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.

---

1 This paper is prepared to stimulate discussion for WFP on approaches to food aid and food security and should not be construed as a research paper. Sections of the paper will need revising as the papers on food security in different regions of Sudan are made available.

2 The views expressed in this paper are those of the authors alone.
SUB-REGIONAL INTEGRATION IN SUDAN:  
THE KEY TO FOOD SECURITY AND RECOVERY

Brian D’Silva & Olivia Tecosky

Summary: The signing of the Comprehensive and Darfur Peace Agreements (CPA/DPA) in Sudan has created a new era for peace; approaches to food security must therefore be reoriented based on the agro-ecological diversity within Sudan. WFP is in a unique position to catalyze an approach to food security that meets immediate needs and contributes to long-term recovery, in collaboration with the Government of National Unity (GNU) and Government of South Sudan (GOSS).

At aggregate levels, average food production in Sudan has increased over the last decade; however, at sub-regional levels, many regions remain food insecure. Major research must be undertaken to determine food production at sub-regional levels as a first step towards linking deficit areas with areas of surplus. Furthermore, several initiatives must be taken to remove barriers and facilitate increased integration between sub-regions. Other post-conflict experiences suggest that sub-regional linkages will not only ensure more efficient delivery of food in the near-term but also contribute to long-term recovery and economic growth.

I. Introduction

The signing of the Comprehensive Peace Agreement (CPA) on January 9th, 2005 and the Darfur Peace Agreement (DPA), on May 5th, 2006 provide a new framework for peace and recovery in Sudan. Based on the concept of one country, two systems, the CPA and implicitly the DPA, politically recognize the diversity throughout Sudan. The food security situation in Sudan, however, must be addressed in relation to the sub-regional agro-ecological diversity of Sudan which may necessitate that areas with divergent agendas and/or political systems be linked and integrated agriculturally and economically. In the new era of peace in Sudan, production, distribution and access to food must be linked irrespective of political borders to achieve maximum efficiency in meeting the needs of all Sudanese.

This paper presents some of the issues the World Food Program (WFP) should address to move towards an integrated approach to food security for the nation in a new era of peace. Food security herein is analyzed in terms of food availability (production at regional and sub-regional levels) and access to food (markets, infrastructure and household access).

WFP has played a vital role in meeting the needs of Sudanese during the conflict between the North and South and the conflict in Darfur, in addition to meeting the needs of other vulnerable populations throughout Sudan. Because of the complexity and duration of the conflict between the North and South, WFP had to develop new and creative systems to access the most vulnerable populations. The resultant approach was at the time an effective arrangement to fulfill the humanitarian imperative.

Within the context of the agreements, however, WFP must reorganize its programming so that it no longer takes its cues by delicately navigating the political context, but rather relies on agro-ecological and economic realities to inform programming; fulfilling the humanitarian imperative by delivering much needed food aid throughout Sudan must capitalize on sub-regional integration between areas of surplus production and areas of deficit. WFP’s logistics and programming in Sudan must be organized so that the entire country can be approached from a sub-regional integration approach, rather than in relation to political borders.
Furthermore, despite the resolution of the conflict between the North and South and partially in Darfur, WFP must be cognizant of the potential for conflict in the East. This is a particularly salient issue for the future of food security in Sudan because of the strategic nature of the region. Conflict in this region could impact food imports coming from Port Sudan, while also affecting the domestic production of crops in the mechanized and irrigated schemes in the region, on which the urban centers are heavily reliant. Furthermore, conflict in the East could affect the import/export of fuel which could then affect the economy as well as fuel-dependent operations.

While many barriers to integration and sub-regional linkages remain, these must not deter WFP from promoting and pursuing sub-regional integration as a means to contribute to food security. As the peace agreements are implemented, Sudan must focus on a path towards recovery and development. WFP is in the unique position of laying the groundwork for these efforts while continuing to meet emergency needs. Through integration the following could be achieved:

- Areas of current food deficit will benefit in the long term from greater linkages with surplus production areas;
- Macroeconomic restructuring to remove barriers for sub-regional integration will ensure a climate that promotes recovery and future food security throughout the country; and
- The increasingly inadequate resources allocated to fund food security by the international community will be utilized as efficiently as possible to meet both near- and long-term objectives.

To assume the challenge of overcoming the barriers to sub-regional integration, WFP must be ready to challenge the status quo that was defined by implementation during a conflict scenario in Sudan. A new era of peace should unveil new strategies for prosperity and food security; WFP is poised to catalyze these efforts. If barriers are removed, Sudan could be almost entirely self-sufficient in feeding the whole country while sub-regional integration simultaneously promotes economic growth.

II. Present Food Availability

A. The Diverse Landscape

Sudan is comprised of three agriculturally productive sectors: mechanized, irrigated and traditional rain fed. Additionally, Sudan has some of the most varied and diverse ecological systems in the world, from the Sud in the South, which is approximately the size of Belgium, to the vast desert areas of the North. It is perhaps easy to forget existence of mechanized farms in Southern Kordofan when just next door in El Obied at the WFP warehouse storing food for air drops in the North. Or perhaps it is simply too far of a stretch of the imagination when in the desert landscape of the Darfurs, with massive displacements, to remember that in the same region lies a naturally rain-fed area with high productivity around Jebbel Marra. However, it is the perpetuated fragmentation of the country which inhibits efforts to link the productive areas with the areas of deficit.

Integration, therefore, will require significant resources and structural transformation; however, Sudan’s long-term dependency on food aid is a far more costly prospect, particularly when the country currently produces enough food to be (almost) food secure at an aggregate level.

B. Aggregate Food Security
As reported in the WFP/FAO Crop and Food Supply Assessment, 2006, at the national level, Sudan can “cover all of its cereal requirements,” through domestic production and importation of approximately 1.3 million tons of wheat and rice (FAO/WFP, 2006). Domestically, it is estimated that with 185,000 tons in opening stocks, Sudan as a whole will produce 5,291,000 tons of cereals in 2006, primarily comprised of sorghum; utilization at a national level is estimated at 6,804,000 tons (FAO/WFP, 2006). Given the fluid nature of the situation in Sudan, these figures are based on significant assumptions, including the assumption that the security situation will not prohibit harvesting in Darfur in 2006.

As evidenced in the graph below (Figure 1), overall production in Sudan has increased steadily. However, there is significant year-to-year fluctuation due to recurrent natural shocks that affect production and productivity. However, to better understand trends in production, these data need to be analyzed both in per capita terms and disaggregated so they can be analyzed sub-regionally.

Within the framework of peace, production increases can be expected if returnees move back to the hinterlands and begin farming again, areas under cultivation increase, and the agricultural schemes receive increased investment as part of a recovery strategy. However, the assumed increase in production, within the framework of peace, is linked to implementation of the specific components of the CPA and DPA which related to land rights and land use in Darfur and the Three Areas (Abyei, Southern Kordofan State and Blue Nile State). Land was central to the conflicts in the Three Areas and in Darfur and is also a critical component of production which must be addressed if increased production can be realized.

![Figure 1: Grain Production in Sudan](http://faostat.fao.org/)

C. Sub-regional Food Production

Though Sudan appears to be relatively close to attaining food security at a macro-level, the picture at the sub-regional level highlights vast disparities in production, deficits, and resultant food aid requirements.

Based on estimates before the 2006 harvest, 1.5 residents and 1.5 IDPs will require food aid in the Darfurs alone in 2006 (FAO/WFP, 2006). In southern Sudan an estimated 25% of the population will require food aid assistance during a hunger gap of two months; this will be exacerbated by an estimated 457,000 returnees competing for scarce resources in certain areas of the South (FAO/WFP, 2006). Thirty-three percent of the population in Red Sea State and 46% of the population in Kassala, including refugees from neighboring Eritrea, will face food insecurity for nearly a month and almost two months, respectively, during the hunger gap. In the Three Areas, Southern Kordofan State, Blue Nile State and Abyei Area, 45-80% of the population will face food insecurity after crops are planted and in anticipation of harvest, this will be exacerbated by an expected 394,000 returnees to the region. Furthermore, an estimated 300,000 vulnerable people in North Kordofan and White Nile States will require food assistance over the year (FAO/WFP, 2006).

Indeed, because of the continued need throughout Sudan, food aid deliveries have increased since 2002, as illustrated in the graph below (Figure 2). The sharp increase from 2002 to 2003 is attributable to the conflict and massive displacement in Darfur.

![Fig. 2](source)

The significant food aid requirements illustrated in specific regions runs contrary to the aggregate picture of increasing food production, which is further evidence that food security cannot be equated with increased food production alone. This apparent incongruence can be attributed to two primary factors: 1) highly divergent levels of production at a sub-regional levels and 2) severe constraints to linking regions of productivity with regions of deficit. Food aid requirements in some regions may have been directly due to factors related to conflict, such as

---

3 This section will most probably require revision once the papers on food security in each of the sub-regions are made available to the authors.
displacement; however, in the new era of peace, the underlying constraints that may linger must be addressed so that areas of increased production can be integrated with areas of deficit.

Of the three primary methods of production, mechanized, irrigated and traditional rain-fed, mechanized and irrigated predominate in the North. (See Map 1 below demarcating approximate location of major areas—producing 100,000 tons or more—under mechanized and/or irrigated production in the North by orange ovals.) In 2000, the Ministry of Agriculture and Forestry stated that the irrigated sector produced 27% of the country’s agriculture (Sudan Ministry of Agriculture and Forestry, 2000). The mechanized and irrigated sectors comprise large tracts of land under cultivation and receive assistance from the state annually. In Northern and River Nile States, maize, sorghum and wheat are grown with irrigation from the Nile, in addition to the current areas under cultivation; a dam under construction at Merowe will increase the area by four million feddans (FAO/WFP, 2006). However, production in the mechanized areas has been affected by the conflict in the East, Blue Nile State, Southern Kordofan State and Southern Darfur.

The **Eastern Region** contains three irrigated schemes, New Halfa, Gash and Tokar as well as the largest rain-fed mechanized area under cultivation in the country. The area produces sorghum and wheat, the total production of which is expected to be almost 60% higher in 2005/2006 than in 2004/2005 which was an estimated 74,000 tons (FAO/WFP, 2006).

The **Central Region** is the most productive region in the North, including the Gezira scheme, Rahad scheme and areas under cultivation in Blue Nile State. The region produces a varied number of crops, mostly irrigated, but some are supported by traditional rain fed techniques. Production is expected to increase in this region as well; estimates of production in 2004/2005 were 799,000 tons compared to 1,040,000 tons expected in 2006 (FAO/WFP, 2006).

Cultivation in the **Kordofans**, North and South, is supported by both traditional techniques as well as rain fed mechanized schemes and a small amount of production is supported by irrigation in Northern Kordofan. Overall, the region is expected to increase production by approximately 60%, from an estimated 412,000 tons in 2004/5 to an expected 670,000 tons in 2006, yielding sorghum, millet and sesame (FAO/WFP, 2006).
In addition to the relatively more productive irrigated and mechanized areas in the North, South Sudan has varied livelihood zones with specific agro-climatic conditions. (See Map 2 below of the varied livelihood conditions in the South). Production in the South is expected to increase by over 70% in 2006, from 587,000 tons in 2004/5 (FAO/WFP, 2006).

Map 2: Livelihood zones and counties of southern Sudan


It is apparent in the graph below, (Figure 3) that some regions of South Sudan with traditional cultivation techniques have vast surpluses (Bahr el Jebel has and estimated 52,765 ton surplus in cereals) (FAO/WFP, 2006). However, despite high levels of production in the North and surplus production in the South, many areas remain food insecure. Regions such as Western Bahr el Ghazal suffer from over a 40,000 ton food deficit (FAO/WFP, 2006); rather than meet this need by linking the region with more productive areas, at least some external food aid will be required to meet the needs of the region because the infrastructure does not exist to facilitate the transfer.

Fig. 3 Surplus/Deficit in Cereal Production/Use

Furthermore, the “Greenbelt” in **Western Equatoria** has the potential to supply food to the surrounding areas, including the input to meet food deficit needs in Darfur if infrastructure is improved. Illustrative of this possibility is the fact that the region has exported 1,500 tons of cassava flour, 600 tons of sesame seeds and 750 tons of groundnuts in the past, though more research would be needed into the surplus production of other crops and specific needs in deficit areas (FAO/WFP, 2006).

As demonstrated in Map 3, correlated to the highly variable agro-ecological/climatic conditions in the South are highly variable food security conditions.

**Map 3: Food Insecure Areas of South Sudan**


In addition to the possibility of the Greenbelt providing food for food insecure areas, areas that were productive prior to the start of the North-South conflict, such as Southern Kordofan and Blue Nile States, also have the potential to regain productivity and contribute to food needs in Northern Kordofan, the East and Darfur. Indeed, the potential for sub-regional integration is highlighted by the fact that in areas of food insecurity during the hunger gap, such as Aweil South, people sell grass and firewood in Aweil Town to purchase grain which has been imported from surplus regions to the urban areas (USAID/FEWSNET, 2006b).

Relatively little research has been conducted on sub-regional food production, potential production and how to overcome barriers to production and trade, beyond the mechanized and irrigated schemes in the North⁴; however, it is imperative that this work be undertaken to ensure that areas of potential high productivity be identified, provided the direct inputs to cultivate and linked to areas of deficit. Though sub-regional production figures reflect increases over the past

---

⁴ This statement may need to be revised should there be submission of papers that address sub-regional production capacity and potential.
year, the estimates of sub-regional food aid needs suggests that increased integration to link areas of deficit with areas of production is needed.

The signing of the CPA and increased security has already increased areas under cultivation at the household level (FAO/WFP, 2006), and during periods of relative stability in Darfur over the last year, cereal production has increased by up to 47% demonstrating the potential to return to production when peace is secured (FAO/WFP, 2006). However, efforts to understand the potential for production at the sub-regional level, and linkages between areas with projected surpluses and deficits, must be undertaken to ensure that Sudan can realize a future of self-sufficient food security.

In a recent statement Vice-President Ali Osman Taha said, "The government of Sudan pledges to give 20,000 metric-tons of food aid to make up for the cuts in food rations," in response to WFP’s 54% funding gap (Mail and Guardian South Africa, 2006). It is evident, therefore, that resources exist in Sudan to feed the people of Sudan, either through cash purchases or increased local production. All efforts must be made to ensure that promotion and utilization of national food resources is not ad hoc and that the incentives for sub-regional integration yield a more prosperous and healthy Sudan throughout all regions.

III. Future Food Availability: Sub-regional Linkages for Food Security

Despite the fact that there is relatively weak data on production, productivity and potential productivity at a sub-regional level, particularly in the South and Three Areas, it is evident that there is a need to address the constraints to linking areas of surplus with areas of deficit. The significance of these linkages can be viewed in two critical phases:

1) WFP assists with the creation and reinforcement of linkages, paving the way for a more integrated economy and food self-sufficiency in Sudan, while pursuing relatively more efficient practices of delivering food aid to areas in need in the near term; and

2) Consequently a longer term framework for an integrated food security system will be attained whereby Sudan can attain self-sufficiency and shed the dependence on food assistance.

The first step towards improved linkages and increased integration in Sudan was the signing of the CPA and DPA which provide the frameworks to unify the country for economic growth and recovery. However, many barriers remain which separate sub-regions of this vast land, both physically and economically. Without concerted efforts to overcome those barriers, disparities in food security and otherwise will continue to shape the landscape of Sudan.

A. Roads – Linking Agro-Ecological Zones

In regions where roads and other infrastructure have been built/rehabilitated, the immediate increase in access and consequent decrease in prices of goods is evidence of the profound effect of, and continued need for, increased and sustained investment in infrastructure.

With initial funding of US$75 million from USAID, WFP has already repaired 872 kms of road as a part of their Emergency Roads and Infrastructure Program (see Map 4 below of repaired roads as of February 2006) (FAO/WFP, 2006). This represents is a tremendous achievement given the extremely difficult operating environment for road upgrading. The purpose of the
program was to help facilitate integration and linkages between sub-regions but also to facilitate the return and reintegration of IDPs as well as delivery of the peace dividend.

Map 4: WFP Repaired Roads as of February 2006.

However, the Vision of the late Dr. John Garang illustrates the optimal road rehabilitation that would most effectively link the regions of production with areas of deficit (see Map 5).

Map 5: Dr. John Garang’s Vision Map of Infrastructure in the South

Specifically, the productive Greenbelt would have feeder roads that link to Northern Bahr El Ghazal and a railway that travels all the way to South Darfur where roads can disseminate to deficit areas, making surplus delivery to those regions relatively efficient. If implemented, the Vision would also facilitate trade between productive and deficit areas in the South and North, both by barge and roads.

While vast areas currently remain inaccessible by road, the only alternative to deliver food aid is by plane. Reliance on flying in food remains expensive for WFP and is a major disincentive for productive zones in Sudan to try to grow and trade their surpluses with other regions. Road
transport between Lokichoggio, Kenya and Kapoeta, Sudan can cost as little as $0.5/kg while an air transport can cost up to $4.25/kg, depending on the aircraft (FAO/WFP, 2006). Furthermore, without being fully developed, barge transport linking the productive regions in the North and potential consumers in the South remains expensive and time consuming. The barges currently have a capacity of 70,000MT and it costs approximately $0.08/MT/KM but major losses are incurred when shipped. It is estimated that at the current rate of rehabilitation, it could take two to three years before the barges and requisite ports are fully developed (FAO/WFP, 2006).

As recognized by GOSS Minister of Roads and Transport, Mrs. Rebecca Garang de Mabior, “roads and education are the key to development in Sudan.” (Garang De Mabior, Rebecca, USIP, 2006) Because WFP is in the unique position of implementing a project to rehabilitate infrastructure in the South as well as deliver food aid, the agency is surely aware of the important linkages between the delivery of food aid and need for better road infrastructure; however, it is equally important for WFP to recognize the relative efficiency of purchasing locally available food for delivery and need for the establishment of specific linkages between productive regions and regions with food deficits.

B. Fuel: the Dual Constraint

While closely linked to the constraint that a lack of infrastructure presents to the efficient delivery of food aid, as well as to the promotion of sub-regional integration of food security, fuel prices and availability present specific challenges that must be considered.

Despite the fact that Sudan is emerging as a major oil producer, currently producing 500,000 barrels per day (bpd) of crude oil and expected to produce over 750,000 bpd by 2007, the majority of the fuel produced in Sudan is currently exported (UNJLC, 2006). However, because of poor infrastructure to transport fuel and a reliance in the South on fuel imported through the Kenyan port in Mombasa, fuel shortages continue to plague sub-regions. This impedes the use of fuel to provide food aid within Sudan as well as a growth in the transport industry to which is important for capitalizing on regional trade.

Local prices for diesel vary throughout the country due primarily to high fuel transport costs; the last assessment to capture prices recorded 75.23 SD/liter in Khartoum as compared to 220SD/litre in El Geneina; 147SD/litre in Juba; 125SD/litre in Abyei; 167SD/litre in Nyala and 132SD/litre in El Fashir (UNJLC, 2006). In April, prices in Juba were $1.20/litre (approximately 288SD/litre) but there is only one refueling station, and the station had to close due to a lack of fuel because of unreliable delivery from Kenya.

High and variable fuel costs are adding a significant price to the delivery of food aid. This is partially exacerbated because WFP continues to operate from a segmented approach between the North and South, relying on imports from Mombassa, Kenya in the South, due to a lack of logistical links between North and South Sudan. Unlike the UN Mission in Sudan (UNMIS) which imports its fuel through a centralize contract, WFP relies on locally available fuel.

WFP utilizes 500,000litres/month (or six million liters per year) of Jet A1 fuel, which decreased from 10.7million liters/month in 2005, primarily due a reduction in airdrops as roads access has increased (UNJLC, 2006). However, the supply of diesel is unreliable, costly and the quality is often suspect after the long journey in sub-standard drums. In addition to the variability of price by region, local purchase of fuels is also subject to potential major price fluctuations; the Government currently has an estimated $1billion fuel subsidy. It receives substantial pressure from the international community to remove the subsidy but if this subsidy is removed, local
prices could increase by 25% (UNJLC, 2006). This increase would transfer to the costs of transporting food aid, if WFP continues to procure fuel locally.

C. Macroeconomic Policy: Its Impacts on Food Aid and Integration

As illustrated by the reference to the Government’s subsidy on fuel above, there are currently several macroeconomic policies in place which create a regime of barriers and disincentives for efficient food aid delivery and sub-regional integration for longer-term food security.

The appreciation of the dinar against the US dollar resulted in a rate of inflation of approximately 11% in 2005. In the post-conflict scenario, prices are expected to rise with an increased demand for goods and increased cost of imports. Therefore, inflation is expected to increase to 12.5% in 2006 (FAO/WFP, 2006).

The appreciation of the dinar creates an indirect tax on domestic production, creating a disincentive for local purchases of food aid and a disincentive for domestic production. If Sudan does not restructure its macroeconomic policies it could hamper any progress towards self-sufficiency. Recently, a similar pattern was witnessed in Zambia where the appreciation of the Kwacha made local purchases of grain surpluses for food aid prohibitively expensive, relative to imported food aid. The reliance on imported food resulted in a disincentive to reinvigorate the local agricultural sector and economy.

Furthermore, customs and uneven taxation policies/practices within Sudan are disincentives for sub-regional trade. Barges carrying goods between Kosti and the South have been taxed anywhere between $200-$900 for twenty containers (UNJLC, 2006). In Aweil East and West, taxation rates on petty traded goods to purchase food were recorded to be as high as 25% (USAID/FEWS Net, 2006).

Needless to say, macroeconomic politics are an important component of the overall food aid and food security situation that cannot be ignored.

D. Imported Food Aid Versus Local Purchases

Over the last six months, the US provided 85% of the donor contributions to WFP in Sudan (Lloyd Pierson, 2006). There has been a long debate in the US about the practice of providing food aid in kind. Notably, former USAID Administrator Natsios specifically questioned the US Government’s current food aid policies which, through PL 480, require food aid to be donated in kind and to use a majority of ships owned by US companies for transporting the food.

A comparable example cited in the Wall Street Journal noted that 100,000 tons of American-grown grain was sent to Uganda as food aid for $57 million; however, Ugandan farmers were producing surplus crops that the government could not afford to buy and transport to deficit areas. It was estimated that local purchases of grain would have bought twice as much grain for the same cost that was donated in kind by the US.

While removing the subsidy to American farmers would reduce the lobby for humanitarian food aid from a powerful constituent group, humanitarian relief for Sudan has significant bipartisan support in the US. If the bipartisan nature of the support for Sudan is leveraged, it may provide a window of opportunity for the removal of the US requirement of food donations in kind, without jeopardizing Congressional support for humanitarian efforts overall. Mr. Natsios rightly noted
that “[h]umanitarian aid does a significant job, but they get used to doing it one way.” (Roger Thurow and Scott Kilman, 2005)

The context of Sudan provides an opportunity to challenge the inefficient in-kind donation requirement and avoid repeating the situation that unfolded in Uganda; the UN family and specifically WFP are in a unique position to pressure major donors to reform this practice. As Mr. Natsios highlighted, “The primary objective is to save lives,” and with a current WFP funding gap in Sudan, it is particularly imperative that the most efficient procurement method be utilized (Roger Thurow and Scott Kilman, 2005).

If an exception is granted for the requirement of in-kind food aid for Sudan, there is strong evidence that it could increase sub-regional integration and have a significant impact on increasing food security. In 2001, the USAID, Office of Foreign Disaster Assistance (OFDA), which is not bound by the requirement to provide food aid in kind, provided US$1 million to Norwegian People’s Aid (NPA) for the local purchase of 1,275 tons of sorghum and maize in Western Equatoria to deficit areas in Bahr el Ghazal. In 2005, OFDA funded NPA to procure 2,000 tons of sorghum and maize for US$400,000 from Western Equatoria for distribution in IDPs camps, facilitated by the roads improved by WFP. These purchases and transfers demonstrated the fact that surpluses exist as well as the synergy produced when surpluses are matched with infrastructure and linkages so that they can contribute to meeting food aid needs in neighboring regions.

A second program under OFDA not only capitalized on local purchases as a more efficient method of food aid procurement but specifically created linkages between urban markets and rural producers. Since the signing of the CPA, the previous disconnect between urban garrison towns and the hinterlands is being redressed. To facilitate this process, OFDA contributed US$300,000 to farmers’ cooperatives around Juba and US$200,000 to those around Wau; the cash injections stimulated markets for agricultural products in the urban centers and provided an incentive for the farmers to increase their production and capitalize on the surplus crops.

IV. Recommendations:
Meeting Immediate Needs and Paving the Way Towards Food Security in Sudan

At a macro/aggregate level, it is evident that in the new era of peace, Sudan can quickly produce an amount of food that would meet the needs of all people. However, there are significant barriers to achieving food security at a sub-regional and household level in Sudan. Given the variable levels of production throughout the country, building linkages and eventual sub-regional integration is the key to meeting the food needs in all regions of Sudan. WFP is in a key position to catalyze the linkages that must provide the path towards integration, both through the continued delivery of food aid and as an agency that is central to the recovery efforts in Sudan.

A. A Regional Food Security Information System – Working Towards a Standard Framework

To understand sub-regional comparative production potential, a common framework for food security analysis needs to be established. The food security information gathered must establish baseline data for each livelihood zone throughout the region. Through crop assessments and continuous monitoring, information on food security indicators can provide comparative analysis between the areas and vulnerable groups within the areas (including returnees). This information, if managed properly and collected consistently by a well-trained team, can assist WFP to plan necessary support to the right areas, at the right time, targeted to the right people, with the most
appropriate intervention. Food needs must be evaluated from one consolidated perspective with relation to the agro-ecological regions of production.

B. **Ensure an Integrated Approach**

WFP must quickly reorganize food aid delivery in Sudan into a unified program. To do this, the agency must clearly map out areas of surplus and areas of deficit and plan appropriate seasonal movements of grain and central storage areas. Programming and logistics must be integrated into a consolidated structure. Logistical routes must be considered from a common base in relation to the routes of least cost and most efficiency; programmatic planning to attain equitable deliveries, must transcend obsolete or irrelevant internal borders.

C. **Fulfill the Vision**

With a current shortfall in funding to complete the Emergency Roads and Infrastructure Project, WFP should make a major effort so that the donor community fulfill the appeal for funding and work toward fulfilling the Vision of infrastructure laid out by the late Dr. John Garang. Through very simple cost-benefit analysis, it is evident that donor investment in the infrastructure program in South Sudan will yield long term benefits in development, economic growth and specifically in food security.

D. **Collaborate on Fuel**

In addition to unifying the logistics operations such that the most efficient routing for inputs and delivery are used, WFP must anticipate the Government’s possible removal of the fuel subsidy. Specifically, WFP should consider signing onto the Integrated Unified Fuels Contract via an MOU with UNMIS. To avoid the 12% administration fee transferred from UNMIS onto partners, WFP should attempt to arrange a subsidiary arrangement with Skylink, unless WFP anticipates purchasing over 6,000,000 liters per month (UNJLC, 2006). Sheltering the agency from potential volatility if the fuel subsidy is removed would ensure efficiency in food aid delivery for the medium term. Importing fuels would also help to avoid any market distortions caused by the eventual reduction in WFP’s consumption of local fuels in the long term.

E. **Purchase Locally**

Given the current agricultural production differences within Sudan, WFP must shift food aid from grain imports to procurement of locally produced foods and other market-based approaches. This will have the dual effect of potentially increasing the efficiency of food delivery while forging linkages between areas of high productivity and areas of deficit for long term integration and economic growth. However, given the macro-economic constraints highlighted above, as well as some of the barriers to local purchases imposed by donors, shifting to local purchases will require WFP to pursue several related angles simultaneously.

First, the international financial institutions must continue dialogue with the Government on sound macroeconomic policies including the exchange rate of the dinar and the fuel subsidy. Currently, the price for locally purchased food is relatively higher than the price of imported food, due to the indirect tax on local production (particularly mechanized) created by the appreciation and fuel subsidy. WFP should not yield to the macroeconomic barriers presented in the Sudan context, but must work with the Government to take responsibility for feeding its population and when that is not possible, for making every effort to assist WFP to do so efficiently.
Second, and concurrently, WFP must appeal to its donors who require that their food aid be provided in kind to WFP, to allow an exception for Sudan. Removing dependence on imported food in Sudan is the key to moving beyond inefficient food delivery to a transformed role whereby WFP contributes to food security while simultaneously contributing to the recovery process by purchasing locally and using other market-based approaches to assist in the integration of sub-regional economies.

The map below (Map 6) demonstrates the possible linkages between food producing areas (green belt represented by the green circle and mechanized/irrigated sector by purple circles) with areas of potential deficit (red circles). The red lines, blue dotted line and light blue arrows represent Dr. John Garang’s vision for the development of roads, rail and barge infrastructure, respectively. As illustrated by the orange arrows, realizing the vision will help to ensure that food can be transported from sub-regions of production to areas of deficit.
Furthermore, stimulated by increased linkages, increased infrastructure and a more appropriate macroeconomic regime of policies, and as regional integration increases within Sudan, WFP and the Sudanese Government must be cognizant of the broader East African regional context in which it is situated. Rather than simulating the trend of Southern Africa in the early 1990s, whereby protective policies to achieve “food self-sufficiency” were imposed, and economies suffered tremendously, the Government must be keen to avoid over-protecting the burgeoning agricultural sector as it develops (Mukherjee, Natasha and Sherman Robinson, 1996).
between agro-ecological zones of production, surplus and deficit that transcend the borders of Sudan will prove key to long-term food security and economic growth in the country.

V. Conclusion

Key Issues for WFP:
- WFP must reorganize its approach to contribute to the national strategy for food security in Sudan so that analysis, programming, and logistics are consolidated.
- Though the CPA provides for one country, two systems approach politically, food security must be approached from an agro-ecological perspective. In-depth research into sub-regional areas of surplus production relative to deficit areas is required so that potential linkages can be explored.
- Because Sudan is increasingly approaching food self-sufficiency at an aggregate level, WFP should work with the Government to identify strategies to link areas of surplus with areas of deficit, recognizing the Government’s responsibility to feed its population.
- In addition to addressing physical and structural constraints to sub-regional integration, WFP should consider shifting to local purchases of food and other market-based interventions to ensure that food aid is delivered most efficiently and to build the linkages between surplus and deficit sub-regions for future integration.

Suggested Guiding Principles:
- Sub-regional integration is key to realizing food security in Sudan and long-term recovery.
- Local purchases of food aid and other market-based interventions can help to build linkages between surplus and deficit areas and facilitate integration while meeting immediate food needs.
- At an aggregate level, Sudan is nearly food secure and WFP should focus on overcoming barriers to sub-regional integration to achieve food security, such as infrastructure and efficient market functioning.
- WFP must develop a standard food security information system for the region
- WFP must facilitate the Government in becoming the duty bearers for providing their people’s food needs through monetization and distribution of grain from surplus to deficit areas

Areas of Uncertainty:
- What are the current levels of production at the sub-regional level; how could these levels be augmented; are there areas of potential production that have not maximized production due to a lack of markets, and what is the potential production of these areas?
- What are the prospects and timeline for rectifying macroeconomic policies, such as appreciation of the dinar, which have a negative effect on sub-regional integration?
- What are the prospects for the successful implementation of the CPA and DPA and how do the sections on land affect future food production potential? What are the prospects of conflict in the East and how would it affect food security?

Discussion Questions:
- Question: How can WFP best promote sub-regional linkages between surplus and deficit areas?
- Question: What are the primary barriers to sub-regional integration in Sudan?
• **Question:** If conflict continues in specific areas, what strategies can WFP undertake to link resultant food aid needs with sub-regional areas of production?

**Question:** Should WFP pursue monetized food aid in Sudan? How can the emergence of a cash economy be encouraged in the South?

• **Question:** Would WFP consider targeting 100% of the population during the hunger period – this can improve the richer households within the community so that they can traditionally support the poorer households. This also enables them to be more productive and increase their asset base which can be beneficial to the community as a whole (loaning of livestock, kinship support etc.).
References


FEWS Net (June 2005) Hunger Season Sets In. USAID
http://www.fews.net/centers/innerSections.aspx?f=sd&m=1001622&pageID=monthliesDoc
USAID.

FEWS Net (April 2006) Hunger Season Starts in Bahr El Ghazal. USAID.
http://www.fews.net/centers/innerSections.aspx?f=sd&m=1001915&pageID=monthliesDoc
USAID.

Garang, Rebecca De Mabior, (February 2006) Remarks on the CPA. US Institutes for Peace.

Mail and Guardian Online, South Africa, (May 16, 2006) Sudan Vows to Bridge Food Aid Gap.


Thurow, Roger and Scott Kilman (October 2005) Farmers, Charities Join Forces to block Famine-Relief Revamp. Wall Street Journal


UNJLC (March 2006) Sudan Logistics Bulletin. #74.