Investing in **market-oriented** agricultural infrastructure in Africa

Summary of the proceedings of a round-table meeting

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INTRODUCTION

The overall level of agricultural infrastructure development in most countries in sub-Saharan Africa is lower than in other regions of the world and is one of the greatest constraints to increasing agricultural production. In most countries in the region, agriculture is not only the largest contributor to GDP (gross domestic product), but also provides employment and livelihood for a significant proportion of the population. The World Bank and many other development partners have argued strongly for some time that economic growth in sub-Saharan Africa must be driven by the agricultural sector, which is seen as the motivating force for rural development and the eradication of poverty.

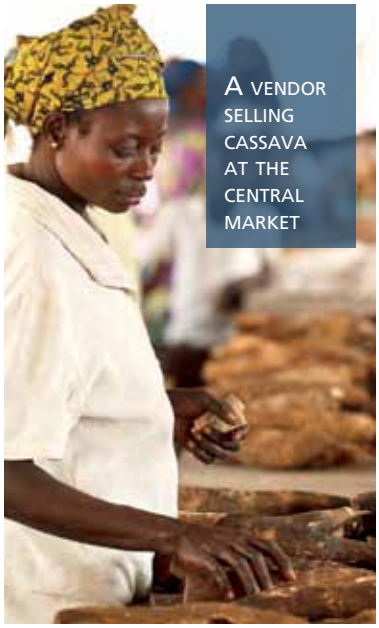
Infrastructure development is identified as a pillar of economic development under the Comprehensive Africa Agriculture Development Programme (CAADP) and development partners such as the African Development Bank are paying increased attention to financing the necessary infrastructure for the development of the agro-industries sector. At the same time, and as agreed at the Maputo African Union Summit of 2003, there is growing realization that ways must be found to increase the flow of private sector resources to augment public spending in the agricultural sector.

Of particular significance is investment in infrastructure at, or close to farms, as well as in villages and towns where small- and medium-scale agro-industries are located. This represents the all-important link between rural communities and large-scale infrastructure developments and is a critical element of rural development and poverty eradication programmes in sub-Saharan Africa. It connects production and input-output markets, thus reducing the risks of investment in agricultural development and providing greater security for producers. Although this fact is now well recognized, investment in market-oriented infrastructure is still not receiving adequate attention and priority in many development programmes.

It is for these reasons that FAO and the Kilimo Trust organized a three-day round-table meeting of regional experts and practitioners from 8 to 10 June 2009 in Kampala, Uganda. The objective of the meeting was to propose, identify and discuss strategies and good practices for maximizing the benefits and sustainability of investments in market-oriented infrastructure in order to provide a stimulus for agricultural and rural development. Investment in infrastructure was viewed in an integrated (multisectoral) manner, aimed at enhancing the effectiveness and efficiency of the entire agricultural value chain. Specifically, the following types of infrastructure were discussed.

- Agricultural water management (AWM)
- Storage
- Assembly, wholesale and retail market infrastructure
- Rural roads

The present summary of the meeting is intended mainly for high-level policy-makers and advisers.



A VENDOR SELLING CASSAVA AT THE CENTRAL MARKET

MAIN ISSUES

Facilitating policies, institutions and regulations

It is essential that governments recognize the importance of market-oriented infrastructure and that investment in such infrastructure be prioritized and targeted at all levels (national, regional, district) and included in budgets. Resources from donors/development partners should be mobilized accordingly.

Harmonization and coordination of the implementation of government policy must be strengthened across relevant ministries and institutions, as well as with stakeholders, including donors and development partners.

It will be necessary to establish appropriate regulatory mechanisms and ensure that all stakeholders are aware of them. The roles and responsibilities of the different actors must be clarified and clear rules of procedure provided

(such as quality standards). Multisector planning will be needed, with the focus on market-oriented infrastructure and the involvement of all relevant stakeholders in order to build on synergies and complementarities.

Any political bias in the planning and implementation of development programmes involving market-oriented infrastructure should be restricted.

Direct public sector investment programmes and financial support

Governments should increase direct investment in basic market-oriented infrastructure for the public good, such as water and marketplace infrastructure, and rural roads. The issue is that the private sector is unlikely to invest in areas requiring heavy investment, where it is difficult to make direct charges and where quick returns may not be guaranteed.

Direct investment is needed in support services such as telecommunications, rural electrification, rural finance, health care and security, all of which help to establish an environment conducive to business.

Rural finance and credit facilities at reasonable interest rates need to be made available to encourage and enable small farmers and businesses to borrow and invest.

Development of institutional capacity in rural areas is needed to sustain the growth of social capital for farmers, farmers' organizations and marketers. Technical services to agribusiness and market investors also need to be provided.

Incentives for private sector investment

While the physical infrastructure should be set up by the public sector, the operational aspects and business issues should be left to the private sector, which is more able to manage and operate efficiently public amenities such as markets and water facilities; however, it must be guaranteed that only reasonable user fees are charged.

Credit and market guarantees, and tax relief should be provided for private businesses to borrow and invest in market-oriented infrastructure, given that the recovery period for such investment might be long term.

There could be joint investment (co-financing) between government/local authorities and the private sector via a shareholder arrangement. The question is whether the private company has a majority shareholding in order to make timely business decisions, but with the government ensuring equity of service provision.

The procurement/acquisition of land by government would be allocated as share capital to private businesses intending to invest in market-oriented infrastructure, combined with subsidies for construction materials and equipment.

Public-private models as a means of investment

The government finances and builds the infrastructure but then contracts the operation and management to the private sector.

The government builds, owns and maintains the infrastructure but then contracts the private sector to provide the utility services for it. For example, this could apply to rural roads, where the government builds and owns the roads but private sector tractor service providers are contracted for maintenance and general transport tasks.

A boy transporting by bicycle rattan furniture and crafts to be sold at the market

Appropriate regulatory mechanisms should be provided to ensure quality standards and protect the public from exploitation by companies adopting unscrupulous business practices.

An irrigation canal running through a field of crops

ROUND-TABLE RECOMMENDATIONS AND PRIORITY ACTIONS

Investment: linking infrastructure development with other agricultural development programmes

Investment in all market-oriented agricultural infrastructures should in general be linked with other developments in the agricultural sector. In particular, investment in the rural infrastructure value chain (storage, processing and marketing) should not be concentrated on individual aspects, but rather on the integration of all individual components. Failure to do this may result in inefficient investment and possible financial losses. For example, in order to maximize returns from investment in water management infrastructure, it may also be necessary to invest in the development of other infrastructures such as storage, rural electrification and telecommunications, and roads. Inputs from different sectors such as water, power, processing, markets and roads may be bundled to create a "bankable" project that is sufficiently large to be economically viable and attract private sector investment. Assistance with the identification and packaging of such projects may be sought from multidonor enabling facilities.

In a wider sense, it may be efficient and necessary to link this investment with other more general agricultural development activities, such as the introduction of improved yields and other production-enhancing technologies. If farmers increase production and improve land and labour productivity, then facilitating access to input/output markets will be vital. It is therefore essential that joint programmes between the different ministries and institutions be coordinated, harmonized and promoted and that all the different components in the agricultural value chains be given support. It is suggested that this be initiated by the institution responsible for national planning.

Agriculture should be promoted as a business, with emphasis given to high-value and high-yielding crops. Local government and key local actors such as farmers and traders should consequently be involved in infrastructure development, awareness creation and sensitization of the local population. Where applicable, local and central governments should create appropriate regulatory frameworks to facilitate the successful operation of marketplace investments.

Governments should assess their policy and regulatory frameworks and, where necessary, formulate and implement relevant changes so as to encourage investment in market-oriented infrastructure. At the same time, it will be necessary to mobilize and raise awareness of the roles and responsibilities of the various stakeholders and empower them to take action. Consideration should be given to decentralization in order to empower local authorities and communities to make decisions on issues related to investment in market-oriented infrastructure and to implement their plans.

To stimulate investment in market-oriented infrastructure, agricultural finance institutions should improve access of private entrepreneurs to loans on favourable terms. Consequently, appropriate mechanisms need to be established and implemented

based on past experiences and evidence. To ensure maximum utilization of the infrastructure, investments should be made in an integrated manner within and across value chains, taking into account the need for market-oriented infrastructure. Examples include the use of integrated mechanization, where an engine may be used for multiple purposes such as water lifting or primary processing; or a tractor may be used not only for various farm operations but also for rural transport and road maintenance. Technical, financial and business development support needs to be accessible to facilitate rural entrepreneurs and service providers to take advantage of existing opportunities and ensure full utilization of market-oriented infrastructure.

Development of public-private partnerships

Public-private partnerships (PPPs) should be developed to enhance infrastructure investment in water management, storage facilities, marketplaces and rural roads. Successful PPPs will require the establishment of appropriate policies, and institutional and regulatory frameworks. Government support may at first be required to instigate and encourage the development of PPPs with incentives such as land and investment support through loan guarantees, tax holidays, tax relief, concessionary packages, bundled investments, subsidies and performance-based contracts. During the planning and development of these measures, all relevant stakeholders need to be involved. At the same time, appropriate legal safeguards should be set in place to protect investors. Governments may also have to consider investing in major infrastructure works such as water, roads, rural electrification and farmer-level water pumps and irrigation equipment; these will, however, be operated and maintained by the private sector on a cost-recovery basis. Where overall fiscal policy allows, financial institutions should provide credit to the agricultural sector at preferential interest rates.

Governments and donor agencies should undertake studies to establish best practices; identify success/failure factors; develop recommendations for PPPs; and clearly define the different roles and responsibilities at the different levels. Innovative project structuring and financing may be needed in order to attract private sector financing to support market-oriented infrastructure. The outcomes of the studies should be shared with the private sector so that country-specific action plans may be developed.

In addition, planners should integrate the provision, management and maintenance of infrastructure in business models. Suitable models that stimulate private sector investment in market-oriented infrastructure should be fostered and strengthened. Contract farming is an example of such a model. Communities and community-based organizations should be encouraged and empowered to participate in the management and maintenance of market-oriented infrastructure, e.g. the maintenance of rural roads. This creates ownership and employment in rural areas. However, there will also be a need for appropriate legal and regulatory frameworks to guarantee long-term protection and operation of private sector infrastructure investments.

Capacity building and institutional strengthening

Capacity building and institutional strengthening will accelerate investment in market-oriented infrastructure and necessitate the coordination of

Women selling produce at the central market

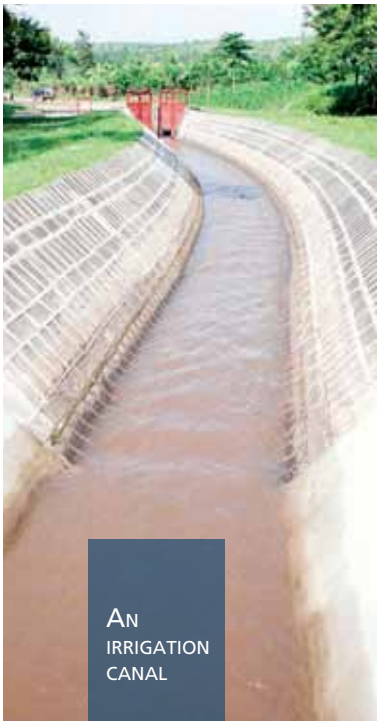
all ministries concerned with development, planning and administration of marketplace infrastructures (agriculture, lands, trade, cooperatives, local governments and councils). Related institutions should be linked to facilitate common planning and synergize capacities; all key stakeholders in the planning, management and development of markets should be involved.

Ministries of Agriculture tend to be oriented towards primary production and will need to develop new capacities to deal with new markets. Recognized centres of excellence should be strengthened and, where necessary, expanded; it may also be necessary to revitalize other institutions and services for research and development (R&D), input provision (seed production, fertilizers, equipment, etc.) and extension. Those professionals holding key positions as agricultural planners will need to be exposed to marketplace dynamics in order to recognize the essential role of a comprehensive, functioning market infrastructure; capacity building in business development skills should also be included. Furthermore, relevant training at both the professional and artisan levels must be developed and consolidated, and the capacities of local authorities strengthened to enable them to deal with market infrastructure planning issues.

Governments and local authorities should establish mechanisms for good governance, transparency and accountability at all levels. Stakeholder organizations (producers, marketers, processors, service providers, consumers) should be promoted and strengthened by governments and donor agencies in order to take advantage of economies of scale. These organizations should become mechanisms for enforcing accountability, demand articulation and advocacy and at the same time be able to lobby, advocate and create awareness among decision-makers and policy-makers at all levels. This includes participatory management in development interventions.

Governments and donors should strengthen national capacities to integrate the planning and implementation of agricultural interventions that go beyond merely increasing production, including market-oriented infrastructure at community, district, regional and national levels, forming the basis for prioritization and budgetary allocation for such infrastructure at all levels. In addition, governments and donors should support training and empower users and local service providers to manage and maintain established market-oriented infrastructure effectively. These activities should be integrated into the relevant infrastructure budget frameworks. Ministries should support the training of stakeholders in pertinent areas such as partnership management, infrastructure maintenance, networking and market information systems management.

Farmers storing sacks of beans



An irrigation canal

Governments and donors should support the development of competent human resources for a market-oriented agricultural system. It is recommended that a review be carried out of curricula in colleges and universities, retraining/reorienting professionals and providing vocational training for artisans. Ministries should support and strengthen the national R&D and extension systems to address emerging constraints in the agricultural value chain and provide technical guidance to grassroots communities.

Maximizing the benefits arising from increased investment in infrastructure

Increased production will result from the promotion and support of rural entrepreneurs and business-oriented farmers, as well as other involved stakeholders such as farmers' organizations and cooperatives, which will thus become better organized and empowered to play a more dynamic role in the establishment and utilization of market-oriented infrastructure. As a result, more informed choices on the establishment and development of high-value farm enterprises and off-farm agribusiness can be made. Good management, maintenance and increased utilization of established market-oriented infrastructure should be fostered in order to create sustainable linkages between input and output markets. Multiple use of facilities should be encouraged, such as using farm tractors for transport and road maintenance. Full and multiple utilization of existing and new infrastructure should be fostered in order to increase returns to investment. Support infrastructure and services, such as rural finance facilities, telecommunications, domestic water supply and sanitation, health care and education need to be provided in order to encourage the emergence and expansion of rural centres and provide increased opportunities for rural employment. All of these should be accompanied by effective regulatory systems and quality standards. Gender issues also need to be considered in order to avoid future imbalances.

Regional markets and cross-border trade, including the development of appropriate policy instruments at national and transnational levels, should be closely examined in order to maximize benefits to be gained from infrastructure investment. Moreover, governments should promote sound macro-economic policies to ensure fair competition and pricing that is determined by the market. If a monopoly does exist, it should be operated in a transparent manner that is beneficial to the larger community, including farmers; it should be examined on a regular basis to ensure that pricing is fair and competition is not suppressed. Finally, there needs to be investment in storage facilities at community level to act as the driver for higher levels of farmer investment in agricultural production.

SPECIFIC ACTIONS

Agricultural water management infrastructure

The aim should be to maximize the productivity of water use through optimizing the benefits obtained from investment in existing and future AWM infrastructures. Schemes that are economically valid should be rehabilitated and supporting infrastructure (roads, electrification, markets) put in place. Farmers' organizations and water users' associations should be promoted and strengthened as

Mud granary

Horizontal grain silo

well as links to operation and maintenance organizations. The establishment of an African Water Academy should ultimately be pursued.

Storage infrastructure

Building storage facilities enhances market opportunities. However, strategies need to be developed and coordinated in order to improve storage services and investment and thus ensure profitable and efficient storage facilities at all levels. Governments should evaluate existing storage infrastructure to determine its optimal use and, where necessary, provide recommendations on additional needs in terms of type, size and location. Further studies may be required to obtain such an overview – the main issues covered should be identification of the most suitable and relevant commodities and the necessary storage capacity; appropriate business models that stimulate private sector investment in storage facilities (e.g. contract farming); identification and evaluation of inventory credit and warehouse receipt systems and their possible linkage to input supplies; development of farmer cooperatives; and identification of build-operate-own (B-O-O) and build-operate-transfer (B-O-T) models that are most relevant for the country concerned. Appropriate legislation may be necessary to ensure that procedures for drawing up and implementing contracts to establish and operate storage facilities are transparent and fair.

Improvements in post-harvest handling technologies at the farmer level will be required, for which specific training and extension programmes may be needed. Storage operators and traders will also need training in storage technology and practices in order to attain high-quality products. Investment by the private sector should be sought, with specific focus placed on the roles of both public and private stakeholders, as well as those institutions that have the authority to ensure effective planning and implementation of programmes.

Marketplace infrastructure

Maximizing benefits from existing and future marketplace infrastructure can be achieved by improved rational utilization of the facilities and by setting up well-managed maintenance and rehabilitation programmes that comply with safety and hygiene standards. Access to markets should be facilitated by, for example, the construction of roads and by ensuring coverage of mobile telephone networks and access to the Internet. The exchange and sharing of investment information by the relevant stakeholders should be encouraged; they should all be represented on market management boards. The effectiveness of investment planning will be increased by adopting an integrated approach that takes into account needs related to roads, markets and telecommunications. Managers must be helped to manage their markets better at central and local levels by encouraging partnership and collaboration and providing marketing information systems and training in market management.

Rural roads

In order to maximize benefits from existing and future investments, it is essential for rural road networks to be linked to the main road networks and for both routine and any major maintenance to be carried out at appropriate intervals. Cost control can be achieved by introducing low-cost methods for repairing and sealing rural road surfaces. At the same time, access by overloaded

Women buying cabbage from vendors at a local market


STREET SCENES IN DOWNTOWN

vehicles that might damage earth and gravel road surfaces should be restricted. Priority should be given to improving rural and feeder roads in key agricultural production areas and Ministries of Agriculture should incorporate a rural roads component in future agricultural development projects. Private sector multidonor investors should be assessed with regard to their ability to structure and package investment projects in rural roads linked with agriculture development.

Actions required will vary according to the class of road. When awarding maintenance contracts for community roads, priority should in general be given to small community-based contractors/groups (where these exist or could be developed). As regards district roads, concessions should be awarded to contractors to maintain a specific road package over a specified time period through performance-based contracting.

It is often necessary to improve tendering and payment procedures for roadworks; improve procedures for monitoring and auditing; consolidate labour-based contractors' associations to bring together trained contractors for networking between individual members and other associations; and train local government staff in developing rural road plans. Training of local government engineers in developing a road asset database and a road condition inventory of their networks may need to be given as well as training for local contractors in labour-based road construction and maintenance methods. At the community level, training will be needed to raise awareness of basic road maintenance techniques. The feasibility of equipment hire centres serving labour-based roads maintenance and construction programmes as well as agricultural operations should be considered, together with opportunities for labour-based contractors to subcontract their equipment needs to tractor-based contractors, who could also provide trailer transport for on- and off-road access to communities.

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PHOTOS

All photographs are from FAO archives.

Cover

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