



Southern Sudan



Agronomy Update

Volume: 0016

Month: March, 2011

Release date: 20th, April 2011

HIGHLIGHT:

- South Sudan receives normal rainfall although rainfall has not commenced in areas outside the Greater Equatoria region....
- Agricultural activities have commenced in some parts of the greater Equatoria region after experiencing substantial amount of rainfall...
- Vegetation performance improved with most areas ranging from average to above average in the last dekad...

INTRODUCTION

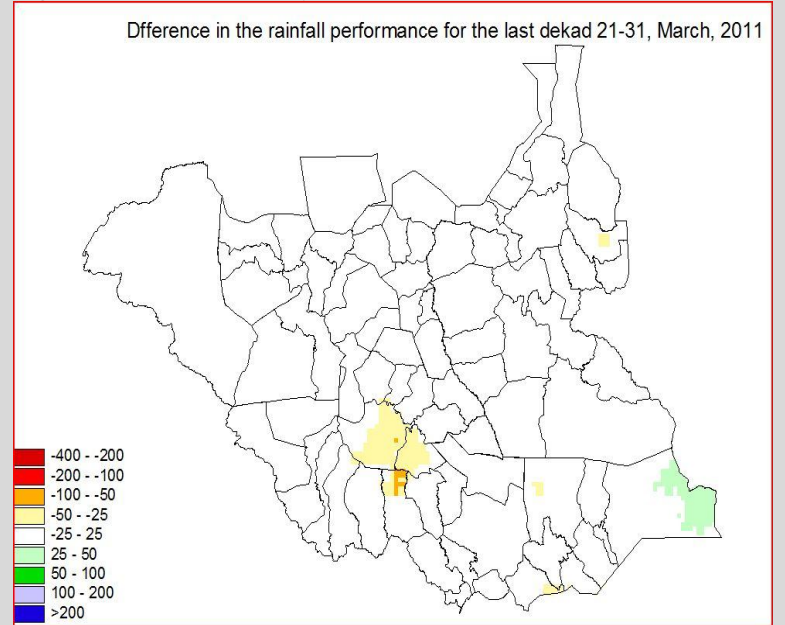
The Agro-meteorology bulletin is a report produced monthly to report on the agricultural season in South Sudan. The emphasis of the report is mainly on rainfall performance and its implication on crops and rangeland. The impact of agricultural season has huge implications on food security situation of households that basically depend on agriculture.

RAINFALL PERFORMANCE IN SOUTHSUDAN

For the last 31 days of the month of March most areas started to receive rainfall especially the equatoria region. In the first ten days of March rainfall performance was poor with the entire area of South Sudan receiving an average range of less than 10mm except for a few areas in Jonglei State (Pibor and Pochalla Counties) that received a range of 10-40mm of rainfall. The rainfall in Jonglei State was experienced due to proximity to Ethiopia where heavy rainfall is usually experienced in its highlands during this time of the year. In the second

dekad (11-21, March) the rainfall performance improved. A lot of rainfall is concentrated in EES spreading both north and west but limited to only a few areas of CES and Jonglei while the other areas received less than 10mm of rainfall and are very dry. In EES, rainfall ranged from 40-160mm mainly covering Budi County and parts of Ikotos and Kapoeta East Counties while in CES it is concentrated in Juba County. The other areas in the above mentioned states received rainfall ranging from 10-40mm. There was a change in the rainfall pattern and distribution in the last ten days of March (21-31). Rainfall received ranging from 10-40mm was mainly distributed in the Western parts of the South Sudan

Figure 1. Rainfall anomaly for dekad 3 (21-31, March, 2011)



Source: SSCCSE/FSTS 2011

Produced by Food Security and Technical Secretariat (FSTS), Southern Sudan Center for Census, Statistics and Evaluation (SSCCSE) in collaboration with Government of Southern Sudan Institutions
 1. Ministry of Agriculture and Forestry. 2. Ministry of Animal Resources and Fisheries 3. Ministry of Health. 4. Southern Sudan Relief and Rehabilitation Commission

A joint effort of the Government of Southern Sudan with United Nation Organizations and International Non-Governmental Organizations



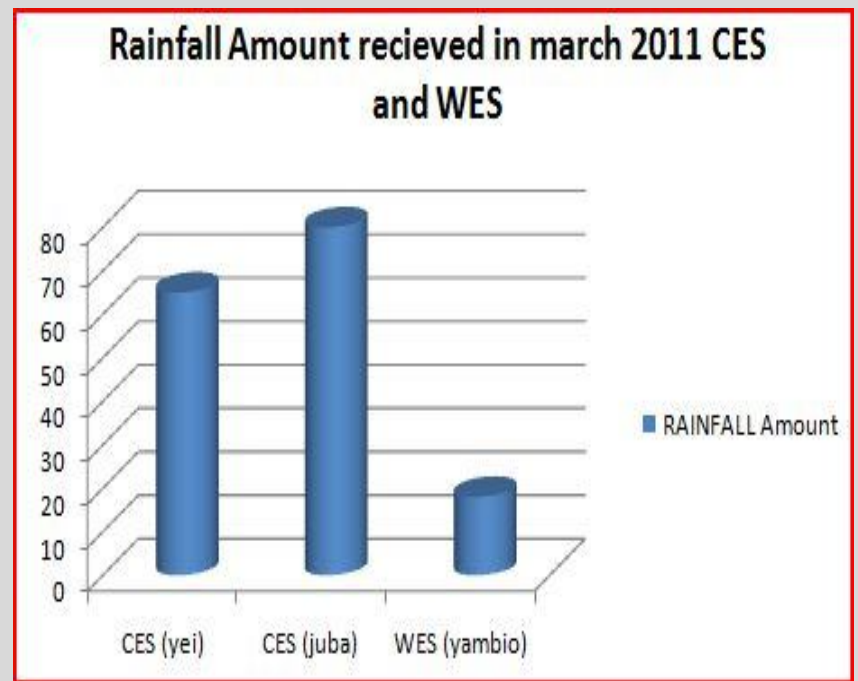
SIFSIA is a programme funded by the European Union (EU) to build capacity in food security in South Sudan

Comparing the current rainfall performance of the last dekad with the long term average condition of the last dekad gives us the rainfall anomaly (see figure.1). Figure 1 shows that given the current rainfall performance, the situation is normal in South Sudan except for Wullu and Nvolo Counties that received less rainfall by 25-50mm. The areas under normal conditions are therefore experiencing exactly what it is supposed to be when compared to historical performance at this same time of each year. Only a small part of Kapoeta East County bordering Ethiopia received above average rainfall by 25mm. This above-average rainfall is due to the fact that Kapoeta area is close to the Ethiopian highlands which experienced heavy rainfalls extending into EES. FAO, through its partners has distributed seeds and tools amounting to 413.1 MT and 47,910 pieces respectively in NBEG, Jonglei, WES and EES

Comparing the rainfall performance in a few locations in Central Equatoria State (Juba and Yei Counties) to Western Equatoria State (Yambio County), Juba County received the highest rainfall (80mm) followed by Yei County (65mm) with the least amount (18mm) received in Yambio County (Figure 3). This could indicate a pattern in the movement of the rainfall in the April-July cropping season from western and southern part of the South Sudan towards northern and north-eastern parts of the country. However the performance will be monitored and updated in the next bulletins.

Satellite Imagery: The satellite imagery Normalized Difference Vegetation Index (NDVI) is used to obtain an overall picture of the progress of the agricultural season.

Figure 3: A graph showing rainfall performance (mm) in CES and WES in March, 2011

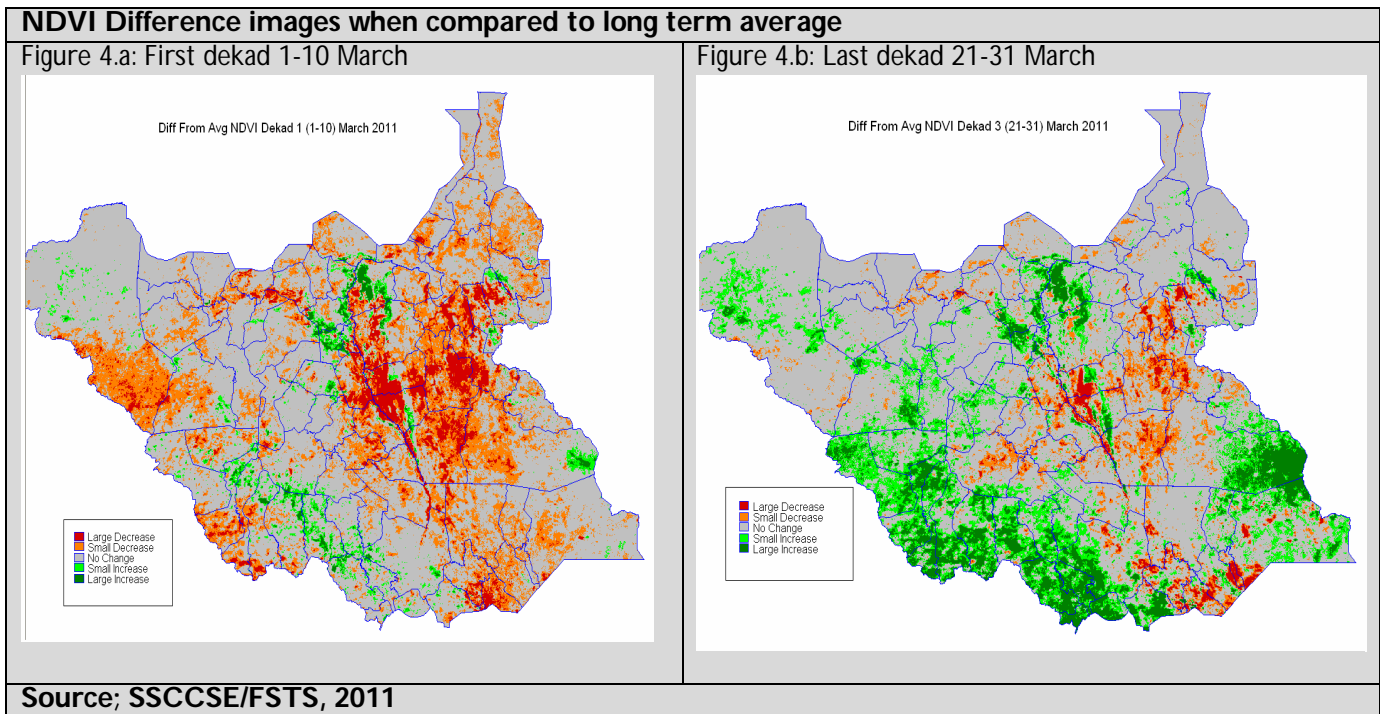


Source : SSCSE/FSTS 2011, www.fieldclimate.com

With reference to the NDVI difference of the first dekad (1-10, March, 2011 see figure 4.a) it is observed that most areas in South Sudan were performing below average. This will affect pasture and livestock body condition negatively. Only a few areas especially in Western Equatoria, Unity and Jonglei States had vegetation performance above average (Green). The poor performance of vegetation is due to the non-commencement of rainfall. However, some areas that had vegetation above average may have been previously flooded during the periods of heavy rains in 2010. The soils would have retained sufficient moisture that enabled vegetation to perform well during the dry season. This resulted in improved pasture condition for the pastoralists to graze their animals. Reports from the States indicate that the Meseriyas are already moving southwards into Unity State in search of pastures for their animals. This is likely to cause conflicts with the local communities.

The last dekad of March, 2011 difference image (figure 4b) shows that there has been significant improvement in vegetation. The onset and improvement in rainfall resulted in improved vegetation performance in the last dekad. Much of South Sudan is covered with average to above average vegetation performance especially many parts of WES that received rainfall earlier compared to other states. Vegetation is further expected to improve in the other parts of the states as the rains are moving from south northward.

Figure 4. NDVI Difference for the Period (21-31) March, 2011



SUMMARY OF AGRICULTURE SEASON BY STATE

Eastern Equatoria State: Rainfall performance so far is not well distributed; the southern parts of the state have received more rains than the northern parts. However, the rainfall performance is average when compared to long term. Agriculture activities have commenced especially in Magwi County. Maize and groundnuts have been cultivated. Seeds and tools amounting to 36.8 MT and 3,060 Pieces respectively have been distributed by FAO through partners (Caritas/CDOT) to areas of Lafon/Lopa and Magwi Counties. Vegetation performance has improved from the first dekad to the last dekad with areas especially in Greater Kapoeta Counties performing above average.

Warrap State: The rainy season has not yet commenced in the state. The season starts around May. However, it's normal during this time of the year and the dry season coming to an end and the rains are about to start. In the last dekad, parts of Tonj South received rainfall of about 10-20mm. As the rainy season commences, agricultural activities will soon start. Vegetation performance improved from below average in the first dekad to average in the last dekad.

Central Equatoria State: Agricultural activities have commenced with majority of the households preparing land and planting for first season crops. Most farmers have their own seed for planting as they kept seeds for planting from last year's good season harvest. However, demand is likely to be high for vegetable seeds. The IDPs and the returnees from DRC and Uganda are most likely to be in need of seed and tools. Some Counties like Lainya have been distributed with treadle water pumps allocated to individual farmers and this is likely to improve vegetable output.

Erratic rainfall in Terekeka County has made most farmers to only fence their farms and clear land as the moisture is insufficient for planting. Reports from the County also indicate that last year's crop performed fairly well. However, storage facilities were not adequate to keep away pest especially groundnut borer (*Seretus caryendom*). Incidences of the pests have repeatedly been reported and the effects might be severe. But measures are yet to be taken by the responsible authorities to address the problem. Although the rainfall performance in the whole State is at average, the southern part has above average vegetation compared to the northern part that ranges

from average to below average. Vegetation will improve as the season progresses.

Upper Nile State: The rainy season has not yet commenced in the state as it normally starts around May/June each year. Land preparation and other agricultural activities have not yet commenced. Animals are currently grazing in areas previously flooded. Vegetation performance is at average but expected to improve as the rains commence.

Northern Bahr el Ghazal State: The rainy season has not commenced in the state. The rains normally start in April/May each year. Agricultural activities have not yet started but are likely to start as soon as the rainy season starts. Seeds and tools amounting to 211 MT and 24,150 pieces of tools have been distributed to the Counties of Aweil East, Aweil North and Aweil South by FAO through its partners (Samaritan's Purse International, Tearfund, and KUCDA). Vegetation performance improved when the first dekad of March is compared with the last dekad. In the first dekad most areas had vegetation performance ranging from average to below average (figure 4.a). However, in the last dekad vegetation improved with large areas covered with average vegetation. Vegetation is further expected to improve as soon as the rains improve.

Western Bahr el Ghazal State: Vegetation is performing at average in the State. Rains are erratic with no agricultural activities taking place at the moment because of the dry season. Rains are expected to start soon as the season progresses from south northwards. Reports of suspected animal diseases like anthrax were reported, however, measures have been taken by the Ministry of Animal Resources and Fisheries that include awareness raising, active surveillance to contain the disease and animal vaccination.

Jonglei State: The dry season is still ongoing although some areas like Pochalla and Pibor have received rainfall in the range of 20-40mm in the first dekad. Vegetation performance is in mixed trends with the southern parts performing above average in Pibor and Pochalla Counties. FAO and its partners (UNWWA, UNYMPDA, NDHF, and DWODREC) have distributed 144.5 MT of seeds and 17,820 pieces of seeds to Akobo, Pibor, Twic East and Duk Counties (FAO, April 2011).

Unity State: Agricultural activities have not yet started as the rains have not yet fully commenced in the State to enable land preparation. The areas in the southern part especially Panyijar have received rainfall of 10-40mm in the last dekad. Although some parts of the State have vegetation performance below average in the last dekad, improved vegetation from average to above average has been observed in some parts like in Leer, Mayendit and Koch Counties. Reports indicate that the Meseriyas from North Sudan are moving into the South looking for pastures for their animals. This may cause conflicts with the local communities.

Lakes State: Normal rains have been received in entire State however areas like Wulu County have rains below average by 25mm in the last dekad. In the last dekad the other areas received rains from 10-40mm. Agricultural activities have not yet commenced although the vegetation is showing some signs of improvement. Further rainfall improvement is expected as the rainy season becomes fully established.

Western Equatoria State: Rainfall commenced early this year compared to other states in South Sudan. Vegetation performance is above average due to large amounts of rainfall which are observed to be normal. Seeds and tools amounting to 20.8 MT and 2,880 pieces of tools have been distributed by FAO through its partners (Intersos, RAAH) in Ezo, Tombura, Yambio and Maridi counties (FAO, April, 2011). Land preparation is on going with planting of some crops like maize and groundnuts already taking place and some crops are at vegetative stage and the condition is good. The security situations is reported to be calm except for some incidence that occurred in Mvolo County with neighboring Wullu County (Lakes State) where the Dinka Atot and Jur fought resulting in displacements. This may jeopardise the agricultural season since many Jur residents were displaced from their homes and live as IDPs in Mvolo and Mundri. They need seeds and tools to cultivate. Some of the IDPs due to LRA in Yambio and other affected Counties have returned home to farm while some just move and cultivate during the day and return to overnight near the towns for fear of attack by LRA. This will affect the size of the area cultivated as they spend time moving to and from the fields which are far.