Authority will improve the situation.
- Given the shortcomings of the current situation regarding the responsibility for construction and maintenance of feeder and community access roads, new institutional arrangements at district level ought to be elaborated and promoted as a matter of urgency.
- Guidelines are required for road construction and maintenance at community level, which encourage community participation. These guidelines should be flexible enough for implementation at village level. As far as possible, general guidelines already prepared by World Bank initiatives, other donors, and NGOs should be adapted to local requirements;
- Avoidance of roads that are too wide; Criteria should reflect villagers' needs based on current and potential traffic volume; Spot improvements may be more beneficial than extensive road construction and maintenance works;
- Labour intensive construction technologies should be encouraged; bearing in mind that this is likely to lead to increased management and supervision costs. Adequate arrangements have to be put in place for maintenance if labour-intensive construction techniques are used as part of a "safety-net" programme such as MASAF.
- Encouragement of self-help initiatives at the lowest level, especially if roads are to the exclusive benefit of one community; however community participation should not take place at the expense of the poorer and vulnerable parts of the rural population; If it is felt that there is a danger in this respect, the possibility of contractual arrangements even at lowest levels needs to be explored.
- Given that communal labour is often associated with 'forced' labour, and the fact that these schemes are notoriously difficult to implement during election times, it appears that a substantial amount of awareness building at Local Government and community level is required in this respect.
- It ought to be recognised that villagers need outside support, especially where the terrain is more difficult (hilly, water streams) or where distances are too long;

Private contractors should be used for the construction of bridges, culverts or drifts.

- If private contractors are used, it is important to ensure transparency during tendering, implementation and evaluation. Without adequate quality control, private companies are unlikely to be more efficient and effective than the public sector.
- In the short-term, NGOs and donors should be involved in Districts with weak local capacity. Capacity building would be required for private sector contractors and Local Government to take over in the medium to long-term.
- Co-ordination at a higher level (e.g. Region) is required where roads and tracks form part of a wider network.

### **Means of Transportation**

During the course of the survey, lack of means of transportation was identified as a key constraint to agricultural marketing in all Districts.

#### **Background**

"Rural people in Africa devote a significant amount of time and effort to transport, much of which involves walking in and around the village and is geared to domestic and subsistence needs" (I. Barwell, 1999). Women are often the ones who are responsible for the bulk of the transport burden in rural areas, and, in many cases, this is aggravated by male migration to urban centres (Ellis, 1997). According to Dawson and Barwell (1993, quoted in Ellis, 1997), women have been reported to take up to 85% of total transport effort in terms of tonnes per kilometer travelled.

The availability of transport provides the poor with better physical access to markets and other social amenities such as education and health services. There is ample evidence that the availability of transport enhances agricultural productivity by addressing the spatial dislocation and any distributionally unacceptable consequences associated with lack of adequate means of transport particularly for the rural masses in the developing countries (World Bank, 1999). The need to transport goods to and from the farm is an essential task associated with agricultural activities of all income groups. For the majority, this travel is associated with household subsistence needs to transport food and inputs either to the homestead, market or to the farm. Availability of transport helps reduce the drudgery associated with headloading and walking.

In most rural areas of Malawi, the most common means of transport is walking and headloading. Many people (i.e. mostly women, by virtue of their dual responsibility for social reproduction and economic production), can carry on average up to 30 kg which is equivalent to 50–60 % of the average weight of a woman. Other rural based activities that require some form of transport include: firewood collection, water collection, going to grinding mills, accessing socio-economic amenities.

According to a study by Barwell (1996, cited in Akidi et al 1997) in Mbale District, domestic transport – mainly for water and firewood collection - constitutes 73% of household transport demand. Travel and transport for farming activities and marketing made up only 18% and 6%, respectively. To some extent, the latter figures are likely to have been influenced by a high degree of subsistence production in the farming system studied.

### **Survey findings**

To improve the transport situation in the rural areas several recommendations were suggested during the field and district level workshops and consultations. These include the need for Government to establish a well co-ordinated and clear rural travel and transport policy and institutional framework. Already several steps have been taken towards this direction through the Malawi Rural Travel and Transport Programme in the Ministry of Local Government (see below). There is need for increased government and donor commitment in terms of financial and logistical support to rural transport improvement. The financial support could be channeled through well established financial institutions such as the Small Enterprise Development Organization of Malawi (SEDOM) and the Investment and Development Fund (INDEFUND) considering that these institutions have already been involved in similar programs before. The development of Intermediate Means of Transportation would be the most effective and sustainable solution especially in the rural areas where accessibility and affordability problems would prevent the use of motorised means of transportation. However, for the sake of ensuring sustainability there is need to train adequate numbers of local artisans to manufacture and repair the IMTs.

An active responsibility over the rural access roads needs to be taken not only by the communities but also through relevant support from the government, the private sector and the NGOs.

### **Motorised and non-motorised transport**

Motorised transport. Lorries, trucks and pick-ups play an important role in long-distance marketing of agricultural produce. Although the capital cost of lorries is highest, they also have the highest transport cost effectiveness (i.e. kg.km/\$) (Grebresenbet et. al 1997). Both capital cost and cost effectiveness are lower in the case of smaller modes of motorised transportation such as pick-up trucks or mini-buses. Nevertheless, in terms of effectiveness, the latter are still far ahead of any other means of rural transport, such as ox-carts or two-wheel tractors and carts.

Tractor schemes have failed in most countries of Sub-Saharan Africa (Ellis, 1997). Amongst other things, this was due to lack of profitability of the operations, and management and maintenance problems.

The design of buses operating in rural areas could be improved to the benefit of small-scale farmers and traders using them for the transportation of goods.

It is understood that motorised transport needs a minimum of rural road infrastructure. At the same time, there are question marks behind the standard of roads in remote

areas. It is widely acknowledged that trunk roads have an important role to play in opening up an agricultural region. However, the exact requirements for motorable feeder and community access roads are less well known.

Despite the rapid growth of some vehicle fleets in the recent past (e.g. Siku Transport, Blantyre), the number of goods vehicles as seen in Table 5 is considered insufficient to satisfy the transport demands especially in a country where a large proportion of the population lives in rural areas. Many factors were cited to contribute to this including the unavailability of trucks due to lack of credit facilities to purchase these vehicles. Except for the credit facility for private traders which was administered by the Investment and Development Fund (INDEFUND) in the mid-1990s, credit facilities to rural transport operators are limited in Malawi. Importation of trucks is discouraged by the relatively high duties (on average between 20 – 30%). Apart from the poor road conditions, which considerably increase operational costs to truck owners, the other problems include lack of a clear policy and government attention to rural transport problems, the insufficient development of appropriate technologies and the uncoordinated institutional framework regarding rural transport in Malawi.

**Table 5: Motorized means of transport, 1990-1997.**

Period	p.cars	% share	g. vehicles	% share	Motor cycles	% share	Others	% share
1990	1560	33	1853	40	918	20	352	7
1991	2428	39	2344	37	1137	18	357	6
1992	3279	34	3046	31	1386	31	380	4
1993	1793	42	1439	34	639	15	374	9
1994	1912	51	1202	32	468	13	153	4
1995	844	36	978	42	411	18	113	4
1996	2003	41	1856	38	733	15	293	6
1997	3009	44	2736	40	752	11	342	5

Source: *Economic Report, 1998.*

Given its role in the economy, it seems important that Central and Local Governments take measures to encourage the development of a competitive transport sector. This includes for example:

- Avoidance of cartels in the form of transport unions or otherwise;
- Avoidance of excessively high taxes on fuel, and vehicle importation and ownership;

- Although safety and environmental concerns are important, relevant regulations should not impede the development of a transport sector.

Intermediate Means of Transportation (IMTs). Given the limited quantities which can be transported, the speed involved and the maximum distances to be covered, head-loading is one of the most expensive means of transportation. At the other end of the spectrum, motorised transport (e.g. trucks, tractor-trailers) is often not profitable in isolated villages. As a consequence, it has been argued that Intermediate Means of Transportation (IMT) have an important role to play in this context. For example, Sieber (1997) argues that the shift from headload to donkey cart can reduce the transport costs by 60%, and the shift to an ox-cart by nearly 90%.

Sieber (ibid) 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. Sieber backs this up with empirical evidence from Tanzania, where marketing revenue is substantially higher for households owning donkeys.

**Table 6: Performance of intermediate means of transportation**

Mode	Max load (kg)	Max speed (km)	Max range (km)	Topography Required
Wheelbarrow	100	5	10	Flat narrow path
Bicycle	75	20	20	Flat narrow path
Bicycle and trailer	200	10 – 15	15 - 20	Flat wide track
Bicycle and slider	150	10 – 15	15 - 20	Flat wide track
Pack animals	100 – 250	5	15 - 20	Hilly, narrow path
Animal-drawn sledge	200 – 400	5	10	Flat
Animal drawn cart	500 – 1500	5	15 - 20	Flat wide track
Motorcycle	100	40 – 90	100	Motorable path
Motorcycle and side-car	250 – 500	30 – 60	60	Flat
Motorcycle and trailer	250	30 – 60	60	Flat
Single-axle tractor and trailer	1500	15 – 20	40	Flat
Asian utility vehicle	1000	60	60	Motorable road / track

Source: Riverson and Carapetis, 1991, quoted in Gebresenbet *et al* 1997.

“Although donkeys are universally ridiculed, they can be invaluable providers of transport energy for women in semi-arid and mountainous areas. Donkeys are more gender-neutral than other work animals and in many societies, it is uncomplicated for

women to own and / or have access to donkeys. By facilitating women's access to donkeys, development programmes can have important social and economic impacts" (Starkey, 1998). In Mali, the majority of carts are drawn by donkeys. In fact, for cost reasons, even owners of oxen often prefer to use donkeys and donkey carts for transport. In that respect, the country benefits from its large donkey population, which was 574,000 in 1991 (Gordon, 1997).

The main constraint to access to IMT for resource poor households is the initial capital expenditure. Appropriate credit schemes are 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). Potential manufacturers of IMTs require training and credit for setting-up a business. (e.g service delivery, parts and repair workshops, etc.)

Table 6 provides an overview of the performance and effectiveness of the various modes of intermediate means of transportation, including small motorised vehicles, and their key characteristics.

## Projects

The **Pilot Integrated Rural Transport Project (PIRTP)** was initiated with funding from the United Nations Development Programme (UNDP) in 1991 under the 5<sup>th</sup> Country Program. The project was in response to the findings and recommendations of the International Labour Organization's (ILO) study mission<sup>6</sup> on the factors that impede integration of the rural population into the national economy.

The Pilot Project was launched in three of the country's ten Rural Growth Centres<sup>7</sup> (RGC), i.e. Embangweni in Mzimba district in the Northern region, Lobi in Dedza district in the Central region and Neno in Mwanza district in the Southern region. The main objective of phase I and II of the pilot project was to contribute to increasing the mobility and accessibility of rural households to goods and socio-economic services necessary for increasing agricultural productivity, income and employment in the rural areas.

The project promoted and facilitated the use of intermediate means of transport (IMTs) through the provision of credit services and the training of local artisans. The number of IMTs disbursed are presented in Table 7. Bicycles were by far the most numerous IMTs which were given out on credit by PIRTP, followed by wheelbarrows, and farm carts. Men were the main beneficiaries of the project. Besides

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6 In 1988 the Malawi government instituted an ILO mission to critically assess the rural transport problems in Malawi, particularly as they relate to the country's Rural Growth Centres (RGC). The Mission report indicated that there is lack of mobility of people and goods at the local level (Ministry of Local Government/UNDP/ILO, 1997).

7 The Rural Growth Centres were established by the government of Malawi in 1977 with the objective of creating focal points of development in the remote areas through the provision of social and economic services, to contribute to the decentralization of administration and to foster community development in order to give rural people an opportunity to better participate in development activities at the local level and to contribute to the integration of development activities of the various ministries in the rural areas. It was planned that each RGC should serve a radius of 15 km with a target population of 25,000 to 50,000 people. However, only ten RGC were established in Kasungu, Mzimba, Mwanza, Thyolo and Mangochi districts.

means of transportation, the project also covered aspects related to infrastructure such as bridges in rural areas and community access roads.

One of the problems encountered by the project, was that carpenters or metal workers did not have sufficient training to operate certain types of machinery or lacked access to electricity which was a problem for welding.

As one of the recommendations, the Pilot Integrated Rural Transport Project has given birth to the **Malawi Rural Travel and Transport Programme (MRTTP)** which became operational in July 1997. MRTTP is a joint initiative between the World Bank under the Sub-Saharan Africa Travel and Transport Programme and the Malawi Government. Unlike the PIRTP, which was on a pilot basis and was localised within three areas in Malawi, the MRTTP focuses on the mobility and accessibility of the rural masses through, *inter alia*, formulation and implementation of conducive national policies and strategies, provision of rural access infrastructure and the promotion of intermediate and motorised means of transportation (Malawi government, MoLG, 1997).

**Table 7: IMTs given out on credit by PIRTP by pilot area by sex**

Type of IMT	Lobi		Embangweni (Mzimba)		Neno (Mwanza)		Total
	Male	Female	Male	Female	Male	Female	
Bicycles	145	67	110	26	192	17	557
Bicycle trailers	3	2	7	0	3	0	15
Wheel barrows	31	2	23	1	23	2	82
Farm carts	16	0	12	1	16	1	46
Hand carts	1	0	0	0	0	0	1
Donkeys	0	0	0	0	4	0	4
Tricycle	0	0	0	0	1	0	1
Stretcher	2	0	1	0	0	0	3
Total	198	71	153	28	239	20	709

Source: Anonymous, 1997.

### Way forward

- There is the need for Government to establish a well co-ordinated and clear rural travel and transport policy and institutional framework. For example, the Government ought to avoid regulatory barriers (e.g. high taxes) blocking the widespread up-take of motorised and non-motorised means of transportation. Local Government taxes on the movement of goods should be avoided since this can lead to significant extra marketing costs.



- There is need for increased government and donor commitment in terms of financial and logistical support to the Malawi Rural Travel and Transport Programme (MRTTP)
- Adequate availability of credit for farmers and workshop owners is important for the up-take of means of transportation.
- Government officials have to be made aware of the benefits of Intermediary Means of Transportation. In the context of small-scale farming, animal traction and other forms of IMTs do not represent an out-dated technology. IMTs should be given more prominence in training and extension curricula.
- Due to socio-cultural constraints, awareness building amongst the rural population is necessary. This should make certain means of transportation more acceptable to women (e.g. bicycles, donkeys, etc).
- A programme supporting the introduction of intermediate means of transportation should have an adequate element on animals (i.e. management, nutrition, and health of draught animals such as oxen and donkeys).

**Table 8: Pros and cons of selected non-motorised means of transportation**

**Bicycles**

Pros	Cons
<p>Don't require fuel</p> <p>Relatively fast</p> <p>Cheap</p> <p>Can be used on narrow paths</p> <p>Local manufacturing and repair capacity exists in many countries</p> <p>Bicycle trailers can be used for heavy or bulky loads, however this requires improved, wider paths/tracks. In the past, bicycle trailers have not been very successful.</p>	<p>Often not used by women, owing to cultural attitudes, or lack of appropriate equipment (i.e. bikes without cross-bars)</p> <p>Pay load is limited to about 100 kg.</p> <p>Difficult to use in hilly terrain, in particular if paths/tracks are not sufficiently smooth</p>

### Ox-carts

Pros	Cons
<p>High pay-load (i.e. up to about 1000 kg)</p> <p>Advantageous if animals are also used for ploughing</p> <p>Cows can be used for transport (e.g. Southern Europe); as a result milk can be an additional benefit of the traction animal</p>	<p>Rarely used by women</p> <p>Pair of oxen plus cart are fairly expensive and often beyond the reach of resource poor farmers</p> <p>Animals have relatively high feed and fodder requirements which can be a problem in areas where farm sizes are small (i.e. below 2 hectares)</p> <p>Problems with diseases such as trypanosomiasis in particular in the more humid parts of Sub-Saharan Africa</p> <p>Cattle rustling can be problem</p>

### Donkeys

Pros	Cons
<p>Due to the animals' size, they can be used by women and even children</p> <p>Relatively inexpensive</p> <p>Can be used on foot-paths, in particular in hilly terrain where there are no roads or tracks which can be used by bikes</p> <p>Require little management, in particular in arid or semi-arid regions</p> <p>In some parts of Africa (e.g. Mali), there is widespread use of donkey carts</p> <p>Owing to their low value, theft of donkeys is rare compared to cattle rustling</p>	<p>Donkeys survive best in arid or semi-arid regions. Disease prevalence and mortality rate increase if annual rainfall is above 700 – 1000 mm.</p> <p>If used as pack animals, carrying capacity is limited to about 70 – 100kg.</p>

Source: Personal communication, Paul Starkey

## Market Infrastructure

One of the major problems affecting access to markets in the remote areas is the lack of adequate market infrastructure which include output, input and food markets. The establishment of market infrastructure is the responsibility of district councils under the Ministry of Local Government. However, the provision of infrastructure is skewed to the district headquarters and the towns and municipalities. The rural areas do not have adequate infrastructure and depend on informal road side markets and the official marketing parastatal, the Agricultural Development and Marketing Co-operation (ADMARC). The latter had to close down its non-economic markets in order to improve its efficiency and competitiveness. This affected particularly communities in remote areas.

It was felt that community markets only require a minimum of investment. In the case of some donor projects which were poorly designed without taking account of the needs of rural communities, expensive market infrastructure was either under-utilised or not used at all. According to Mittendorf (1993), "improving infrastructure at rural market centres is mainly an institutional issue, namely what is the best institutional arrangement to provide the necessary maintenance and investment services." Private operators of markets are unlikely to make necessary investment. Therefore, it was suggested that local authorities need to undertake a minimum of investment prior to handing it over to the private sector for management purposes.

It is important to find a sustainable institutional solution to farming communities in areas where ADMARC has closed down its markets. This may include the use of ADMARC warehousing facilities by private traders. The private sector should be given priority wherever possible.

The following points can serve as guidelines for the establishment of markets:

- Markets should be located at central points to reduce distances for producers and traders,
- Markets need a minimum of infrastructure to be provided by LG, such as platforms, permanent shades for all-weather business, sanitary facilities, and water supply. The construction of warehouses should be undertaken by the private sector.
- The system of weekly or fortnightly markets may need enhancing. Announcements through the mass media (i.e. rural radio) should be envisaged (also see Section below on market information).
- Following an initial, moderate investment, the running of the markets should be tendered out to private operators.

## Storage

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.

Storage is a private sector activity. As such it is important that research and extension services prepare relevant messages on technical aspects and the economics of storage for the main players, i.e. namely farmers and traders. Farmers generally will require small storage facilities, which are appropriate for the scale of their business, whereas traders require warehouses, which can be owned or hired. In the context of the latter, it appears appropriate to develop mechanisms allowing the private trading sector access to ADMARC warehousing facilities.

Protection of stored produce against insects, rodents, mould, moisture etc is important to preserve the value of the commodity. Aside from technical messages on the use of chemicals or natural protectants, it is important that these means are available.

Table 9, prepared by Dr P Golob, NRI, provides some guidance on the extent of agricultural storage losses. The table in general demonstrates that considerable losses occur during grain storage at farm level particularly when storage periods are extended over several months.

**Table 9: Weight losses in local grains and pulses during storage on small farms in Africa**

Country	Crop	Storage period (months)	Cause of loss	Mean % weight loss ( $\pm$ SEM) or range	Reference
Zambia	maize	7	Insects	1.7-5.6	Adams, 1977
Kenya	maize	Up to 9	insects, rodents	3.5 $\pm$ 0.2	De Lima, 1979
Malawi, Lilongwe	maize	Up to 9	Insects	3.2 $\pm$ 3.4	Golob, 1981
Malawi, Lower Shire	maize	Up to 9	Insects	1.8 $\pm$ 3.5	Golob, 1981
Malawi, Lower Shire	sorghum	Up to 9	Insects	1.7 $\pm$ 0.5	Golob, 1981
Tanzania**	maize	3-6.5	insects (LGB)	8.7	Hodges <i>et al.</i> , 1983
Swaziland	maize	Unspecified	Insects	3.7	De Lima, 1982
Swaziland	maize	Unspecified	Moulds	0.5	De Lima, 1982
Swaziland	maize	Unspecified	Rodents	0.2	De Lima, 1982
Ethiopia!	sorghum	9	Insects	4.0-9.2	Lemessa and Handreck, 1995
Togo	maize	4-6	insects	5.1-6.4	Pantenius, 1988
Togo*	maize	6-8	insects (LGB)	30.2-44.8	Pantenius, 1988
Tanzania*	maize	4	insects (LGB)	17	Keil, 1987
Ghana	cowpea	5-9	Insects	1.1-4.7	Golob <i>et al.</i> , 1998
Ghana	bambara	5-9	Insects	1.4-1.6	Golob <i>et al.</i> , 1998
*Data do not take into account food removals during storage, no allowance made for declining quantities.					
** Spot estimate on samples collected at one point in time.					
! Storage in lined, underground pits which were untouched for the entire storage period					

Storage is associated with capital costs. Traders often depend on credit (e.g. inventory credit) to be able to purchase commodities which can be stored. Although farmers may not require capital to store produce, storage still leads to opportunity costs. In many cases farmers are forced to sell produce after the harvest to meet their financial commitments. This could be prevented if farmers had better access to credit facilities.

### **Processing**

Processing can range in scale from household level, low technology, processing, to fully mechanized factories. Farming communities lacking opportunities to sell their produce in fresh form are often forced to endeavor in processing activities (e.g. drying of roots, fruits and vegetables, or smoking of meat). With respect to marketing, processing at farm level 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.

At national level, agro-processing industries can generate demand for agricultural raw materials, including crops that are traditionally viewed as food crops. "New market opportunities are now providing a still largely unexploited niche for small-scale processing" (Spore 65, September – October 1996). The final product may be exported or consumed domestically. Aside from the traditional cash crops, other examples include:

- Vegetable and fruit processing (e.g. chilli sauces, dried fruits),
- Animal feed processing (e.g. dried cassava and by-products from oilseed processing and maize milling),
- Starch industries (e.g. cassava or sweet potato in Asia),
- Milk processing,
- Fish processing.

A favourable investment climate is a condition for the creation of a successful agro-industry. It is important that the investment climate is appropriate not only in the major cities but also in the Districts. Needless to say, a minimum of infrastructure is required to stimulate agro-processing industries, such as water, electricity and communication facilities. Investment promotion authorities need to provide relevant information for potential domestic and international investors.

## **INFORMATION**

### **Survey Results**

The lack of market information was the fourth most important constraint to agricultural marketing identified at the District workshops. Market information provided by the Market Information Services (MIS) of the Ministry of Agriculture and Irrigation (MoAI) is not very relevant to the people in the remote areas because it is not timely and is collected from very few markets which are poorly linked to the remote areas. Most of the rural areas are situated outside the main public communication facilities such as telephones and the availability of information dissemination media is also very limited in the rural areas.

The Agricultural Co-operatives Development International (ACDI) under the Smallholder Agribusiness Development Project (SADP) funded by USAID is providing commercial information to motivate farmers to take up farming as a business. Although this kind of information is very useful for farmers, only a relatively small minority of the rural population has access to it.

### **Facts about Information**

The need for market information is unquestionable. "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).

Shepherd (*ibid.*) distinguishes between market information and marketing information. The former emphasises collection and dissemination of prices, and, in some cases, quantities, whereas the latter represents a much wider concept, including information on market channels, potential buyers and their contacts, payment requirements, quality standards, etc. In this report, only the term market information will be used.

Larger-scale traders usually have their own information networks relying on more or less modern communications technology (e.g. fax, e-mail, etc). Although generally quite well informed of local markets, small-scale traders lack the resources to monitor markets on a regular basis (Shepherd, *ibid.*). They depend more on "word-of-mouth" information, which depends on the existence of traditional communication channels such as telephone lines, and a functioning transport infrastructure. The latter not only results in larger quantities of goods transported but also improved flow of information.

Although it is increasingly argued that users should pay for information, in the context of resource poor farmers, this seems unrealistic. For the time being, information should be considered a public good in the context of small-scale farming in Sub-Saharan countries. Especially where mass media such as radios are used, it is difficult to recover costs. Information provided through the printed media (e.g. newsletters or

newspapers) could be charged directly or indirectly to the user, but there are issues such as affordability, delivery delays, quality of information, and presentation (i.e. normally not presented in vernacular language).

It must be recognised that the provision of information for small-scale farmers ought to be seen in the context of adult education. Universal Primary Education (UPE) is expected to generate long-term benefits. However, if agricultural productivity is to increase within the next one or two decades, then adult farmers will require more information of not only markets but their business and environment in general.

Particularly in remote areas, demand for information needs to be created. Farmers need to be made aware of their right to information, how they can make use of it, and how to influence its delivery. This can take the form of "pressurising" an extension officer to provide a particular piece of information or request better packaged agricultural radio programmes from the local FM station.

At the same time, it is important to bear in mind that provision of information alone, however good its quality, is not sufficient. Markets must be sufficiently competitive so that farmers or small-scale traders can take advantage of opportunities offered. Aside from the availability of production factors, farmers must have the entrepreneurial spirit and knowledge to be able to make use of information. Obviously, and last but not least, if increased market orientation would lead to unjustified risk to their livelihoods then farmers cannot be expected to adjust production accordingly.

### **Types of Information Required**

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 record so that they can avoid those that are untrustworthy".

In Mali, the execution of needs assessment studies was one of the first activities of the newly established "Observatoire des Marchés Agricoles". Target groups for this exercise included, farmers, traders, processors, and institutional decision-makers.

According to Sanogo (1998), farmers requested the following types of market information: Different food security and cash crops (i.e. not only cereals should be covered), supply and demand situation and prices on markets, availability and prices of inputs (including transport, equipment, fertiliser, etc), availability and conditions of credit.

As for processing and storage, the following information needs were expressed by producers: Storage technologies, Availability and price of chemicals, and Demand for processed products. Livestock producers requested information on, disease control, availability and price of inputs such as drugs and feed, livestock prices.

The survey also revealed that farmers prefer local radio stations broadcasting in vernacular language. This indicates that, at least, part of the information should be

related to the context of a specific locality rather than the nation as a whole. This may in particular apply to farmers operating in remote areas.

Traders expressed the following information needs: Traders buying and selling on the domestic market, prices, demand and supply volumes, contacts of traders, information on storage technology.

Export traders request information on prices, supply and demand situation, contact details of traders, quality standards, regulations, market opportunities. In the context of traders it is important to mention government policies affecting domestic and export markets. For example, unannounced subsidised imports of cereals or inputs such as fertilisers can create problems for traders.

Processors require three types of information related to, raw material supply (prices, volumes, sources, production statistics), processing technology (prices and suppliers of machinery, new technologies), and sales (price, demand and distribution of products, information on competing imported products).

Decision makers require information on: Commodity system, agricultural statistics, food aid, food security stocks, regulations on national and international markets, support programmes for operators active in the respective commodity chains, availability and conditions of credits, prices of agricultural products on the national, sub-regional, and international markets.

This clearly shows that farmers and traders require more than market information, which is primarily based on prices. Technical information includes both pre- and post-harvest aspects of farming. Traditionally, extension services were given a leading role in providing this information, however, at best, their results have been mixed. Emphasis has been on production, in particular of the traditional food and cash crops such as maize and tobacco, whereas farmers equally require technical information on post-harvest aspects, including storage, transport, processing and marketing. As a consequence the latter points need to be strengthened.

In the wake of market liberalisation farmers need to adopt a more commercial approach to their business. This requires a minimum exposure to farm management concepts such as record/book keeping, profitability, etc. In this respect, extension officers, be they from Government departments, NGOs, or private sector, have an important role to play in communicating these concepts. It is important that the extension staff themselves - be they from Government services or NGOs - are more exposed to commercial approaches. As already indicated, the NGO ACDI, as part of their Smallholder Agribusiness Development Project (SADP) provide commercial information to motivate farmers to take up farming as a business. The challenge is how to make this kind of information more accessible to the majority of farmers.

Although not directly linked to market information, institutional information has an important role to play in rural development. This may correspond to civic education whereby villagers are made aware of their rights and duties. In particular, following decentralisation, it is important that communities are able to participate in the decision making process, and that Local Government actions and decisions are made as transparent as possible.



## Means of Communication

### Rural radio

"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.

Broadly, there are three types of radio stations:

- National radio stations,
- Private or Commercial local FM radio stations,
- FM Community radio stations (small radius, about 50 – 100km) often set up by NGOs.

The main advantage of national radio stations is the large coverage they can achieve. This is partly due to the fact that listeners are used to the programmes and schedules of the national radio and therefore prefer to tune in despite the existence of new stations.

Disadvantages of national radio stations include:

- generally high fees for airtime, in particular if the stations have been commercialised to enable them to meet their financial obligations.
- sometimes political interference,
- if there are many languages and dialects spoken in the country, it can become difficult to reach the majority of the population,
- National radios, which are usually based in the capital or a major city, may be useful for spreading very general messages concerning the entire country, but they cannot take account of local information requirements.

As the term already implies, private or commercial FM Stations tend to have a commercial, profit-making approach. They often also charge relatively high rates for airtime, which may be an indication of lack of competition, or high demand for airtime. Income may not only come from advertising, but also broadcasting of development programmes, and personal messages.

Although generally set up without support, in some countries such as Mali they receive a subsidy at least during the first years of operation. Often, the owner of the station or key employees have a background in journalism, which is of advantage when it comes to issues such as programme making and broadcasting.

The radius of FM Stations can vary considerably. Smaller stations with less expensive equipment have a radius of about 50 km which can increase to 100km if the transmitter is well positioned (e.g. on top of a mountain). Larger stations with several transmitters can cover several regions of a country as the example of Voice of Toro in Uganda shows (Box 1).

### **Box 1: Voice of Toro, the Example of a Commercial FM Station in Uganda**

Created in the mid-1990s, Voice of Toro (VOT), a private FM radio station, which has its headquarters in Fort-Portal, Western Uganda, has four 3KW transmitters located in Fort-Portal, Mbarara, Mubende, and Kampala. In addition to the usual media aspects like entertainment and news updates, the focus of the corporate mission is on basic social concerns such as poverty alleviation, agriculture, education, and other aspects of rural development.

According to their factsheet, VOT covers 16 Districts in Western and Central Uganda with a population of over 15 million, and is also received in parts of Northern Rwanda and Eastern Congo. The languages used by the station include: Runyoro/Rutoro, Runyankole/Rukiiga, Lukonzo, Rwamba, Kinyarwanda, Swahili, English, Lingala, and Luganda.

The average airtime cost for advertising spots is between Sh10,000 to Sh15,000 (US\$7 – 11). Airtime for news adjacent journals will attract an extra charge of 50%. The production of one commercial/advert costs Sh150,000 (approx. \$110), and a 15 minute programme Sh450,000 (approx. \$330). At the same time it was indicated that cheaper rates could be negotiated if, for example, the station would be used for regular broadcasts of agriculture related extension or market information messages.

During the early years of their existence, VOT have also sold low cost FM receivers to the population in their area in order to boost radio ownership and listenership.

Community Radio Stations, often sponsored by NGOs or donors, are stations that can be particularly useful in remote areas where no commercial FM station can be received. In some cases they are based on volunteer work. Thus, there are no permanent employees to develop and broadcast programmes on the radio. Consequently, they are obviously in close contact with their listeners, but are also likely to lack professional broadcasting and management staff. This can be a problem once the initial enthusiasm for the new station is gone and programme making becomes routine. They require financial support from donors, NGOs, or the Local Government.

Box 2 provides the background to Radio Dzimwe, a Community Radio Station in Mangochi District, which started broadcasting in late 1998.

Estimates of costs of setting up a Community Radio Station vary widely. According to Myers (1998, based on Louarn, Panos 1994), small stations “cost as little as £15,000 to set up in terms of initial investment in equipment”. Larger stations may cost up to £50,000 and more, including costs for broadcasting equipment, transmitters, studio, vehicles, and training of personnel. In addition, there are often unpaid inputs from volunteers. Insufficient funding and the absence of adequate training and support (e.g. means of transportation for volunteer staff) can jeopardise the success of a station.

**Box 2: Radio Dzimwe, Malawi**

**Dzimwe Community Radio Station, Malawi**

**"You develop a woman, you develop a whole nation."**

*by Francois Laureys, 22 December 1998*

**Dzimwe Community Radio Station is one of the first women's radios in Africa. In a men's world, female groups find it increasingly important to develop their own structures to be able to bridge the historical and social gap between the sexes. In Malawi, the Media Women's Association took the initiative to set up a radio station of their own. Coordinator Patricia Chipungu-Thodi tells why and how the radio was founded.**

"We are the first in Southern Africa to set up a women's community radio station. With funding by UNESCO amongst others, we had the equipment installed, and we rented some premises as an office and a studio. That is at the Wild Life Society offices in Mangochi, which is [one of] the Lake [shore] districts of Malawi, where the radio will be situated. We recruited 14 women and trained them during September, October and November, so we were able to start broadcasting before the end of 1998."

"First, the programme makers will work on a voluntary basis. Later, they can try to sell advertisements on the stations. When these come in, the station will be able to pay the programme makers. But I think this will be at a later stage. Since there is some donor-fatigue, I guess we will have to try and be as self-supporting as possible pretty soon. Meanwhile I'm trying to find as many sponsors as possible. For instance, at this moment, we don't have telephone, we don't have fax-possibilities, we don't have internet... So it's quite difficult to get in touch with us. That will have to change."

"The Malawi Media Women's Association did extensive research throughout the country to see what problems were imminent, especially for women. We discovered that this part of Malawi has a lot of problems. Here, we have high illiteracy – most of the grown-up women have never been to school, and a large part of the young women still don't go now. Health hazards are our other big problem due to the location near lakes. People don't have latrines, they don't have bathrooms, they bathe in the lake, drink water from the lake where they defecate too etc. So we said, 'how can we help these people?'. We thought radio would be a good medium to inform and educate the women about hygiene, since most of them are illiterate."

"What we do is to ask some women from the community to participate in the radio. These same women will be going to see and will be speaking to their fellow-women in the villages. They will be teaching them what they should do and avoid in terms of health. In this way, we hope to develop the whole area, at least within one or two years after opening the station."

"We are not barring men from working with us. But what we are saying is that it should be seen as the women doing most of the job. Because, so far as I know in my country, most of the people who are developed are men. Even if you compare our government's ministers, most of them are men. We only have two, maybe three women in the cabinet. At the National Radio, we are approximately 200 women against 600 men! All that shows that men have already monopolized the whole political and media sector. We want to work with women to get them on the same level as the men, so that the positions can be divided more equally. Another thing of which I am convinced is that we will only be able to develop this country through women. Like they say: "You develop a woman, you develop a whole nation; you develop a man, you develop an individual."

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Source: website of Radio Netherlands: <http://www.rnw.nl/realradio/community/>

Cost of FM equipment for Community Radio Stations starts with US\$1,500 for a small transmitter suitable for villages or small areas increasing to about US\$7,000 (ex-works) for a 1200 Watts package comprising transmitter, power supply, and four-bay antenna system (Source: Mallard Concepts Ltd., Brixham, UK; E-mail: <http://www.mallard.org> ).

With 107 licensed radio stations, out of which 92 were operational in early 1999, Mali can be considered a communication laboratory. For example, there are five stations alone in the secondary urban centre of Segou and a total of 14 in the Segou Region. The rapid expansion of radio stations was sparked by the downfall of the Traoré regime in 1991. Until then, only one Government run radio station operated in Mali.

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”.

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.

The cost of programme production, including script writing, transport etc. was £250 (\$400) per 15 minutes soap opera in Kenya, excluding airtime (pers. comm. Lloyd Morgan). In the case of the USAID funded DISH project in Uganda, the cost of producing a 30 minutes drama on health issues is approximately \$300 (pers. comm. Cheryl Lettenmaier). For comparison, Myers (1995) estimates production and broadcasting of natural resources related programmes at £75 (\$120) per hour in the context of a Community Station. These figures need to be seen in comparison with the number of listeners reached. Overall, radio is an inexpensive, cost-effective medium for reaching large numbers of listeners in remote rural areas.

Comparing commercial and community stations, it appears preferable to establish the latter primarily in areas where commercial stations cannot be received. Otherwise, it seems best to use commercial stations for the dissemination of the different types of information required by isolated farming communities. Different avenues of funding need to be explored. For example, one option consists of companies involved in input supply also sponsoring agricultural programmes on the radio.

In some countries, including Malawi, **radio ownership and availability/cost of batteries can be a problem.** 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). 30 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 (Robbins, *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 10 summarises the pros and cons of the clockwork radio.

**Table 10: Pros and Cons of clockwork radio**

Pros	Cons
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.

### **Other means of communication**

To begin with, there is what is called word-of-mouth communication, which plays an important role in most parts of rural Africa. This type of information flow is influenced by the volume of traffic and movement of people, which is a function of road infrastructure, availability of means of transportation, etc. Markets and other centres of social gathering are places of high turnover of word-of-mouth information.

Dialogue is the type of communication used at workshops or seminars where, for example, members of medium and small-enterprise associations benefit from an exchange of information on various aspects of their business. At the same time, this type of communication is commonly used by agricultural extension staff providing farmers with information. Exhibitions, trade fairs, and study tours are a form of communication where farmers and traders mainly benefit from the visual impression of an object. Although they can be very useful, it is unlikely that the bulk of the population in remote, rural areas will be able to benefit from them.

In the past, printed media have played an important role in Market Information Systems. Often, information was disseminated in newspapers, newsletters, and bulletin boards. Main problems with printed media include language and illiteracy among readers. The majority of farmers in isolated communities are unlikely to read English. Another problem with printed media is the delay in reaching remote villages. On the other hand, posters written in vernacular languages have proved to be effective in communicating straightforward technical messages.

Mobile video vans are an effective form of audio-visual tool in areas with good road network. However, they are less appropriate in remote areas and where large audiences are targeted. Maintenance of equipment can be an issue.

New communication technologies, which started only to exist during the 1990s, can be very useful. Examples include cellular phones, e-mail connections and the Internet. Cheaper satellite technology has greatly helped to spread these means of communication. It may well be the case that due to this rapid technological development, the construction of traditional telephone lines may become superfluous in the very near future. The usefulness of community telecentres, which provide public access to a range of communication services such as radios, telephone, fax machine, and Internet needs to be monitored.<sup>8</sup>

However, according to Bay Petersen (quoted in Robbins 1998), "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."

## **Market Information Systems and the Way forward**

### **Mali's experience**

Based on a survey of 120 countries the FAO was able to identify only 53 functioning Marketing Information Services (Shepherd, 1997). Given the questionable utility of those services they came to the conclusion that "Market Information Services 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." (Shepherd, 1997).

Mali's Agricultural Market Information System (MIS) provides an interesting case in this respect. Since its introduction in 1989, it concentrated on the collection, processing and dissemination of information on cereals and livestock markets (Sanogo, 1998). However, according to Galtier *et. al.* (1998), Sanogo (1998), and Timbo (1998), it was increasingly recognised that Mali's MIS had a number of shortcomings such as:

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<sup>8</sup> FAO (1999) Communication for Development Group works to get the message across. FAO website: <http://www.fao.org>

- Too much emphasis on price,
- Emphasis on cereals and livestock only,
- System too bulky and expensive,
- No projections / forecasting,
- Inappropriate dissemination techniques, and
- Lack of demand for information.

Due to these shortcomings, it was decided to revamp the MIS and change its institutional setting. The new project, Observatoire des Marchés Agricoles (OMA), was launched in 1998 with funding from the USAID. The project is being implemented by APCAM (Assemblée Permanente des Chambres d'Agriculture du Mali), in collaboration with Michigan State University. The primary objective of this project was to create a decentralised market information system which is efficient, viable and financially sustainable (thus, without requiring donor support) (Timbo, 1998).

A participatory needs assessment exercise was carried out to identify the information needs of the different stakeholders such as farmers, policy makers, traders., etc. This exercise was certainly a step in the right direction. Private sector stakeholder involvement is considered one of the keys to the success of the MIS.

As for the financial independence, it is difficult to foresee the system working without donor support. The annual operating cost of the new system is estimated at 100 million FCFA (i.e. approx. US\$170,000). Although part of the costs can be recovered through the sale of information, this is likely to work only with commercial operators. In remote areas, information that is disseminated through radio, has more of the characteristics of a public good.

Given the amount of information requirements for different stakeholders, there is a danger that the "new" system will become even bulkier than the previous system. As a consequence, data collectors and analysts ought to be careful not to repeat the mistakes of the past. A flexible approach is required.

The information requirements identified through the survey also suggest a number of different sources of information. Market information as such should be supplied through the MIS as much as possible. However, other types of information may be better supplied by extension services, private companies, or directly, by research institutions (e.g. information on new processing technologies). Obviously, this depends on the location.

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.



Whilst it is desirable to have several sources of information available to farmers (i.e. information pluralism), at the same time, it is also important to co-ordinate efforts between suppliers of information. For example, where there are different projects collecting or disseminating certain types of information, there is need for co-ordination to avoid duplication. This is particularly the case in remote areas, where resources are often scarce. Decentralised government structures should allow better co-ordination in this respect.

### **Ideas on a decentralised Market Information System**

The following paragraphs do not attempt to provide a complete blueprint but to provide some ideas for a possible way forward.

- A decentralised, flexible, information system, bringing on board all the main stakeholders (e.g. LG, private sector associations, NGOs, Radio Stations) should be envisaged,
- Government (Central and local), donors and NGOs ought to make resources available for collection, updating, building up and publicising of different information to a wider audience. Information, in particular if broadcast through mass media, is a public good in remote areas. The private sector should be encouraged to support the development of the MIS but this is unlikely to cover the bulk of the funding requirements,
- Pilot projects are required to identify how system should be set up at District level. Possibilities where MIS could be placed at local level include Chambers of Commerce or NASFAM offices, in conjunction with local administration. This may differ from District to District depending on the resources available. Given the lack of resources, it is unlikely that several independent information centres will be established at District level.
- As far as possible, there should be direct exchange of information between information officers from different Districts. However, although the system should be based on decentralised and flexible principles, it requires a Focal Point at the Centre for two reasons, namely (a) network co-ordination, and (b) data collection, processing and analysis (a place, where some selected District level data (e.g. key market indicators) are gathered and processed.)
- The system should be demand-driven reacting to the needs of the target population groups (i.e. primarily small-scale farmers and traders). This process should start with a participatory needs assessment, followed by an on-going contact between target groups and District Information Officers. Agricultural extension staff may have to play an intermediary function in passing on farmers' information needs, which is dynamic depending on the agricultural calendar and other factors.
- Local Radio stations should be a principal means of disseminating information. If possible, commercial stations should be used. Other modern technologies should be used for data gathering and processing. Radio spots and programmes, however long they may be, need to be well presented (i.e. should not be boring), and broadcast at the right time and in the right form (i.e. language, etc). This requires

be used for data gathering and processing. Radio spots and programmes, however long they may be, need to be well presented (i.e. should not be boring), and broadcast at the right time and in the right form (i.e. language, etc). This requires training on the part of District Information Officers and others involved in the Market Information System. Radio stations have to carry out audience research to get feedback from their clientele.

- NGOs may have a role to play where local capacity is weak. This may involve assistance to the Local Government in setting up a community radio station, training of information officers, and provision of transport and equipment. At the same time it is important that the institutional side of the MIS is sustainable. The creation of unsustainable units, which do not form part of the local institutional set-up, should be avoided.

## FACILITATING FUNCTIONS

### Community Organisation and Market Linkages

Group actions by farmers have considerable potential for increasing market access. 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, 1995). With respect to market access, the advantages of group actions are as follows:

- **Cost sharing:** Groups can 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.
- **Provision of public goods:** Groups can internalise certain externalities and therefore allow for the private provision of certain public goods.
- **Risk sharing:** Groups can reduce risk by pooling individuals' risk (though this may lead to unwise and over-risky decisions).
- **Economies of scale:** Groups can lower transaction costs, for example, by performing screening roles; gathering and disseminating information about members; and joint activities, for instance the purchase or marketing of goods.
- **Collective bargaining:** Co-operatives can exercise or counter market power through collective negotiations or control with-holding members' supply to the market, etc.

(Goodland et al, 1998)

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 no 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.
- In some cases, the formation of co-operation has been justified on ideological grounds. Often these co-operatives fail because of 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. In this case, people of common interest 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 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 is "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 out-grower schemes. Marketing frequently plays an important role in these groups (see examples in Stringfellow: UVAN Ltd. Uganda; ITDG, Chivas Region, Zimbabwe). The linkage is formed on the understanding that both sides - the group members and the private company - benefit from the relationship. 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.

Although 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.

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.

Nevertheless there are examples where communities in areas considered remote have been able to take advantage of marketing opportunities. An obvious example is the marketing chain of smallholder tobacco. Recently, the government introduced an Intermediate Buyer system of tobacco where private traders establish markets in

remote areas to buy semi-processed tobacco when the selling season starts. The buyer meets costs of transportation (market to storage to market), storage and processing. Sufficient supply in terms of quantity and quality, and the existence of a demand on domestic or international markets are obvious conditions for the success of such a marketing system.

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 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.

NGOs can play an important role in promoting farmer groups for marketing and other purposes. ACIDI/VOCA, under the Smallholder Agribusiness Development Project (SADP), is encouraging the creation of farmer groups and associations in the production and marketing of agricultural export crops. In addition, ACIDI/VOCA provides active support for the National Smallholder Farmers' Association of Malawi (NASFAM).

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, January 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.

In rural Mali, two types of community organisation can be found, (a) the traditional community organisation which is based on common grounds such as social or professional categories, age, and gender, and (b) the modern organisation (Association Villagoise (AV), Ton and Groupement d'Interet Economique (GIE)) introduced by the public sector or the Ministry of Agriculture.

In the context of decentralisation, it is expected that these associations could form APEX associations of farmer groups in rural areas.

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). Hussain, 1996, P7). 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. The GIE, which is a recognised body takes account of this fact.

CLUSA, an NGO operating in Mali, is actively promoting the formation of village groups. Whereas in the past CLUSA was directly involved in the setting up of groups, it is now supporting local NGO type bodies that can assist the groups. Important elements for the success of village groups are information, credit/finance, and management capacity. The latter requires training.

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).

Although it is acknowledged that these NGOs are making a very positive contribution to rural development, they generally do not reach more than 1 – 2% of a country's farm households. Given their resource endowment, this raises questions about the scale of the task of forming an efficient farmer co-operative sector covering the majority of producers.

### **Research and Extension**

A strong emphasis on production is one of the key features of agricultural extension services in many countries in Sub-Saharan Africa, including Malawi. In the past, agricultural inputs and output trade was controlled by marketing boards and co-operative associations. However, following liberalisation, farmers have to rely more on their own judgement in commercial decision making. Unfortunately, this is not reflected in the messages of agricultural extension, whose staffs are primarily trained in production aspects.

In order to increase farmers' commercial and business skills they need more exposure to relevant extension information. In addition, research systems also need to take account of this fact. As a consequence the following steps are suggested:

- Post-harvest and commercial aspects of agriculture need to be given a higher priority in national research organisations,
- Extension staff training require more emphasis on commercial aspects of agriculture. As a consequence training institutions ought to change their curricula correspondingly. Many existing extension staff may need a refresher training on the commercial aspects of agriculture since the previous curriculum emphasised production aspects.
- Appropriate extension material has to be developed. It should be adapted to local farming systems and it may well be in vernacular languages.

- Different media should be used for extension service delivery. This will require a detailed study in order to examine the effectiveness and efficiency of extension service delivery and to make recommendation as to identify to what extent the existing extension systems require up-dating.

Newer approaches to extension should be tried out in remote areas. For example, aside from more use of the radio as a means of communication, networking and exchange programmes between communities ought to be considered.

In Uganda, a task force was set up to prepare guidelines on how NGO activities should be integrated into district agricultural programmes. The creation of unsustainable services in parallel to Government structures should be avoided as much as possible. In particular, at the lower levels of decentralised government, there is a great need for capacity and institution building. As such, these organisations have an important role to play in improving the effectiveness and efficiency of service delivery including agricultural extension services.

### **Credit**

Poor access to credit was cited as one of the major constraints to agricultural production. Because of the dualistic nature of Malawi's agriculture, credit to the smallholder sub-sector has always been provided by a government supported institution while the estate sub-sector obtained credit from the commercial credit institutions. With the liberalization of the agricultural credit market and the subsequent removal of the input subsidy, access to credit among smallholder farmers has been greatly reduced. Most farmers do not qualify for credit given the prohibitive interest rates and the fact that most of them do not have the necessary non-movable assets to declare as collateral. At the same time, most credit institutions find it unprofitable to operate in the rural areas because chances of default are very high.

Agricultural credit to the smallholder farmers is provided by the Malawi Rural Finance Company (MRFC) which became operational in 1994 replacing the Smallholder Agricultural Credit Administration (SACA). In addition to (MRFC), there are other NGOs and donor projects that offer credit on soft terms to the smallholder sub-sector. Typical examples include Action Aid through the Malawi Smallholder Seed Development Project (MSSDP), European Union funded Agricultural Productivity Investment Programme (APIP), the Malawi Mudzi Fund (MMF) which was incorporated into MRFC in 1995, the Malawi Union of Savings and Credit Cooperatives (MUSSCO) with its network of Savings and Credit Cooperatives (SACCO) and other numerous small credit programs run by various NGOs and international organizations often in collaboration with Malawi government institutions (Diagne et al, 1996 (cited from Evan, 1993 ; Chirwa et al, 1996). Of these credit programs, only MRFC and MUSSCO can claim having national coverage.

Agricultural credit is also provided by the commercial institutions such as SEDOM, INDEFUND, FINCA and the other commercial banks. Smallholder access to these credit facilities is however limited and difficult because most of these institutions charge the market interest rate (at about 50% in early 1999) and require non-movable assets such as buildings as collateral.

The following solutions were suggested:

- Formation of farmer co-operatives to bargain for better loan conditions and use co-operative security to obtain loans
- Government to create an enabling environment to have a better organised credit sector and more competition among the lending institutions
- Government has to maintain stable monetary policies to avoid prohibitive interest rates
- Enhanced networking among lending institutions to avoid defaulters obtaining loans from several institutions i.e. need for a database. Idea already started by SEDOM.

Given that DFID have funded a number of projects on these issues in the recent past, no attempt was made to go into further detail but to highlight some of the main references, namely:

Coulter and Shepherd (1995) on inventory credit and private warehouse receipts.

Poulton et al (1997) on interlocking transactions in agricultural markets.

Gordon and Goodland (1999) on input credit schemes by private companies.



## APPENDICES

- Appendix 1: Contact lists**
- Appendix 2: Bibliography**
- Appendix 3: Examples of market information needs**
- Appendix 4: Summary of district workshop results**
- Appendix 5: District case studies**

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### **Appendix 3**

#### **Examples of market information needs**

##### **Excerpts from:**

**Robbins P (1998), Review of market information systems in Botswana, Ethiopia, Ghana and Zimbabwe, A study commissioned by the Technical Centre for Agricultural and Rural Co-operation (CTA), CMIS, London.**

### **Economic observatory of Senegalese horticulture**

The 'Economic Observatory of Senegalese Horticulture' has been operating in the Dakar market since 1994. Its strategy is very different from that of state-managed systems and consists of organising operators in the marketing chain in order to make it more efficient. The initiative was taken by the Horticultural Department of the Ministry of Agriculture and by scientists of the Agricultural Research Institute (Institut sénégalaise de recherche agricole, ISRA) which was already collecting price data in Dakar. The origin of the system is thus in the state sector, but the private sector was also involved right from the start. Foremost among the latter group was the National Horticulture Association (Conseil national interprofessionnel de l'horticulture, CNIH) which was set up to right the challenge of other exporting countries, particularly Burkina Faso and Kenya, competing for the European Market. CNIH's membership comes from all levels of the marketing chain, including one association of large and one of small exporters. All parts of the chain from both public and private sectors meet every week to discuss developments.

The Agricultural Research Institute provides information on the market prices, the Customs Service supplies data on imports and exports and the producers talk about the stage of development of their crops and indicate disease problems that might be of interest to the research organisation. The downstream side looks at what it might do if it seems that there is going to be a gap in production and the upstream side can set about trying to respond to the market demand.

Papa Abdoulaye Seck, special adviser to the Director-General of ISRA, has said that 'As President Senghor would have said, the association both gives and takes because once people are together they can talk about their problems and find common ground from which to manage the conflicts that are inevitable in a market chain in which the problems of one section are not necessarily the same as those of another. Discussion leads to mutual understanding and to a consensus from which everyone, including the consumer benefits'.

The effectiveness of the Observatory could be improved still further, particularly as a provider of information by, for example, distributing to the various media the two page minutes of its weekly meeting. This would be cost effective because 'as everyone freely gives of the information that he has there is very little additional expense.'

The Senegalese Horticultural Observatory is lean, participatory and has practically no formal organisational structure. It has, however, benefited from one especially favourable circumstance which Papa Seck considers very important: 'Agricultural policy in our countries since independence has resulted in very little interference in the horticultural sector. When one is not circumscribed and encumbered by directives it is natural to be self-reliant and to grasp the initiative. Horticulture was well to the front when 'liberalisation' and 'disengagement' became the watchwords. This is why private sector initiatives in horticulture have flourished in recent years compared to those in other agricultural sectors that were for long under the yoke of tight government control.'



This clearly confirms that a single type of market information system cannot be applicable to all situations. It also shows the need for those most closely involved in the business to be fully part of it.

From 'Harnessing the informal sector' – Spore – No 69 June 1997 (CTA)

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### Information needs of stakeholders in Ghana

#### Perceived Needs for MIS by User Groups

USER GROUP	PERCEIVED INFORMATION NEEDS	WHO TO PROVIDE
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

## **Appendix 4**

### **Summary of District Workshop Results**

## SUMMARY OF RESULTS OF DISTRICT LEVEL WORKSHOPS

### Constraints to Marketing of Agricultural Produce

		Mzuzu	Chitipa	Ntchisi	Mangochi	Nsanje	Proportion
1	Poor roads	<b>1</b> (14)	<b>1</b> (24)	<b>2</b> (18)	1 (12)	<b>1</b> (15)	23%
2	Low produce prices	<b>4</b> (9)	<b>2</b> (23)	<b>1</b> (20)	<b>2</b> (10)	<b>2</b> (13)	21%
3	Lack of means of transportation	<b>3</b> (10)	<b>3</b> (22)	<b>5</b> (5)	<b>2</b> (10)	<b>4</b> (10)	15%
4	Information/Education	<b>2</b> (12)	<b>6</b> (6)	<b>4</b> (6)	<b>2</b> (10)		9%
5	Markets (infrastructure and distance)	<b>5</b> (7)			<b>6</b> (6)	<b>3</b> (12)	8%
6	Lack of buyers	<b>8</b> (6)	<b>4</b> (17)	<b>3</b> (8)			7%
7	Credit / capital	<b>11</b> (3)	<b>5</b> (15)		7 (5)		5%
8	Lack and cost of inputs	<b>8</b> (6)			<b>5</b> (9)		4%
9	High transport costs					<b>5</b> (8)	3%
10	Farmer associations	<b>5</b> (7)					2%
11	Gvt. Policy	<b>5</b> (7)					2%
12	Lack of appropriate technology				7 (5)		2%
13	Insufficient production	<b>10</b> (4)					1%

**Note:** Figures in bold represent ranks of constraints identified at District level workshops. Figures in brackets represent scores. Scores were converted into proportions, for which averages were calculated for each category (right-hand column). Percentage sums may not add up to 100 due to rounding errors. Some of the original scores obtained during the course of the workshops have been combined.

## **Appendix 5**

### **District Case Studies**

## CASE 1. MZUZU/RUMPHI

### **REPORT ON THE PROCEEDINGS OF A MEETING ON COMMUNITY ACCESS TO MARKETING OPPORTUNITIES HELD AT MZUZU RTC, 16 October, 1998.**

#### **Participants**

1. Mr J. Chisenga, Acting Programme Manager, Mzuzu ADD
2. Mr H.C Gondwe, Evaluation Economist, Mzuzu ADD
3. Mr D. Moffat, DDO, Nkhatabay
4. Mr V.J. Kaude, P/bag 2, Mzuzu
5. Mr. G.K. Thawale, Regional Manager, P.O Box 130, Mzuzu
6. Mr L.S Mgunda, Acting Regional Officer, Min of Local Government, Mzuzu
7. Mr R.S Chiputula, Regional Commissioner's Office, Mzuzu
8. Mr A.C Mbewe, Project Coordinator, P.O Box 20662, Mzuzu
9. Mr O.M Ndhlovu, Assistant Operations Manager, MRFC, Mzuzu
10. Mr D.K Nyirongo, Assistant Regional Manager, ADMARC, Mzuzu
11. Mr K.T Kaisi, ADP Manager, Rumphu
12. Mr A.H Ibrahim, Trader/transporter Representative, P.O Box 489, Mzuzu
13. Mr A.H Mwakikunga, Trader/transporter Representative, P.O Box 20266, Mzuzu
14. Mr F.J.L Matabwa, Regional Manager, DEMATT, Mzuzu
15. Mr J. Kalikuwa, GVH, Mhomphe EPA, Rumphu-North Mzimba RDP
16. Mr R.J Khonje, Farmer Representative, Mphomphe EPA
17. Mr J.K Nyasulu, Farmer Representative, Mphomphe EPA

#### **The Research Team**

Mr U. Kleih, Market Economist, Natural Resources Institute (NRI), UK  
Mr C.B.L Jumbe, Research Fellow, Agricultural Policy Research Unit, Bunda College  
Mr H. Tchale, Research Fellow, Agricultural Research Unit, Bunda College

### Constraints to access to marketing opportunities by remote communities

Through participatory discussions, three major constraints to access to marketing opportunities were identified. These are, in order of importance, road infrastructure, information and transport. The other constraints and their scores are shown in the Table 1 below:

Table 1: Scoring of the constraints to marketing access by remote communities

Cluster	Score
Road infrastructure	14
Information/Education	12
Transport	10
Prices	9
Market infrastructure	7
Farmer Associations	7
Government Policy	7
Lack of buyers	6
Inputs	6
Production	4
Credit	3
Storage	0
Climatic conditions	0

The participants attributed each of these clusters to a number of factors:

1. Road infrastructure

- poor road infrastructure: roads/bridges
- seasonality of the roads
- poor road network

2. Information/Education

- lack of exposure to existing internal and external markets
- lack of training in market research
- lack of information

3. Transport

- inadequate means of transport
- inadequate motorised transport in remote areas
- high transportation costs

4. Prices

- low product prices/farm-gate prices
- exploitation of producers by buyers
- price fluctuations

#### 5. Market infrastructure

- poor market infrastructure
- shortages of the markets
- locality of the marketing points

#### 6. Government Policy

- unharmonised Government policy e.g. liberalisation policy
- ineffective implementation of policies
- political interference/conflicts

#### 7. Lack of buyers

- few intermediate buyers
- unwillingness of buyers (attitude problem)
- low demand and supply

#### 8. Inputs

- high input prices
- inadequate/lack of supply inputs in remote areas
- low purchasing power of the farmers

#### 9. Production

- low output
- no commercial element in production
- low quality of products
- inadequate production technology

#### 10. Credit

- credit unavailability
- untimely disbursement of credit
- lack of access to credit among remote communities

#### 11. Storage/processing

- lack of storage and processing facilities

Possible solutions were provided for the three major constraints. These would guide the formulation of policy recommendations to improve community access to marketing opportunities:

#### 1. Road infrastructure

- Community participation in road maintenance

- Government should adopt and improve on the concept of DRIMP
- Government should increase the use and supervision on contractors
- Encourage private sector participation in road construction and maintenance
- Widening VARBAU bridges to allow for bigger trucks
- Village access roads and bridges construction
- NGOs should be involved in road maintenance and construction projects
- Government should invest more in rural infrastructure projects like MASAF
- Rehabilitation of all timber bridges with concrete
- Rehabilitation of all existing village and district roads through local authorities
- Roads construction under public works should have an element of maintenance
- Government should seek funding for improvement of major rural roads and engage the rural communities to work on rural feeder roads for a payment or food

## 2. Information

- Intensification of radio programs that target remote communities
- Take key local leaders to successful places
- conduct training with communities in marketing and market research
- Grassroots extension workers be updated with latest information on marketing opportunities
- Strengthening the capacity of the existing training officers
- Institutionalisation of information flow
- Organise (Govt and Pvt sector) producer-buyer meetings
- Organise product promotion campaigns
- Dissemination of information through local leaders

## 3. Transport

- Hiring of transport through farmers associations
- Provision of credit to farmers to purchase ox-carts and draught animals
- Use of non-motorised means of transport in areas with seasonal roads and uneven landscape
- Expand the Government's rural transport programme
- Provision of credit to local transport operators
- Provision of credit to farmer associations to purchase trucks, e.g. TAMA
- Government to make importation of small trucks duty free
- Communities should attract transporters by constructing and maintaining better bridges and roads



## **Mphompa-EPA (Rumphi District) – Summary of RRA Finding**

### **Constraints to Marketing of Agricultural Produce**

Approximately 10 men and 10 women participated in meeting.

Fairly high potential; average farm size 3ha, 800 – 900 mm rainfall;

Cash crops: coffee, beans, Irish potatoes, tobacco;

Food crops: maize, cassava

Main constraints are related to production; lack of seeds and fertiliser; Farmers said “before we can market we have to produce”. Therefore, market problems, though important, are secondary. At the moment there is not enough surplus production.

Low volumes are traded, as a result traders and transporters do not come to the area.

There is an ADMARC market, however this is seasonal.

They do not get market information because most people do not have radio receivers. However, they would like to have information on produce markets and the specific locations of the markets. However, they are aware that there is a demand for beans in Chitipa. They also do not have information on club formation. Otherwise they feel clubs would be helpful in organising transport, bargaining for better prices and accessing credit. Chiefs do not always pass on information.

Women do not go to the market because they do not have means of transportation; “Men who normally go to the markets using push bicycles do not always tell the truth about sales”. As a consequence, it was suggested that men would benefit more from increased marketing activities.

Through a self-help initiative farmers have constructed a motorable track which allows vehicles to come to the area. As a result, the situation has improved.

Farmers lack agricultural extension services because Extension workers do not come to the area.

Lack of means of transportation. There are only a few bicycles which are used by men. As for ox-carts, these are too expensive and there is not enough pasture for cattle.

## **CASE 2. CHITIPA - NTHALIRE EPA**

### **2.1 PRA with farmers from Rukuru and Nthalire Sections**

The PRA group was composed of 16 farmers from Rukuru and Nthalire sections. Women were poorly represented because apparently the message about the meeting went to men as household heads i.e there was only one woman.

Table 2.2 Main crops grown in Nthalire

Food crops		Cash crops	
Crop	Score	crop	Score
Maize	15	tomato	14
Cassava	14	groundnuts	13
Phaseolus beans	11	rape	9
Sweet potatoes	11	onions	8
Millet	12	tobacco	7

Note: It was however noted that although most of the people grow groundnuts in the area, tobacco is the most important crop in terms of revenue and profitability.

Table 2.3 Constraints to agricultural production

Constraint	score
High input prices (fertilizer and seed)	11
Poor road network	11
Lack of transport	7
Declining soil fertility	6
Unavailability of farm implements	4
Lack of markets	3
Pests and diseases	3
Late delivery of inputs	3

### **2.4 Causes of the major constraints and the possible solutions**

From the community's point of view, it was decided that solutions could be suggested only to improve the poor road network. For the other problems like high input prices, the communities felt that their contributions will not be sustained in terms of

improving the situation since most of these problems hinge on Government policy. The increase in input prices is an obvious result of the removal of the input subsidy. Input subsidies were removed in 1994 as part of the structural adjustment facilities, which Malawi adopted from the World Bank and IMF in order to reduce its economic problems. Therefore unless the Government reintroduces the input subsidies, the input prices are likely to keep on increasing given the country's landlocked nature and the fact that the country imports most of the inputs.

The problem of poor road network is exacerbated by the lack of maintenance. Although the villagers maintain the village access roads, the main roads, which are under the Ministry of Works have not been maintained for a long time now. This has resulted in an acute problem of access to the markets and other social amenities including the lack of transport facilities. The area has a problem of lack of both inputs, output and food markets. As a result of the lack of the domestic markets, people tend to go to Mozambique to buy inputs and food. Due to the price differentials and availability of commodities, there is a tendency for the trade balance for agricultural commodities to be in favour of Mozambique.

The communities suggested three solutions to improve the road network. These include: Government should resume the maintenance of the roads under its jurisdiction with the support of other projects such as MASAF through the public works program including the resumption of DRIMP and VARBAU activities ; the Government should increase its budgetary allocation to the public works programs ; and villagers should be responsible for the maintenance of the village access roads.

## 2.2 District level workshop

Table 2.2.1 Constraints to agricultural production

Constraint	Score
High cost of inputs	25
Poor road network	18
Lack of transport	13
Low output prices	11
Lack of access to credit	9
Low supply and poor delivery of inputs	8
Inadequate markets for produce	8
Lack of market information	7

Note: the other problems that were mentioned include inadequate agricultural extension services and decline of soil fertility.

Table 2.2.2 Constraints to marketing of agricultural produce

Constraint	Score
Poor road network	24
Low produce prices	23
Lack of transport facilities	22
Lack of buyers	17
Lack of capital	15
Lack of market information	6

Note: the other constraints that could not be scored include lack of processing facilities and market infrastructure.

### 2.2.3 Causes of the major constraints and the possible solutions

The workshop resolved that most of the constraints particularly with respect to the declining terms of trade in agricultural produce are as a result of the market liberalization policy. The workshop noted that this policy was initiated without the necessary infrastructure particularly in the rural areas. As a consequence, the actual results of the policy change are contrary to the intended objectives. The participants noted that while the declining terms of trade in both the output and inputs market is the issue of policy, people can, through collective action, do something towards the improvement of the other constraints. The major constraint that can be improved through community initiatives is the road condition and this will feed into the rectification of the other problems such as the lack of the transport facilities, lack of buyers as the remote areas will be easily accessible.

The condition of the roads has deteriorated because among other reasons, there is a complete lack of funding for maintenance as a result of the change in Government policy regarding road maintenance ; conflicting political messages during the transition to pluralism that have affected community participation; heavy rains and poor road design. It was noted that since 1993 there has been no Government funding for the routine maintenance of the roads at national and district level. The responsible Ministry (Ministry of Works) is going through a transition into the National Roads Authority (NRA) which will be responsible for all roadwork through contracting. The participants however, questioned the rationale behind the contracting policy compared to employing of permanent labourers for road maintenance. The major concern against the contracting policy is the lack of the routine maintenance given that once the contractor finishes the assigned work, he can no longer take responsibility for maintenance. The Ministry of works has retained the services of its main stream of Supervisors who oversee the activities of the contractors and other projects such as MASAF and EU community road projects. But even with this main stream of supervisors, the contractors' work has often been below expected standards. The Ministry of Works argues that this is because the tendering system for contractors is through the central tendering system so that the district level supervisors find it

difficult to effectively supervise on contractors identified by the Central Government. Therefore decentralising the tendering system could improve on the effectiveness of the district level supervisors.

In terms of community participation in road projects, the communities feel there are conflicting approaches between MASAF and EU in terms of community participation in these projects. MASAF's public works program pays about MK10.50 to each member of the community who participates in the community road projects while EU uses full time employees in the community road projects. The communities thus feel MASAF payments are so low compared to the EU as a result in cases where these projects are running concurrently in the same or close areas, people are likely to shun the MASAF projects in favour of the EU. In addition, both projects do not have maintenance provisions once the cash-for-work is phased out. It is apparent that the communities will not be willing to take the responsibility of maintaining the roads in the absence of the payments. However, to ensure that the communities take up the maintenance of the roads constructed under MASAF and EU projects, the participants suggested the introduction of village level operation and maintenance (VLOM) committees to oversee the maintenance of the village feeder roads. In addressing the problem of lack of funding, it was suggested that the local Governments should be given the mandate to assume aggressive revenue collection for example in land rents, withholding taxes, road user taxes etc for the benefit of the district; the fuel levy system has to be properly handled and distributed according to priority areas in terms of road infrastructure and that farmers' associations have to subscribe to the district development fund in order to increase the resources to accommodate as many projects.

The participants also suggested for consideration in terms of the construction policy that the bridges on district and main roads should have a load capacity of 30 tons and 50 tons respectively and that all timber decked bridges have to be replaced with concrete deck bridges.

### **List of Participants for the District Workshop**

Mr Mhango - Inputs Marketing Officer, Karonga ADD  
Ms M.M Gondwe - Women=s Programs Officer, Chitipa RDP  
Mr Munthali - Project Officer, Chitipa RDP  
Mr S.E Ngosi - Roads Supervisor, Ministry of Works, Chitipa  
Mr L. Gondwe - World Vision International: Small Enterprise Development Program  
Mr E.P Mulungu - Farmer Representative  
Mr J. Kalinga - Farmer Representative  
Mr H.J.A Singini - DRIMP Roads Supervisor, DRIMP Chitipa  
Mr M. Munthali - M&G Consultants, Site Engineers for EU Projects  
Ms T. Jumbe - Micro-projects Program, Northern Region  
Mrs M. Mwanja - National Association of Business Women (NABW) Chairperson, Chitipa  
Mr L.B Mwenesongole - Farmer Representative  
Mrs O. Harawa - M&G Consultants, Site Engineers for EU Projects  
Mr G.M Munkhondya, Clerk of Council, Chitipa District Council  
Mr Mbachi Munthali - Development Facilitator, Evangelical Lutheran Development Project  
Mr G.A.L Mwamlima - PROSCARP Committee Chairman  
Mr B.A.J Macheke - Area Marketing Supervisor, Chitipa ADMARC Market  
Mr G. Meja - SEDOM Loans Officer  
Mr C. Mzilahowa - Relief and Rehabilitation Officer  
Mr D.L Chiyani - World Vision International, Area Coordinator  
Mr M.S Jere - Transporter  
Mr L.K Mkandawire - Malawi Rural Finance, Credit Supervisor  
Mr Kacheche - MASAF Supervisor, Chitipa  
Mr R.W Mithi - Ministry of Local Government, Chitipa

### CASE 3. NTCHISI - T. A. CHIKHO

#### 3.1 PRA Discussions with farmers from Chafumbwa Section in T.A Chikho

The PRA group was composed of 77 farmers: 67 men and 10 women. The group was divided into seven men groups and one women group, all composed of between 8 and 10 individuals. These farmers were from four villages within Traditional Authority Chikho in the Eastern side of Ntchisi district which borders with Mwansambo in Nkhotakota.

Table 3.1.1 Main crops grown by gender

Food crops				Cash crops			
Male		Female		Male		Female	
crop	score	Crop	score	crop	Score	Crop	score
Maize	55	Maize	8	Cotton	57	g/nuts	10
s/potatoes	49	Cowpeas	8	g/nuts	55	Cabbage	7
p/beans	41	p/beans	8	tobacco	49	Tomato	9
Cassava	46	s/potatoes	8	soybeans	43	Tobacco	6
Bananas	34	Millet	4	tomato	41	Sugarcane	5

Note: women poorly represented compared to men

Table 3.1.2 Constraints to agricultural production

Constraint	Score	
	Male	Female
Low produce prices	51	9
Inadequate supply of inputs	62	9
Lack of markets	43	8
Lack of adequate extension advice	-	7
Lack of improved seed	60	8
Lack of markets	43	2

Note: Results were affected by the high illiteracy levels particularly among women.

Table 3.1.3 Constraints to marketing of agricultural produce

Constraint	Score	
	Male	Female
Markets are far away	55	8
Low produce prices	51	1
Lack of transport facilities/high transport cost	-	7
Fraudulent traders	14	2

### 3.2.3 Possible causes and suggested solutions to the identified constraints

The communities identified two major problems that culminate into many of the problems that constrain agricultural production and marketing. The major problem identified is the low agricultural production which is as a result of the high cost and unavailability of inputs. The low output/input ratio which results from the low produce prices, makes it not possible for the farmers to afford inputs. As a result almost all the farmers complained of food insecurity. The other major problem is the poor road network to and within the area. This is mostly due to the hilly terrain coupled with lack of maintenance of the only road to the area. Private traders including ADMARC find it unprofitable to open markets in the area. The only market for produce and food is located at Chimbindu which is 20 km away from the area. Due to lack of markets, it was noted that the farmers dispose off their commodities even at unfavourable prices sometimes even to fraudulent traders who tamper with the weighing scales in order to reduce the buying price even more. Only cotton buyers come to the area from Mwansambo in Nkhotakota but because they are so few in number, they end up colluding with each other to reduce the price.

As a solution, the communities suggested the improvement of the road condition by the Government. While community participation is important, it was noted that other road works such as bridges require the assistance of the Government and other development agencies. Unfortunately, most of the farmers do not know about the operations of the MASAF's public works program. In order to attract as many traders, the farmers suggested the production of diversified crops. This needs the support of the Ministry of Agriculture through the Extension worker in the area. However, it was noted that the area is too big for the effective coverage of the only extension worker in the area. Thus it was suggested that the use of block meetings and farmers' clubs should be enhanced including the training of farmers who volunteer to serve as extension workers. Most of the farmers' clubs have been disbanded since the separation of credit provision from club activities. The delinking of extension services and credit provision need to be properly explained to the farmers.



### 3.3 District level workshop

Table 3.3.1 Constraints to agricultural production

Constraint	Score
Insufficient use of inputs	23
Low produce prices	9
Low access to credit facilities	11
High input costs	16
Lack of markets	4

Table 3.3.2 Constraints to marketing of agricultural produce

Constraints	Score
Low produce prices	20
Poor road network	18
Few and unscrupulous buyers	8
Lack of market information	6
Lack of transport facilities	5

#### 3.3.3 Causes and possible solutions for the major constraints

The participants identified unfavourable terms of trade and poor road infrastructure in the rural areas as the major constraints affecting agricultural productivity. While the decrease in the terms of trade is an issue of policy, the participants felt that low quality of produce, lack of marketing plans among the majority of the subsistence farmers, lack of crop grading and lack of farmer cooperatives which could assist the farmers to collectively bargain for better prices, cause an even more reduction on the produce prices.

The problem of poor road network is exacerbated by the lack of funding from Government on road maintenance as a result of the change in Government policy on road construction and maintenance. Political interference has also reduced self-help spirit among the communities.

It was therefore noted that an improvement in the road condition should be given the priority by the Government. This should be done by increasing the budgetary allocation to the Ministry of Works for road maintenance ; constant supervision of road works ; expansion of the coverage of MASAF=s public works programs to cover even the main and district roads ; encouragement of the self-help spirit through

community mobilization campaigns ; farmers should be discouraged from blocking water ways and drains and that road maintenance teams have to be employed at district level.

#### **List of Participants at the District workshop**

Mr D.A Banda - Farmers World  
Mr A.S.H Kavalo - Farmers= Representative/Businessman  
Mr G.H Kapelemera - Project Officer, Ntchisi RDP  
Mr K.T Chazama - Farmers= Representative/Businessman  
Mr F.M Kazota - Farmers= Representative/Businessman  
Mr B.M Thuluwe - Officer-in-Charge, Ntchisi DRIMP  
Mr Chikafumbwa - Roads Supervisor, MoW, Ntchisi  
Mr A.L.R Kapira - Community Development Officer  
Mr I.M Tauzie - Ntchisi SACCO  
Mr S.E Juba - Development Officer  
Mr L.M Kachombo - Agro-Economic Survey  
Mr B.L Chikafutwa - Farmers= Representative/Businessman  
Mr R.S Chikadewa - Ministry of Commerce & Industry  
Mr J.E.B Chimlala - Evaluation Officer, Ntchisi RDP  
Ms P. Chiwoko - Assistant Women=s Programs Officer, Ntchisi RDP  
Mr J.C Kumwenda - Farmers= Finance Company  
Mr J.E Kagwa - Farmers= Representative/Businessman  
Mr G.V Tembo - District Information Officer  
Mr R. Petro - Farmers= Representative  
Mr R.E Chandilanga - Clerk of Council  
Mr I.N Gondwe - Malawi Rural Finance Company  
Ms P. Masina - Farmers= Representative  
Mr H. Njati - Evaluation Officer, Kasungu ADD  
Mr M.S Kamphambe - Farmers= Representative  
Mr R. Hara - District Development Officer  
Mr D.D Dula - World Vision International

#### **CASE 4. MANGOCHI - MAKANJIRA (MPILIPILI EPA)**

Mangochi is one of the districts in the Southern region of Malawi. It is located along the lake shore and extends to the southern tip of lake Malawi. The district has a total land area of 627300 hectares (about 6243 Km<sup>2</sup>) of which 231811 hectares representing about 37% is arable. This area supports about 165358 farm families (the district has an average density of 79 persons per Km<sup>2</sup> and the average land holding size for a farm family is about 0.8 hectares). In terms of agricultural administration, the district has three Rural Development Projects (RDP) namely Mangochi, Namwera and Bwanje Valley. These three RDPs are further sub-divided into 11 Extension Planning Areas (EPA) i.e 6 of these EPAs are under Mangochi RDP, 3 EPAs are under Namwera RDP and the remaining 2 EPAs are under Bwanje Valley RDP.

About 90% of the population in the district, just like elsewhere in Malawi, is composed of subsistence farmers who depend on rainfed agriculture for their livelihood. Of the total arable land, about 42% is under cultivation by the smallholder farmers. The remaining 58% of the arable land is cultivated by the estates (there are 916 estates in the district with an average land holding size of 106.5 hectares per estate).

The smallholder cropping pattern is mostly dominated by maize (the dominant food crop on over 80% of the arable land), followed by rice, groundnuts, cotton, sweet potatoes, cassava and vegetables. The estate subsector is mostly dominated by burley tobacco production. In both the estate and smallholder agriculture, the growing season normally starts in November and ends in April i.e the rainy season in Malawi.

Makanjira, the area which was chosen for the community market access study, falls within Mpilipili EPA which is under Mangochi RDP. The area is located to the Eastern part of the lake shore close to the border with Mozambique. Mpilipili EPA is divided into 10 sections and has a total number of about 11323 farm families and the average farm size in the area is about 0.6 hectares per farm family.

Mpilipili EPA in general and Makanjira area in particular are high potential areas in terms of agricultural production. The soils are suitable to a wide range of both food and cash crops. Table 4.1.1 below indicates the main food and cash crops grown in the area.

However, despite the agricultural potential, the area has critical access problems especially during the growing season which coincides with the rains. While the district as a whole has an extensive road network at least compared to the other districts under the study i.e slightly over 430 km of road network (Apthorpe et al, 1995), Makanjira area has only one access road (designated as a secondary road S129) which is impassable during the rainy season. The area is also accessible by boat from Monkeybay or Salima but this is subject to seasonal variability due to the effect of water currents on the lake and the availability of the boats.

Table 4.1.1 Main crops grown in Makanjira

Food crops				Cash crops			
Male		Female		Male		Female	
crop	score	Crop	score	crop	score	crop	score
Maize	14	Maize	11	groundnuts	14	groundnuts	10
Rice	14	Sorghum	10	sugarcane	12	onions	10
Cassava	12	Cassava	10	cabbage	12	tomato	10
s/potatoes	11	s/potatoes	9	bananas	11	sugarcane	10
Sorghum	6	Rice	9	tomato	10	bananas	8

The PRA group was composed of a total of 20 people, 12 men and 8 women at the beginning of the session. During the course of the PRA, one man and three women joined the group and we thus ended up with a group of 24 people, 13 men and 11 women. In order to ease the facilitation, these people were divided into four groups of 6 people each. Thus, there were two men and two women=s groups.

Table 4.1.2 Constraints to agricultural production

Constraint	Score	
	Male	Female
Lack of credit facilities	13	-
Inadequate supply/late delivery of inputs	13	9
Lack of markets	-	11
Lack of transport facilities	10	7

The PRA results indicated that while men cited lack of credit facilities, inadequate supply and late delivery of inputs and lack of transport facilities as the major problems affecting agricultural production in Makanjira area, females felt that the major problems are lack of markets, inadequate supply and late delivery of inputs and lack of transport facilities in that order of importance. All these problems however, relate to the lack of accessibility to the area, which makes it unprofitable to most input and output traders including ADMARC. The area has three ADMARC market outlets (Makanjira, Kululanga and Fort Maquire) all of which are poorly stocked with inputs. In November 1998, when the PRA was conducted in the area, all these markets had no stocks of fertilizer and other inputs. The group identified inadequate buyers, low produce prices, poor roads, lack of transport facilities and fraudulent acts among the traders as the major constraints to the marketing of agricultural produce in Makanjira. These constraints also relate to the difficult access to the area. Due to the high

transport costs to the area, very few traders come to the area. In the absence of competition, the traders end up offering very low prices to the farmers in order to ensure wider margins to offset the high transport costs.

Table 4.1.3 Constraints to marketing of agricultural produce

Constraint	Score	
	Male	Female
Few buyers	11	10
Low produce prices	12	8
Poor roads	13	-
Lack of transport facilities/high transport cost	2	3
Fraudulent traders	-	10

#### 4.3 Causes and possible solutions for the major constraints

Most of the constraints to agricultural production and marketing relate to the poor access to the area. As a result the communities felt that the first step is to address the poor access problem. The S129 gravel road to Makanjira was constructed in the early 1980s through DRIMP. Until the last three years, the maintenance of the road used to be the responsibility of the Ministry of Works through DRIMP. However, with the change in Government policy towards road maintenance and construction, the road has not been maintained for the past 3 years. All the bridges are made of wooden decks. Due to overcapacity of trucks, most of these bridges have been dilapidated ( i.e the road is 98.6 km long and has a total of 64 timber decked bridges all of which have a design load capacity of less than 10 metric tones).

Although communities have taken the responsibility of maintaining the feeder roads, including some MASAF projects (a road project in Chipole and Kapamba bridge), there are some bridges whose construction and maintenance needs external financial support. Therefore the communities feel that the Government has to take a leading role in the maintenance of the secondary road to Makanjira including the renovation of all wooden decked bridges to metal or concrete decks. Another area which needs support is the water transport through Monkeybay and Salima. This is seen by the communities as being a cheaper way of transportation compared to using the road (the fare for the road transport is at MK120 per person while the boat fare is less than MK45 per person). However, there is a limit in terms of the capacity of the boats. Currently there are less than 10 engine boats that operate between Monkeybay and Makanjira. Due to the limited carrying capacity per trip, people have to wait for longer periods of time in order to get transport.

The communities feel that with the accessibility problem improved, most of the constraints to agricultural production and marketing will also be improved. For example, with reduced transport costs many traders will be able to come to the area to

take advantage of its potential in the production of a wide range of agricultural commodities. Trader competition will thus entail competitive prices in both inputs and output. Also the availability of inputs both in quantity and timeliness will improve given the increased number of suppliers.

#### 4.4 District level workshop

The district level workshop was attended by 20 participants drawn from Government, NGOs, the private sector (private traders and transporters) and the farmers representatives.

The initial discussions centered on the sectoral projects within the district that are related to agricultural production and marketing. Most of these were derived from the presentations that were made by each of the participants with regard to the projects being carried out by their respective organizations. The participants were later involved in a process of identifying the specific problems that hinder community access to marketing opportunities with particular emphasis to those communities in Makanjira which was identified as one of the problem areas in as far as marketing opportunities are concerned in Mangochi. Table 4.4.1 shows the identified constraints to marketing opportunities.

Table 4.4.1 Constraints to marketing of agricultural produce in Makanjira

Constraints	Score
Poor road network	12
Poor means of transport	10
Low prices of agricultural produce	10
Unavailability of marketing information	10
High cost of inputs	9
Lack of markets	6
Lack of capital	5
Lack of appropriate technology	5

##### 4.4.1 Causes of the identified constraints and the possible solutions

The workshop identified 8 major problems that affect marketing of agricultural produce in Mangochi in general and Makanjira area in particular. All of these problems except for the unavailability of the marketing information, lack of capital and appropriate technology, are related to the problem of poor road network either directly or indirectly.

Improvement of the road condition hinges upon the availability of funds. Therefore the participants felt that the Government has to urgently consider increasing its budgetary allocation to public works. However, this can only work if Government

funds are increased otherwise it may result in affecting the allocations to the other equally important sectors. The workshop felt that the Government needs to improve the efficiency of the revenue collection mechanisms. For example, the National Roads Authority (NRA) is supposed to operate with funding from the fuel levy from the Petroleum Control Commission(PCC). It was however, noted that since this levy was initiated, it has often been misappropriated. As a result the NRA has not been able to maintain the roads at least to the level that used to be done by the Ministry of Works through DRIMP. This has been the major cause of the current poor state of the roads elsewhere in Malawi. It was also noted that for most roads in Malawi, the increased level of traffic including the violation of loading limits no longer matches the design capacity . This means that even with constant maintenance, the road conditions will still be poor and will remain so as long as the loading limits are not enforced. The other problem that was cited as affecting the road conditions is the vandalism of road signs and bridges by the communities. This needs strict law enforcement and the provision of civic education to the communities.

The inadequate means of transport triggers high transport costs and other related prices. The workshop felt that while this is exacerbated by the poor state of the roads, the situation could also be improved if the private transporters are provided adequate credit to purchase trucks. In addition, the Government should assist the private transporters through the Rural Transportation and Travel project funded by UNDP in the Ministry of Local Government.

In terms of lack of capital, it was noted that although the credit market has been liberalized thereby allowing the entry of other lending institutions like the commercial banks, Finance Company of Malawi (FINCOM), Malawi Rural Finance Company (MRFC) etc, the access to credit has not improved because of the harsh terms. Most of the agricultural credit is provided by MRFC whose loan portfolio and conditions are limiting the access particularly to the remote communities. The workshop resolved that access to credit could be improved if the farmers and private entrepreneurs are organized in cooperatives. These cooperatives could be used to acquire credit and inputs in bulk, organize transportation of produce to the market and empower the farmers to bargain for better prices for their commodities. However, there is need to ensure that these are not imposed but rather that the communities are sensitized to form cooperatives to solve specific problems which they face. These cooperatives should be self-financing. Fortunately, the Malawi Cooperatives bill was passed and enacted during the last sitting of parliament and will assist in the formulation of these cooperatives.

Lack of market information and appropriate technology was also seen as a hindrance to agricultural production and marketing. Apart from the Government=s effort to provide price information based on the data collected from various markets across the country, only one institution, the Development of Malawian Enterprises Trust (DEMAT), a parastatal, is involved in the provision of market information and services. It was however noted that most of the price information provided by the Ministry of Agriculture, albeit being timely and commodity specific, is not relevant at district level and that its mode of dissemination renders it inaccessible to the majority of the remote communities. Also DEMAT=s services are especially geared towards the commercial and industrial sectors and the provision of business advisory services. Therefore, the workshop felt that DEMAT and other NGO=s should improve their

services towards the agricultural sector to make their services available even to the remote communities. For example DEMAT=s efforts to link buyers and sellers through buyer - seller meetings including the improvement of the provision of marketing information. This should be done in coordination with other Government, private organizations and NGO=s serving the remote communities.

#### **List of participants at the district workshop**

Mr D.P.S Chione - District Development Officer  
Mr B.D Kapunula - District Council  
Mr D.J Beka Phiri - Road Supervisor, Ministry of Works  
Mr P.E Chitowe - DRIMP  
Mr N.C Kapampha - Ministry of Women, Youth and Community Services  
Mr S.B Hausi - Malawi Rural Finance Company  
Mr W.E.J Chikuni - Ministry of Relief and Rehabilitation  
Mr S.W.D Kachala - DEMAT  
Mr C.M.D Sambani - DEMAT  
Mr K.G Singini - World Vision International  
Mr J. Gwazanga - World Vision International  
Mr E. Lutepo - Farmwise Limited  
Mr M.A Chitonya - Kalos Transport  
Mr S.A Eliasi  
Mr B.A Kambulire - BAK=s Investment  
Mr G.L Chimwala - Farmer Representative  
Mr A.W Khauke - Farmer Representative  
Mr S.R Chizara - Farmer Representative  
Mr S.S.V Zulu - Assistant Project Officer, Mangochi RDP  
Mr V. Kisyombe - Project Officer, Mangochi RDP



## CASE 5. NSANJE - CHIDI AREA

Nsanje is one of the districts in the Southern region of Malawi. It is located within the southern tip of the country. The district has a total land area of 193262 hectares (about 1942 Km<sup>2</sup>) of which 82730 hectares representing about 43% is arable. This area supports about 58834 farm families (the district has a total population of 290170 with an average density of about 150 persons per Km<sup>2</sup> and the average land holding size of about 1.4 hectares per farm family). In terms of agricultural administration, the district has one Rural Development Project i.e Nsanje RDP. Nsanje RDP is divided into 5 Extension Planning Areas (EPA) i.e Makhanga, Magoti, Mpatsa, Zunde and Nyachilenda.

Over 90% of the population in the district, just like elsewhere in Malawi, is composed of subsistence farmers who depend on rainfed agriculture for their livelihood. Of the total arable land, about 43% is under cultivation by the smallholder farmers. The remaining 57% of the arable land is shared among estates, livestock grazing and idle land.

In general, the low lying areas of Nsanje have soils which are still very productive because of the residual fertilizers in the eroded soils from the highlands of Thyolo. Even the fertilizer recommendations for the district are so low compared to other districts indicating that soil fertility is quite high. Given good management and availability of adequate rainfall, Nsanje is an above average productivity area.

The smallholder cropping pattern is dominated by maize (the dominant food crop on over 80% of the arable land), followed by sweet potatoes, groundnuts, beans, cotton, cassava, sorghum, vegetables and fruits particularly for the high lying areas. In addition to crop production, most farmers rear livestock. According to the Nsanje RDP livestock census, the district has a total of 32444 cattle, 53610 goats, 784 sheep, 33438 pigs and 84340 representing different types of poultry.

Chididi, the area which was chosen for the community market access study, falls within Zunde EPA. The area is located in the North - Eastern highlands that form a border with Zambezia province of Mozambique. Zunde EPA is divided into 9 sections and has a total of about 11284 farm families and the average farm size in the area is about 0.4 hectares per farm family.

Due to the hilly terrain, Chididi area has acute access problems. The area has only one access road (a 20 km gravel secondary road from Nsanje district headquarters (S105)). During the rainy season it becomes difficult to access the area due to the extremely slippery and sloppy road.

### 5.1 PRA with farmers from Chididi area

The PRA group was composed of 17 farmers i.e 10 male and 7 female farmers. These were divided into two groups, one for males and the other for females.

Table 5.1.1 Main crops grown in Chididi

Food crops				Cash crops			
Male		Female		Male		Female	
crop	score	crop	score	crop	score	crop	score
maize	10	maize	10	cassava	7	cassava	7
s/potatoes	6	pumpkins	10	groundnuts	7	sugarcane	7
mangoes	6	groundnuts	9	bananas	7	pigeon peas	6
p/beans	5	s/potatoes	5	tomatoes	6	a. pears	4
cocoa yams	5	mangoes	4	oranges	5	bananas	4

Table 5.1.2 Constraints to agricultural production

Constraint	Score	
	Male	Female
pests and diseases	8	5
lack of markets for produce	8	6
lack of means of transport	10	7
high cost of inputs (fertilizer and seed)	9	7

Table 5.1.3 Constraints to marketing of agricultural produce.

Constraint	Score	
	Male	Female
Low prices of agricultural produce	4	5
Lack of means of transport/high transport costs	10	7
Fraudulent buyers	5	3

## 5.2 Possible causes and solutions to the constraints

The communities indicated that the location of their area constrains them in many ways. Although the area is of high potential in terms of agricultural production, the communities face critical problems to get inputs and also to get their produce to the market. The poor road condition deters transporters and traders from going to the

area. Those traders who come to the area normally buy produce at extremely low prices in order to offset the high transport costs.

In order to improve the condition of the people in the area, the communities noted that there is need to open up the area by grading the road from Nsanje district headquarters. This should be the responsibility of the Ministry of Works through the National Roads Authority. In addition to this, the Government should bring up food-for-work projects for the communities to work on the village feeder roads including the earthworks on the secondary road from Nsanje or the road from Chididi to Lulwe which is now being reconstructed by the communities through the MASAF funding.

## 5.2 District level workshop

Table 5.2.1 Constraints to agricultural production

Constraint	Score
Erratic rainfall patterns/flooding	14
Inadequate livestock care/overgrazing	11
Poor road network	10
Low produce prices	5

Table 5.2.2 Constraints to marketing of agricultural produce

Constraint	Score
Poor road network	15
Low prices of agricultural produce	13
Long distances to markets	12
Lack of means of transport	10
High transport costs	8

Note: The workshop was attended by 19 participants drawn from Government, private sector and NGOs working in Nsanje district.

## 5.3 Possible causes and solutions to the constraints

The workshop identified erratic rainfall patterns, inadequate livestock care, poor road network, low produce prices, and crop and livestock diseases as being the major causes of the declining levels of agricultural productivity.

Nsanje is one of the driest and low rainfall districts in Malawi. The district receives on average less than 700 mm of rainfall per year. The distribution is also so erratic.

However, the district is prone to flooding resulting from the shire river which takes water from the highlands of Blantyre, Thyolo and the other areas upstream. As a result most people in Nsanje do not depend on upland cultivation but use the residual moisture in the low lying dambos close to the shire river. Thus their produce is mostly affected by the floods. Due to the increased number of livestock which are left to roam freely in the dambos for pasture, most of the crops are also destroyed by the livestock.

In terms of access to Nsanje, there is one main road, a graded gravel road which extends from Ngabu in Chikwawa. Another secondary gravel graded road branches from the main road at Thabwa and goes through the Eastern bank of the Shire river, meeting the road from Ngabu at Bangula. The district has a total road network of about 274 km, most of which are earth roads. Due to the flat terrain in most areas, most of these roads are flooded with water. The district used to be accessed by rail which is currently not functioning. Therefore, access to the district as a whole is seasonal because almost all the roads are inaccessible in the rainy season.

In addition to the problems affecting agricultural productivity, the workshop identified five major problems affecting the community access to marketing opportunities. These include poor road network, low prices of agricultural produce, long distances to markets, lack of means of transport and high transport costs. Apart from the scattered markets, it was noted that all these problems stem from the poor road network. The participants noted that Nsanje district is one of the worst in terms of road conditions. As a result it requires Government attention to improve the road infrastructure. Most of the bridges are just made of concrete culvert drifts (the district has a total of 442 drifts) which are often flooded over by water thereby cutting road access altogether. These drifts need to be renovated to concrete deck bridges.

In order to improve access to credit, market information and other relevant agricultural services, the workshop resolved that there is need to encourage the formation of farmer associations. The information network linkages with these associations need to be clearly formulated and strengthened to ensure that farmers take advantage of the institutions available to offer services to them. For example, there are already five livestock groups/committees whose mandate is to look at clinical aspects i.e purchase of drugs for livestock and management of dip-tanks, to control livestock roaming and theft and to look at the marketing aspects. Although these committees are on their learning curve, there is a potential that they will be of great benefit to the farmers. These farmers associations need to be represented in the district development framework such as the district development committees, area development committees, and the village development committees.

### **List of participants to the workshop**

Mr Chirwa - Project Officer, Nsanje RDP  
Mr B.A Liche - Assistant Project Officer, Nsanje RDP  
Mr B.D Chabuka - Development Officer, Zunde EPA  
Mr A.N.R Master - Clerk of Council  
Mr D. Chitsonga - Roads Supervisor, Ministry of Works  
Mr A.N Kapombeza - DRIMP  
Mr K.T Mponda - Ministry of Relief and Rehabilitation  
Mr D.J Nyabanga - District Education Officer  
Mrs C. Nduna - Ministry of Women, Youth and Community Services  
Mr D.J Mtofu - DEMAT  
Mr M. Basikolo - Churches in Action for Relief and Development (CARD)  
Mr H. Mandere - CARD  
Mr E.L Kaputa - Christian Services Committee (CSC)  
Mrs M. Mbulula - National Association of Business Women Chairperson (NABW)  
Mr G.J Salifu - Private transporter  
Mr Pedro L.F Pinto - Private transporter  
Mrs E. Chilingulo - Private transporter  
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