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EXPERT OPINION

BRIEF OVERVIEW OF SUDAN ECONOMY AND FUTURE PROSPECTS FOR AGRICULTURAL DEVELOPMENT

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The World Food Programme (WFP) has organized a Food Aid Forum from 6-8 June 2006 in Khartoum, as part of an ongoing process to develop the longer-term strategy of WFP in Sudan. In support of the Forum, a series of Expert Opinion papers have been prepared by a wide range of partners on various aspects on food security strategies and their implications for WFP programmes in Sudan. In line with the objectives of the Forum, it is hoped that these papers will help inform a strategic framework offering direction to WFP Sudan through 2011 consistent with national priorities, and improve the understanding of the role and impact of WFP programmes in Sudan.

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Executive Summary

The main objectives of the paper are to: (1) provide a brief analytical note on the Sudan economy (resources and GDP); (2) assess the Sudan economy performance during the last two decades; (3) assess the performance of the agricultural sector and (4) develop a future vision for agricultural development. The challenging question that needs to be addressed during the forum would be what role(s) the WFP Food Aid Programme could play in realization of the future vision of agricultural development in Sudan?

1. Introduction

Sudan is considered the largest country in Africa and ninth largest in the world with an average per capita income of U.S.$ 395. It has varied ecological zones and a diverse agricultural base that accounts for 40 percent of GDP. Over the years, growth rates have shown fluctuating trends that coincide with agricultural production being affected by weather conditions. Oil has also emerged as major source for economic growth and revenue for the government as reflected in the balance of payments and investment flows.

2. The Performance of Sudan Economy

Since independence in 1956 the Sudan economy with it is heavy reliance on mono-cropping culture for export (cotton) has been set on a turbulent course reflecting fluctuating pattern of growth which necessitated the introduction of economic measures to mitigate pitfalls.

As far back as 1970, Sudan initiated the first wave of economic reforms to try and address economic deterioration. The measures agreed to were not fully implemented and a second wave of measures were initiated under the umbrella of the salvation programme, which was merged with the national Comprehensive Plan of 1992-2002. This programme was also not successful and there was a deterioration in balance of payments, escalating inflation rates and persistent macroeconomic imbalances. Another reform programme was introduced 1997-2001 with a sharpened focus on macroeconomic and price stabilization. The programme encompassed four basic elements including: (1) introduction of stabilization measures and macroeconomic environment that focuses on fighting escalating inflation by way of increasing collection of revenues, reduction of public expenditure and following balanced monetary policy; (2) pursuance of market friendly measures and policies to abolish controls and provide incentives for domestic production and export; (3) introduction of structural reforms to limit role of government by privatizing enterprises and rendering opportunities for the private sector in such areas as health, education and other utilities and (4) encouragement of savings by stabilizing the economy and introduction of reforms in the banking sector.

Table 1 below compares the macroeconomic indicators of 1986-90 with year 2000-2004 highlighting the results of some of the most recent reforms. As can be observed those macroeconomic indicators that started off with low levels of growth rates during 1986-90, after 1996 showed signs of improvement. In addition, inflation rates, which peaked during years 1991-95, tapered off during later years and were accompanied by continued decline in government expenditures compared to GDP (WB, 2003).

Table 1: Growth Rates of GDP, Agricultural GDP and per capita GDP of Sudan (1986-2004)

	1986-90	1991-95	1996-00	2000	2001	2002	2003	2004
Growth rate of real GDP	2.3	3.5	5.7	5.1	8.0	6.5	8.3	7.2
Growth rate of Agric. GDP	-1.2	0.7	10.9	5.3	5.6	7.3	5.2	4.5
Growth rate of per capita GDP	-0.8	1.6	3.6	2.8	5.6	4.2	2.2	1.5
Inflation	43.3	106.4	43.6	8.0	4.9	8.3	7.4	8.7

Source: World Bank (2003), Bank of Sudan (2000-2004)

This dramatic change in the performance of Sudan economy since 1996 could be attributed to a number of factors that include: (1) economic reforms; (2) favorable weather conditions affecting agriculture; and (3) high investment in oil sectors and related services.

While the stabilization measures and economic reforms have been carried out without external aid or technical assistance and achieved success in setting high growth rates for the economy, external debt and its accumulated arrears remain to be a problem facing future development of the country. In this respect it has to be stressed that stabilization measures have been achieved at the expense of drastically cutting public expenditures except for security purposes with adverse impact on productive sectors, infrastructure, and human resources development.

In addition, stabilization measures have been facilitated by oil exports which gained prominence during the past few years. Oil exports increased from zero level in 1998 to reach US $ 276 million in 1999 accounting for 35 % of overall export earnings. In year 2004 oil export reached US $ 3.097 billion accounting for 81 % of exports. With the inflow of foreign direct investments and oil revenues, the economy of the Sudan witnessed a boom in real estate development in major towns, coupled with road construction, development in telecommunications, electrical power supply and investment in food processing industries. However, despite this development, most rural areas and national agricultural development has not directly benefited resulting in accentuating poverty and continued rural migration.

3. The Performance of the Agricultural Sector

Agriculture is considered the main source of economic growth and livelihood of the majority of the population. The sector also provides about 80 percent of the country's exports (excluding petroleum) and contributes to the livelihood of 80 percent of its population (Ahmed, 2004). The agricultural resources in Sudan are characterized by diversity ranging from forests, swamplands, crop lands, grazing lands and water surfaces for fisheries (Nile basin and Red Sea). Rainfall varies from scanty zero level in north west of the country to 1600 mm in the Southern Sudan with half area of the country exposed to periodical waves of droughts. At present 41 million feddan of land are cultivated which is equivalent to the 20 percent of potential arable land

Table 2: Contribtuion of the Agricultural Sub-sectors to the Agricultural GDP

	1981/82 - 1991/92		1991/92 - 1999		2000 -2004	
Item	Growth rate/ annum	Share of Agric. GDP	Growth rate/ annum	Share of Agric. GDP	Growth rate/ annum	Share of Agric. GDP
Irrigated crops	1.5	25.8	6.6	21.1	5.3	27.6
Semi-mechanized crops	-9.2	8.1	-6.7	6.3	18.0	3.7
Traditional crops	-8.4	10.0	24.6	12.5	4.0	15.9
Minor Crops and by-products	4.35	7.9	0.5	6.1	N.A	N.A
Total Crops	-0.8	51.8	8.5	47.0	27.4	47.3
Livestock	2.0	36.9	15.9	46.9	4.3	46
Forestry & other	0.7	9.9	-21.5	4.8	4.9	6.7
Fisheries	1.0	1.4	9.0	1.3	-	-
Total	0.6		10.8		7.3	

Source: WB (2003) and Bank of Sudan (2000-2004)

Agricultural contribution to GDP, which was estimated at 37% in early 1980s, witnessed a decline to 28% during mid 1980s and early 1990s due to severe droughts and government policies that adversely affected performance. A rebound was achieved during early 2000, when agriculture reached 47% of GDP, mainly due to favorable climatic conditions once again highlighting the importance of the sector in the future development of the country.

According to Table 2, the agricultural sector witnessed an appreciable growth rate from an average of 0.6% per annum during the period of 1981-91 to a peak of 10.8% per annum during the period of 1992-99, and then a decline to an average of 7.3% during the period from 2000-2004.

In Sudan they are three major farming systems (1) irrigated farming; (2) rainfed semi-mechanized farming and (3) rainfed traditional farming

Irrigated Farming:
According to the available statistics there are 4-5 million feddan suitable for irrigated agriculture within the Nile Basin covering states such as Northern, Khartoum, Gezira, White Nile and Blue Nile. The major four scheme managed by the central Government includes Gezira Scheme (2.1 Million feddan), Rahad, Suki and New Halfa with a total area of one million feddan. Irrigated farming showed an increase rate of growth of 1.5% per annum during 1981-91 followed by another appreciable increase in the rate growth of 6.6% during 1990s and 5.3% during 2000-2004. Its share in agricultural GDP is ranged between 27.6% and 21.1% during the period from 1981 to 2004 (Table 2). The capital intensive nature of irrigated farming and low productivity levels has led it to be stigmatized as unproductive.

The irrigated sub-sector contributes 90% of the total amount of cotton produced in Sudan. Cotton productivity in the Sudan is only 53%, 47%, 35% and 61% of the cotton productivity in Egypt, China, Australia and Pakistan, in that order (Table 3).

Table 3: Sudan Average Productivity of Cotton Compared to the Various Countries (1990 –2000)

Country	Productivity (kg/ha)	Relative Sudanese Productivity (%)
Sudan	1261	100
Egypt	2365	53
Bangladesh	1719	73
China	2668	47
Brazil	1362	92
Australia	3578	35
Pakistan	1749	61
Developing countries	1439	88
Developed countries	2081	72

Source: Ahmed (2004).

Rainfed Semi-mechanized Farming/Rainfed Traditional Farming:
The rainfed semi-mechanized farming covers an area of 14 million feddan and according to statistics (Table 2) its growth rate has remained negative during the period 1981-1999 resulting in decrease in its share of agricultural GDP from 8.1% during 1981-1991 to a level of 6.3% during 1992-1999. During the period 2000-2004 annual growth rates showed a sizable increase of 18 % accompanied by lower share in agricultural GDP of 3.7%.

For the period 1990-99 onwards the rainfed traditional farming sub-sector, including such activities as livestock production, gum arabic production and traditional farming of plant crops such as sorghum millet sesame and groundnut, achieved a leading position in the contribution to agricultural GDP achieving annual growth rates of 24.6% and 15.9% for crops and livestock, consecutively. During years 2000-2004 its contribution to agricultural GDP reached 15.9% for the traditional farming and 46% for livestock. Despite the non-condusive policies and lack of services rendered (research, education, extension and credit) in this sub-sector, positive weather conditions resulted in productivity.

Sorghum is the main staple food crop grown in both traditional and semi-mechanized rainfed areas (75% of the total sorghum production). However, Sudan's sorghum productivity is low compared to other sorghum producing countries. As depicted in Table 4 sorghum productivity in Sudan represents 14%, 15% and 16% of that of Argentina, USA and China, respectively.

Table 4: Sudan Average Productivity of sorghum Compared to the Various Countries

Country	Productivity (kg/feddan)	Relative Sudanese Productivity (%)
USA	1651	15
Argentina	1824	14
Sudan	255	100
India	339	75
Yemen	402	63
Nigeria	467	55
China	1581	16

Source: Taha and Faki (2004).

Sesame and livestock were the leading agricultural export commodities in year 2004. The contribution of sesame to the total export proceeds increased from US$ 74.37 million in 2003 to US$ 178.64 million in 2004, an increase of 140%. This was mainly attributed to an increase in the amount exported from 108.69 thousand tons in 2003 to 218.34 thousand tons in 2004, as well as an increase in the international prices of sesame. In 2004 livestock exports ranked second to sesame. Export proceeds from livestock increased from US$ 97.68 million in 2003 to US$ 137.64 in 2004 million (Bank of Sudan, 2004).

4. Future Vision

Despite high growth rates of the Sudan economy during the past years, the level of poverty has dramatically increased. This could be explained by a high positive correlation between growth rates in GDP and agricultural GDP. On analyzing agricultural GDP, during period 2000-2004, the contribution of the traditional rainfed sub-sector amounts to 15.9%, irrigated sub-sector 27.6% and the semi-mechanized sub-sector 3.7%. The proportions of the population depending on those sub-sectors are 70%, 12% and 0.7% consecutively. This means, the contribution of traditional rainfed sub-sector to agricultural GDP falls short relative to the proportion of population depending on it. This pattern is a reflection of skewed income distribution among different sub-sectors which calls for a number of measures to be undertaken to enhance productivity of unit labor and other resources (land, water, and other inputs).

Constraints:

In this respect, the Sudanese Agricultural Council (2005) has commissioned group of experts to prepare road map for future strategy of agricultural development. The working document they produced alluded to a number of constraints besetting the performance of the agricultural sectors including: (a) lack of strategic planning for different agricultural sub-sectors; (b) low priority accorded to the sectors as reflected in allocation of public expenditure, formal banking credit and investment levels which amounts to 3%, 11% and 3%, respectively; (c) inadequate complementarities and coordination of macro economic and sector policies, and persistent negligence of the role of small producers in achieving food security and poverty alleviation; (d) instability of production due to the exposure to natural risks and hazards in addition to price competition of imported subsidized goods; (d) low productivity of animal and crop producers due to inadequate training, extension programmes and supportive producers association; (e) under-utilized efficiency of human resources capacities engaged in agriculture; (f) meager budget allocated for agricultural research which amounted to 0.04 of public expenditure (MOAF, 2005); (g) inadequate social and physical infrastructure; and (h) weakness of laws governing lease and use of land.

If those constraints are addressed, agriculture in Sudan has a large potential to become a driving force for economic growth, source of employment, base for agro industries, source of food, and a thriving avenue for exports. A challenging question arises: how to make use of available resource base to enhance productivity and efficiency taking into consideration the additional impetus of oil production.

As mentioned earlier, the recent improvement of the agricultural sub-sectors as reflected in its growth rates has not been an outcome of technological transformation or price increases, rather it is mostly due to favorable weather conditions that allowed increases in area cultivated, and size of livestock.

The future sustainability of the sub-sectors necessitates improvement in supporting services, provision of technologies, and rendering better management capacities.

Suggestions:
The main components of the future vision include: (a) harmonized integration between the macro economic and sectoral policies to create market friendly environment that allow for producers incentives in production and marketing (World Bank, 2003); (b) introduction of land reform measures that would allow use of land as a collateral to obtain credit and provides opportunities for land and capital improvement (land reform also offers opportunities for integration of farming and livestock production in legal structure that avoids communal conflicts and strife); (c) strengthening research and extension services and training to induce technological transformation in production and marketing, especially in the traditional sub-sector; (d) improving physical rural infrastructures such as roads and other transportations modes that would ultimately reduce costs of transportation and increase efficiency; (f) provision of better services for domestic marketing and export activities; (g) making available credit facilities especially targeting small producers; (h) improvement of rural services which include water supply, health, sanitation and basic education; (i) improvement in institutional and organizational structures to allow for participation of different partners in the process of development; and (j) better management of natural resources which necessitate enforcement of laws and regulations that secure future sustainability.

It must also be noted that, related to Southern Sudan, a real challenge exists since less than 2% of potential land suitable for agriculture was utilized before the civil war, and therefoew this area reflects a large potential for growth. With the advent of peace there are attractive prospects to establish a viable and fruitful North-South production and marketing relationships.

The challenging question that needs to be addressed during this forum would be what role(s) the WFP Food Aid Programme could play in realization of the future vision of agricultural development in Sudan?

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