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DISASTER RISK REDUCTION IN FOOD SECURITY: ISSUES AND CHALLENGES IN SADC[§]

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ABSTRACT

This paper gives an outline of current issues and challenges for disaster risk reduction facing SADC farmers in particular and African farmers in general. It reviews recent literature on the current state of agriculture as well as trends determining direction and future of SADC's and African agriculture. These are used to assess the opportunities and threats for regional and continental agriculture and farmers. On the basis of these, the paper proposes strategies and activities that could be adopted to enhance the future of agriculture. The paper advocates that these are the current issues and challenges for agricultural policy analysis, research, training and advocacy in SADC. Agricultural economists should assume the drivers' seat to influence the future of agriculture at the farm, national, regional as well as international levels.

Keywords: Agriculture, food security, food production. disaster and risk reduction, SADC

INTRODUCTION

A number of scholars have written on the state and the future of agriculture in Africa (Eicher, 1998; Pinstrup-Andersen et al. 2000; Global Coalition for Africa, 1999; Von Braun, 1999). Increase in food production in the past has been largely due to expansion in farming area than increase in land or labour productivity. Crop yields remained low compared to Asia and Latin America for similar crops. Land productivity has been on the decline as a result of loss of soil fertility due to over utilisation of the land.

However fertilizer use is on the decline due to increased prices. Population growth is exerting pressure on the environmental and natural resources, arable, grazing and woodlands under the stewardship of farmers. Thus environmental problems such as soil erosion, overgrazing and deforestation associated with agriculture are contributing to unsustainable land use practices. The combined effect is loss in land productivity and consequently inability to withstand disturbances caused by droughts and war. Between 1980 and 1995, Sub-Saharan Africa recorded a negative growth (1% per cent per year) in per capita food production against a population growth of 3.0 per cent per year thereby creating a chronic food gap. Thus Africa has been a net food importer since the early 1980s. Still, a sizeable proportion of the population faces chronic food insecurity due to food shortages, high food prices, distribution bottlenecks in the rural and urban food markets among many other factors. It is estimated that 31-40% of children under five are under-nourished. Africa is not gaining and even continues to lose its market share in traditional exports of crops such as cocoa, tea, cassava, coffee, etc. There is no gain in market share of non-traditional exports such as horticulture, soya bean either. Agricultural value-added growth rates are the lowest in comparison to other regions of the world. Since agriculture is heavily dependent on rain-fed production, it is very much at risk. The high cost of production per unit of limits competitiveness in local and export markets. Subsistence production is still dominant, characterised by labour intensive operations based on the nuclear family. As most men migrate to urban areas for formal employment, women have become the core producers of both food and cash crops. Theirworkloads have consistently remained high and labour intensive due to failure to adopt appropriate labour saving technologies.

[§]SADC stands for the Southern Africa Development Community. The community comprises Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Madagascar, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

Another issue is that SADC is home to a high number of people living with HIV/AIDS. Southern Africa is one of the worst affected regions in the world in terms of those infected and affected with HIV. The full economic and social costs of HIV/AIDS in SADC have yet to be measured. Unfortunately the epidemic has decimated the productive population in both urban and rural areas resulting in reduced remittance for investment in agriculture and heavy losses in agricultural labour. Rural family structure has changed as young adults and young parents have died leaving the elderly to look after children. Child-headed households have mushroomed as a result of the AIDS pandemic.

Notwithstanding the above, there is ample evidence that smallholder women farmers have become efficient, innovative and hardworking and have begun responding to new technologies and conducive policies. However, their performance and potential to increase output and productivity has been limited by a number of chronic and transitory constraints at both farm and sector levels. These include inappropriate policies biased against agriculture, bureaucratic bottlenecks and corruption among others. Low farm productivity and low farm income are a result of many complex factors that can be categorized as environmental, technological, financial and economic, infrastructure and marketing, as well as institutional and organizational constraints.

Food Production Constraints

Environmentally, agriculture in SADC, as in the rest of Sub-Saharan Africa, is subject to many factors that circumscribe the production environment and affects the farmers' ability to manipulate the enterprises of the farm. Although the soils are low in fertility, continual fertilizer application is necessary for optimal economic production of most crops and yet farmers are financial constrained. As population increases, farmers are encroaching on to marginal lands resulting in heavy environmental cost in terms of loss in forests, wildlife habitats, and biological diversity, increased erosion and downstream silting of river systems.

In terms of technological constraints, improved crop varieties and crop production management practices are available for adoption by the small farmers but rates of adoption have been low and slow. Rate of technology adoption has been influenced by high cash investment requirements, labour availability, education, risk-bearing ability and attitudes. The majority of the farmers are not able to adapt the technology for their use as most of it has been developed for high-input type farming. Mechanised tools have not been adequately scaled down to meet the needs of the small farmers in terms of cost, appropriateness and usability.

Financially**, t**he majority of the farmers have not been able to source credit from local banks as they are considered high risk and because of their low equity positions. Without adequate credit, the farmers cannot invest in productivity to augment technologies such as fertilizers, chemicals for pest control and machinery needed to improve crop productivity. In most cases, because the farmers are partly subsistence producers, a substantial proportion of income raised is invested in non-production activities such as education for children and household consumption. School fees, textbooks and uniforms form the largest part of expenditure. There is, therefore, little net income to adequately meet the investment required in agricultural production.

African agriculture is also characterised by infrastructure and marketing Constraints. Farmers face considerable problems in accessing marketing services. This is because the farming areas are poorly served by transportation systems due to poor or non-existent roads, long distances to markets, and physical barriers such as mountain ranges and impassable rivers. This affects the procurement of improved seed, fertilizers and other agricultural chemicals. Due to a relatively low volume of marketed output and the poor road infrastructure, the farmers are limited in bargaining strength. They are restricted to being "price takers". Consequently, farmers receive only a fraction of the prices of the commodities they sell. They are also not in position to benefit directly from higher product prices and expanding markets. There is limited potential to gain access to contract marketing on an individual basis due to relatively low output volumes and bargaining power. The ability of the farmers to receive and utilize market information is also limited by low education levels, poor road networks, underdeveloped electricity infrastructure for radio and television informational systems. Similarly, access to market information is poor due to non-existent or poorly functioning postal services

(telephone, mail delivery). As observed by Delgrado (1998), poor, non-functioning, unreliable input and output markets and information create high transaction costs for the farmers.

Other Contributing Factors

Several factors are attributed to the state of Africa's agricultural performance in the past 20 years. These include policy, market and institutional failures, decay in institutions servicing the farmers due to corruption, exploitative economic policies, government mismanagement and under-investment in technical capacities at universities, research and extension organizations. Idachaba (2000) states that actors in the agricultural establishment in most countries, despite their nominal membership of some inter-ministerial committees, have exerted little influence in the formulation and design of macro-economic and other sector policies originating outside the agricultural sector. The most important policies in terms of their consequences for agriculture are

a. foreign exchange rate policies that set the average levels and variances of foreign exchange rates with consequences for foreign and domestic prices of exports and imports of agricultural commodities,

b. monetary policies and their inflationary impacts for the domestic terms of trade between the agricultural and non-agricultural sectors, the terms-structures of interest rates and the supply and demand for loanable funds in agriculture,

c. fiscal policy (taxes, tariffs, inflationary deficit financing incomes policies) and

d. balance of payments policy.

All these have tended to work against agriculture. Eicher (1998) argues that the state of the African agriculture can be attributed to the decay and failure of institutions to service the needs of the African farmers. Re-emergency of civil wars and ethnic conflicts has worsened the situation leading to degradation in human capital and scientific capacity due to a net brain drain of professional and scientific staff as a result of deterioration of political and economic conditions. This reduced the threshold of scientific capacity of African countries thereby reducing capacity to benefit from scientific advancement in biotechnology and information. HIV/AIDS has exacerbated the death of professional and skilled persons in public and private service organizations. Von Braun et al (1998) are of the view that the development paradigm of the 1960s and 1970 put emphasis on industrial development and little on institutional development. This led to African governments with donors' support adopting strategies for industrializing their economies. In most cases, this led to macro-economic policies that over taxed agriculture. The Global Coalition for Africa (1999), in examining the performance of agriculture in the different regions of Africa, argues that lack of long-term public investment and capacity development led to decrease in productivity and competitiveness of Africa's agriculture. Growth in publicly funded agricultural research slowed from 2.5 per cent in the 1970s to 0.8 per cent per year in the 1980s (Alston, Pardey and Roseboom, 1997). Delgrado (1998) blames the lack of investment in social and economic infrastructure in rural and farming areas over the past three decades on poor, non-functioning, unreliable input and output markets. These create high transaction costs that limit the farmers' ability to respond to price and market liberalisation. The 1990's were characterised by recovery and upturn in agricultural growth. This is attributed to economic reforms, particularly price and market liberalisation, and removal of inappropriate macro-economic policies such as over-valued exchange rates, foreign exchange controls and pan territorial pricing. But rate of growth is still low and its sustainability is not yet clear. As observed by Collier (1997), US$60 billion of donor funding for policy reforms has achieved disappointing results.

Challenges and Change for SADC Agriculture

SADC's agriculture is poised for change propelled by changes in local and global demand factors, globalization and new world trade arrangements, advances in information and communication technologies, and advances in production technologies. These forces demand that Africa's agriculture be regenerated.

A number of factors make agriculture important to the future of SADC and other African countries. Close to 70 per cent of the population lives in rural areas and is largely dependent on subsistence

farming. The urban population is directly dependent on the farming sector for its food security. Notwithstanding the impact of HIV/AIDS, SADC's population is expected to grow to 250 million by 2020. With these growth estimates, Africa's agriculture has to grow by 40% to meet the growing demand for food. But, the projections point to Africa's remaining a net food importer for the period up to 2020. As a result, high rates of food and malnutrition are expected to continue and even increase due to the estimated increase in population. These negative trends need to be de-accelerated. High rural population growth on limited and fragile lands has exerted pressure on land based resources. Without increase in productivity and technologies for intensifying production, the population growth pressure may exacerbate soil erosion, deforestation, loss in soil fertility and cause further loss of the commons and marginal lands. Agriculture has been and remains a prime mover for economic growth and mainstay of the economy. It accounts directly for up to 15 per cent of the Gross Domestic Product. It generates direct and indirect spin-offs in rural and urban communities such as employment in the service sector. Growth in agriculture will stimulate growth in the non-agricultural sector and non-agricultural GDP. There is vast physical agricultural potential to produce food, cash and export crops for neighbouring countries, regions, and international markets. Agriculture will continue to be important in the economy because of its contribution to rural and urban employment, social welfare, national and household food security and political stability.

However, changes at global and local levels are providing both opportunities and threats for the SADC'sfarmers. These are threats because without changing Africa's agriculture, farmers will face anoblique future. There are also opportunities because they create demand for Africa's agriculturalproducts and therefore the opportunities for farm and national income growth.

Globalization and SADC's Agriculture

The trend in the new millennium is toward the integration of national agriculture into the world economy through globalization of input and product markets. This coupled with a more liberal international agricultural trade regime has resulted in new challenges, opportunities and new risk structures for SADC agriculture. Globalization of markets and trade liberalization generate new opportunities for countries that are internationally competitive. SADC farmers can compete directly for consumers of finished or processed products in the international markets. The new risk structures are that national agriculture is no longer just dependent on domestic market conditions, domestic agricultural policy, local weather conditions and crop and animal diseases. World market conditions would be critical to performance of domestic agriculture. The governments have to undertake structural adjustments to create farms that are internationally competitive. The challenge for government and farmers through partnership is to take advantage of new opportunities in the context of anticipated growth in demand for food and process products as a result of the increase in population and incomes. As the world economy changes, SADC's farmers will need to access markets in high growth areas for products that SADC's farmers can produce. This requires the integration and focusing of agricultural production, value-added production and agribusiness marketing to global and growth markets and such opportunities created by developments relating to the General Agreement on Tariffs and Trade (GATT), World Trade Organization (WTO), and other regional trade and economic blocks such as COMESA[**].

Agricultural diversification and value addition to agricultural output should focus on those crops and products for which the farmers have a competitive advantage. Given the large labour base, African farmers can produce high value crops at competitive costs. The use of this competitive advantage represents the greatest opportunity for value added production in SADC's agriculture. The farmers have the capacity for value addition in: oil seeds production and processing, use of feed grains in intensive livestock production, game farming, and the production of special products such as indigenous vegetable, medicines, honey and fruits.

Since the competition in the world economy for markets is tough sustaining a business in open an economy requires skilled international marketing and negotiating expertise, effective use of

[**]COMESA stands for Common Market for Eastern and Sothern Africa. The region spans from Zimbabwe through much of East Africa up to Egypt. Zimbabwe is a member of both SADC and COMESA despite that some policies of the two organisations conflict.

agribusiness organizations and new arrangements to share risks, acquire credit and service markets. Pro-action would require examining and influencing policy changes not only at regional level but also at the global level to meet the needs of the farmers. More importantly, SADC's governments have to undertake domestic policy reforms to remove distortions so as to give incentives to farmers and facilitate access to markets in growth areas and countries. Throughout the world, consumers are increasingly concerned about the conditions under which food is produced and processed. Thus to complete effectively, SADC's farmers have to meet international quality grades and food safety standards.

Approaches for Regenerating Agriculture to Change Factors

SADC has the land resources and the potential to meet world demand. Getting agriculture moving again calls for, not only allowing liberalized price and marking systems to fully determine output and input prices, but also reforming and investing in new institutional arrangements support and approaches for stimulating growth and development. Farm income, employment and food security have also to be increased besides investing in social infrastructure as well. As observed by Rukuni (1992), market forces, institutions and technologies are the prime movers of agriculture. These are also pre-requisites for making the farmers responsive to global changes. Wiggins (2000) asserts that without market opportunities, farmers are not able to develop their farming in ways that enhances income and contribute significantly to national development goals. Market opportunities facilitate farmers to seek the requisite technologies that increase productivity. Improved institutions, such as credit, extension, research, favourable regulations and marketing arrangements (such as contracting farming) play a facilitating role in improved production. Improved roads and availability of appropriate and time information reduce transaction costs. It is on these bases that multilateral and bilateral development funding agencies and partners are calling governments to draw up a new and focussing strategy for rural and agricultural development based on improving services and investment in the agricultural sector to improve agricultural productivity, incomes and rural employment. This entails downsizing bloated and non-functioning public sector service organizations, namely extension, research, veterinary service, rural finance and marketing information systems. Both multilateral and bilateral development funding agencies are providing funding through Agricultural Sector Investment Programmes (ASIPS) for these organizations to be refocused and refinanced so that they offer demand driven, cost effective, accountable and sustainable services. Governments have to shed off non-public good activities that can be provided by the private sector. Sustainability of services entails farmers' contributing to the costs of services in a variety of forms. Public and private sector provision with farmers' contribution is co-production. This entails stakeholder participation in determining priorities and resource allocation. Stakeholder participation allows taking into account the different needs and characteristics of the farming community so as to target interventions.

In addition to downsizing, governments are working on decentralizing services to the lowest levels possible. This would allow participatory and accountable government. Accountability promotes good governance. An institutional approach would focus on re-orientation of existing agricultural service organizations and creating more innovative institutional arrangements with innovative approaches to attend to the needs of the farmers (Mabeza-Chimedza, 2000). An initial step would be to acquaint the farmers with available services. In order to be focussed, the government's approaches of incentives will have to be altered to deal with the unique technological and socio-economic needs of the specific farmer types. In other words, the services should be provided based on farmer's problems rather than offering blanket services, as has been the case hitherto.

The Future of SADC's Agriculture

The strategy for directing the future of SADC's agriculture must be focused on the family farm. This is because the family farm is the centre of production, the place where people live and make their income. Viability, self-reliance and environmental sustainability are elements that help maintain the family farm as the basic unit of production. Farm families should be able to look forward to a suitable standard of living and the promise of a healthy future by surviving the changes in the local and international market, manage risk and maximize market opportunities. The farmers must make an effective contribution to the management of change confronting agriculture whether from the local

community or the global marketplace. Managing change in agriculture is the key to ensuring that the agricultural industry realizes a strong and prosperous future. Farmers should assume significant control over their own destiny. Farmers should participate in government at local, regional and national levels. They should organize for their members or families (sons, daughters, spouses, and even grandchildren), to seek elected positions in organizations or institutions that have influence and decision making powers in public policy, and specially resource allocation that has bearing on the farmers' wellbeing. The decay in agriculture in the past decades suggests that this cannot be left to rent seeking politicians.

CONCLUSION

The importance of agriculture to the social and economic wellbeing of the SADC countries and the people is indisputable. The future of agriculture will depend upon conducive domestic policies consistent with opportunities created by global demographic changes, international markets and new technological advances. To benefit from these changes, SADC's agriculture will need to be regenerated through efficient input and output markets, effective institutions servicing specific needs of the farmers, investment in technologies and social infrastructure. The decay of the last three decades has to be arrested. The strategy should be to build partnerships that involve the agriculture industry at all levels - private sector, farm organizations, academia and research communities, rural communities, government and most importantly, farm families. The focus of the strategy is to assist the farmers in managing the current transition and in the process develop a stronger industry for the future and to take advantage of new opportunities emerging in the changing environment of the 2000s. It will be to the interest of the farmers to put themselves in effective positions to influence public policy and investment. As observed by BongieNjobe (2000), the challenge is to re-position the agricultural sector and negotiate that position in terms of global trends, as Africa cannot afford to be passive as a continent. African agriculture needs to establish, define and negotiate for a niche as part of the global system of land, natural resources use and food systems. Regional agriculture needs to apply appropriate technology that facilitates economic growth by raising yield and incomes and at the same time satisfies food security at the household level without compromising the sustainability of its biodiversity or trade that exists for its unique products. SADC has the capacity from its people and resources and farmers need a conducive environment (inputs, technologies, and information) to sustainably exploit the natural resources.

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