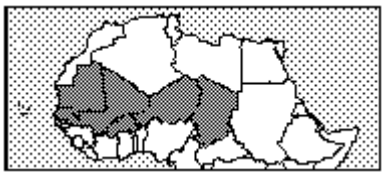


SAHEL WEATHER AND CROP SITUATION 1998

Report No.2 - 10 July 1998

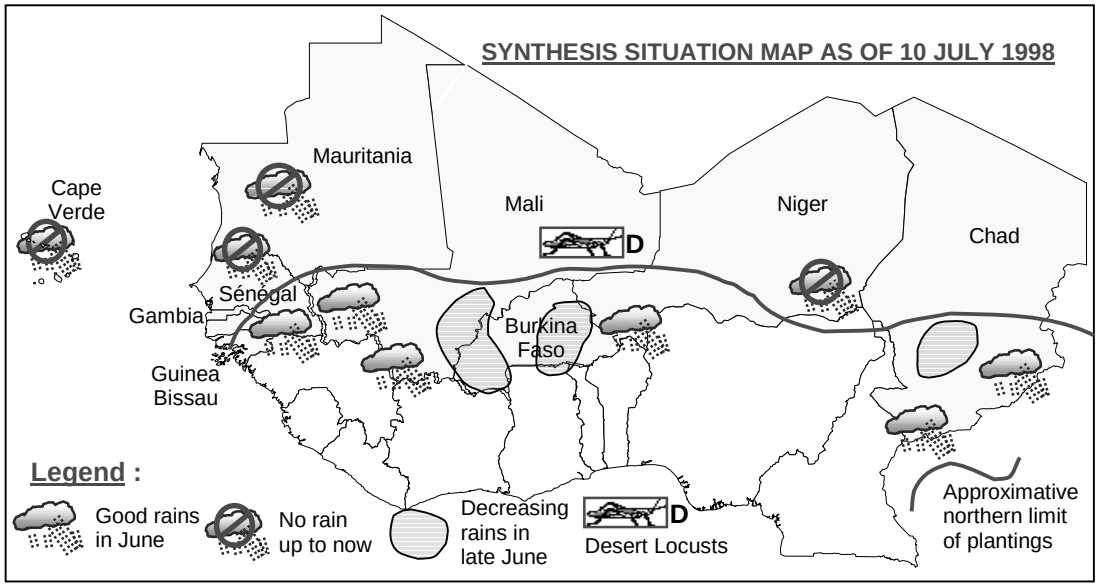
LAND PREPARATION AND PLANTINGS ARE PROGRESSING NORTHWARDS FOLLOWING THE ONSET OF REGULAR RAINS

SUMMARY

Following first rains in April in **Burkina Faso,** the extreme south of **Chad, Mali** and **Niger,** rains reached the east of **Guinea-Bissau** in mid-May and the extreme south-east of **Senegal** and the east of **The Gambia** in early June. First rains were also registered in several areas of southern **Mauritania**. Elsewhere, in **Cape Verde**, northern Senegal and eastern Niger, seasonably dry conditions continue to prevail. The latest Meteosat satellite image for the early days of July indicates that clouds remain present over most producing areas of Mali, Burkina Faso, western Niger and southern Chad but dry conditions persist in northern Senegal, eastern Niger and most parts of Mauritania.

Land preparation and planting are progressing following the onset of the rains. Crops are generally emerging satisfactorily in Mali, Burkina Faso, western Niger and southern Chad. Rainfall decreased in late June in Burkina Faso but soil moisture reserves are generally adequate.

Grasshoppers are reported in Burkina Faso, Chad and Niger. Limited Desert Locusts activity is reported in Mali. Small-scale breeding is expected to commence with the onset of the summer rains in southern Mauritania, northern Mali and Niger.



CURRENT SITUATION IN GUINEA BISSAU

Since 7 June, despite on-going international efforts at mediation, fighting continues between rebel armed forces and troops loyal to the elected government of President Joao Bernardo Vieira. It recently spread out from the capital Bissau to other towns, notably Mansoa.

About 400 000 people, or about 80 percent of the capital's population, have fled their homes towards the north-eastern regions of Cacheu and Biombo, the Quinara region, coastal islands or to neighbouring Senegal and Guinea Conakry. About 3 000 foreigners, including staff of the UN, diplomatic missions, humanitarian agencies and international NGOs, have been evacuated. Infrastructures have been severely damaged.

This conflict occurs at the start of the growing season when crops need to be planted or transplanted. If fighting continues and spreads into rural areas, these agricultural activities will be seriously disrupted. Insecurity has also impeded the distribution of inputs to farmers. As a result, food production is likely to fall in 1998 and the food supply situation could be very difficult in 1998/99. There is already growing concern about food and water availability in towns and other locations, which have received large numbers of people. The arrival of the displaced has put pressure on food supplies for both the displaced and the local inhabitants. Current local food stocks are not sufficient and normal food supply channels have been disrupted. In addition, with the rainy season underway, there is a real risk of cholera and malaria epidemics.

Guinea-Bissau normally imports about 40 percent of its cereal consumption requirement, almost totally through the Bissau seaport. Thus, insecurity and fighting are bound to cause severe food shortages in the capital and its vicinity. Before the crisis, FAO estimated the cereal import requirement for the 1997/98 marketing year (November/October) at 76 000 tonnes, but it is unlikely that this volume can be achieved if insecurity persists. Wider effects may include reduced cereal supply in southern Senegal as substantial quantities of locally produced or imported rice are usually exported there.

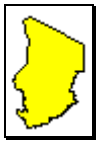
World Food Programme (WFP) has left about 2 700 metric tons of food in Bissau and authorized the ICRC to distribute up to 450 tons of this food through churches or NGOs. At least 30 tons have been distributed so far, mainly in Bissau, Prabis and the Bijagos islands. Churches have been active in distributing drinking water and rice, but food stocks are running out and fuel supplies are a problem. ICRC reports that distribution has been slow due to shelling and problems with trucking capacity. WFP is in the process of preparing an Emergency Operation for 350 000 people, including displaced persons in Guinea Bissau and refugees in the neighbouring countries of Gambia and Senegal. A UN Inter-agency assessment mission recently visited the country.

SITUATION BY COUNTRY

BURKINA FASO: Crops are generally developing satisfactorily despite decreasing rains in late June. Following first sporadic rains in late March, rains started in the south-east in early April. They progressed northwards over the entire country in April and May and remained generally widespread and above normal up to mid-June. Precipitation decreased during the third dekad of June notably in the west and the east but resumed in early July. However, soil moistures reserves are generally adequate and crops are developing satisfactorily. Seeds have been distributed to farmers during June in deficit provinces. Planting of millet and sorghum is drawing to a close in the east. Crops are generally emerging satisfactorily.

Pastures have started to regenerate, except in the extreme north. Worms and grasshoppers infestations have been reported in the north, notably on sorghum crops. Treatments have been undertaken.

CAPE VERDE: Seasonably dry conditions prevail. Rains should start soon and allow planting of maize on the main islands. Dry plantings have started in some areas on Santiago island. Maize production was particularly poor both in 1996 and 1997, which may cause problems of seed availability in some areas. Insect attacks and phytosanitary problems are also reported from several islands.



CHAD: Reduced precipitation in mid and late June may have affected recently planted crops. Following first significant rains in mid or late April, precipitation progressed northwards and remained generally above normal in May and early June. Rains decreased in mid-June and became well below normal during the last dekad of June. They resumed in early July in the Sudanian zone. Land preparation and planting of coarse grains are underway in the Sahelian zone. Following reduced precipitation, substantial replantings are necessary in the Sahelian zone, which may cause seed availability problems in some areas.

Pastures have started to regenerate in the south. Surveys have been undertaken in areas of possible African Migratory Locusts infestations. The situation is reported to remain calm. By contrast, grasshoppers and army worms have attacked plantings in the Sahelian zone and necessitated replanting. Low numbers of solitary Desert Locust adults may be present in a few places of Biltine and southern BET where they are expected to lay eggs with the onset of the rains.

THE GAMBIA: Rains started in mid-June, allowing first plantings. First rains were registered in mid-June in the east and the centre. They increased in late June in the east allowing large wet planting of coarse grains. Plantings will start in the centre and the west following the onset of the rains.

GUINEA-BISSAU: Agricultural activities are hampered by on-going civil disturbances. Fighting, which started in Bissau on 7 June, intensified and spread to other towns in late June/early July. No information on crop prospects has been received from the country but insecurity is likely to impede normal agricultural activities at the critical planting period. Satellite imagery indicates that rains started in the east in mid-May, stopped in late May but resumed in early June, progressing over the entire country from mid-June.

Normally, in June, planting of coarse grains should commence in the east and the north and that of rice be undertaken in seedbeds. Transplanting should start in July/August after desalination of swamp rice fields following stronger rains. It is currently difficult to know how far areas planted will be reduced but 1998 production will certainly be reduced following the crisis (see further details in box on page 2).

MALI: Plantings are progressing northwards following the onset of the rains. The first significant rains reached the extreme south in early to mid-April. They progressed northwards in early May and remained generally widespread and above normal through May. In June, they covered most producing areas. Land preparation and sowing of millet and sorghum is progressing northwards following the arrival of the rains. First plantings of millet are emerging/tillering. Areas planted are similar to last year, except in Ségou region where planting is somewhat delayed.

Pastures are regenerating. Grain eating birds and rodents are reported in Niono and Macina areas. Treatments are underway. In early June, isolated Desert Locust adults were present in the Adrar des Iforas, the Tilemsi Valley and in part of Timetrine. There was an unconfirmed report of a swarm near Gao at Amastaouas. Low numbers of adults will persist in a few of the major wadis in the Adrar des Iforas, the Tilemsi Valley and in Timetrine. Small scale laying should occur with the onset of the seasonal rains.

MAURITANIA: First rains in June allowed plantings in some areas. The first significant rains were received in the south and south-east on 11, 16, 20-21 and 24 June. They permitted first localised planting of coarse grains in Guidimaka region. Elsewhere, seasonably dry conditions still prevail. Land preparation is underway.

Following the first rains, pastures have started to grow in the south and south-west of Hodh El Gharbi. Treatments against grain eating birds have been undertaken in Gorgol and Trarza. No Desert Locust activity has been reported. However, numbers will increase in the summer breeding areas of the south and centre. Laying on a small scale is expected to occur with the onset of the seasonal rains and scattered solitary hoppers may appear.

NIGER: Plantings are well underway except in the east, which is still dry. Following first early rains in the south and the south-west in April, precipitation progressed in May over the main producing areas, except in the east. In June, rains remained present over the western part of the country but decreased in the centre. In the east, dry conditions still prevail. Plantings of millet and sorghum are now well underway. More than two thirds of the villages have planted as of late June, which is less than last year. Millet is emerging/tillering. Sorghum is emerging.

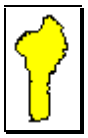
Pastures are starting to regenerate. Grasshopper infestations have been reported in Dosso, Maradi, Tahoua, Tillaberry and Zinder departments. Treatments are underway. Low numbers of solitary Desert Locust adults may be present in a few places of Tamesna and are expected to lay eggs with the onset of the summer rains. Surveys have started in Aïr and Tamesna.

SENEGAL: Plantings are progressing following the timely onset of the rains. Following first sporadic rains in the extreme south in mid-May, the rainy season actually started in the extreme south-east in early June. Rains progressed to the centre and the west from mid-June but the weather remained mostly dry in the north. Wet planting of coarse grains is underway in the south and progressing towards the centre. Dry plantings have also been undertaken in several areas. Land preparation is underway in the north. Harvesting of off-season irrigated rice is about to start in St Louis region in the north.

Pastures remain dry except in the south. Treatments against grain eating birds have been undertaken in the Senegal River region.

SITUATION IN THE COASTAL COUNTRIES ALONG THE GULF OF GUINEA

In the **coastal countries of Western Africa**, the 1998 growing season started on time and is now well underway. Following the onset of rains, planting has started in late March or early April in the south, and in late April in the north. Crops have benefited from good growing conditions and prospects are generally favourable. The first maize crop is about to be harvested in southern regions. The rice crop is being planted in Liberia and Sierra Leone but civil disturbances in rural Sierra Leone are affecting agricultural activities and will limit planted areas.



BENIN: Rains started in mid March over the south and remained abundant from early April to late June over the whole country. Planting started in early April in the south and by the end of the month in the north, slightly later than last year. Precipitation in May and June was normal to above normal over the whole country. The first maize crop and rainfed rice are developing satisfactorily, as well as millet and sorghum crops in the north.

CAMEROON: First rains were received in mid-February in the south. They progressed to the centre in mid-March and became abundant and widespread in April and May. They decreased somewhat in June but remained widespread. The main maize, rainfed rice, millet and sorghum crops are growing under generally favourable conditions.

COTE D'IVOIRE: The rainy season started in early April, which is later than last year. Substantial rains fell in April over the whole country, allowing the planting for the main maize, rainfed rice, and millet and sorghum crops. Above normal rains persisted in April and early May, but decreased in late May and June, remaining close to normal.

GHANA: Rains started but remained limited in late March, and abundant precipitation occurred in April over the whole country, allowing the planting of the first maize and rice crops in the south and land preparation for planting of millet and sorghum in the north. Precipitation decreased but remained widespread in May and June. In June, rains decreased significantly in the northern areas, where rainfall was less than 70% of normal, which could hamper the development of recently planted millet and sorghum crops.

GUINEA: First rains occurred in late March and in April in the extreme south east, allowing the planting of rice in this area. Rainfall became abundant over the whole country only in mid May and remained abundant and widespread in June. Recently planted rice, maize, millet and sorghum crops in most parts of the country are developing satisfactorily, benefiting from good growing conditions.

LIBERIA: Limited rainfall started in mid March in the south and became widespread over the whole country in late March. Abundant precipitation was recorded over the entire country in April and May, followed by a seasonal decrease in June. Cumulative rainfall is above normal since the beginning of the growing season. Following these good climatic conditions, the main maize and rice crops, planted in April, are growing satisfactorily, as well as cassava and yams.

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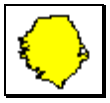
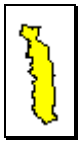
NIGERIA: First rains started over the south in mid March, allowing the planting of the first maize crop in this area. Rains reached the north in mid and late April and remained abundant and widespread over the entire country in May and June. Following the onset of rains, the growing season started in May in the centre and the north, with the planting of maize, rainfed rice, and millet and sorghum crops. Despite a late start of the growing season, satellite images show above normal vegetation in the whole country, meaning that agro-meteorological condition allowed normal crop development. Nevertheless, shortages of fertilisers, improved seeds and pesticides are reported and may result in reduced foodcrop production.



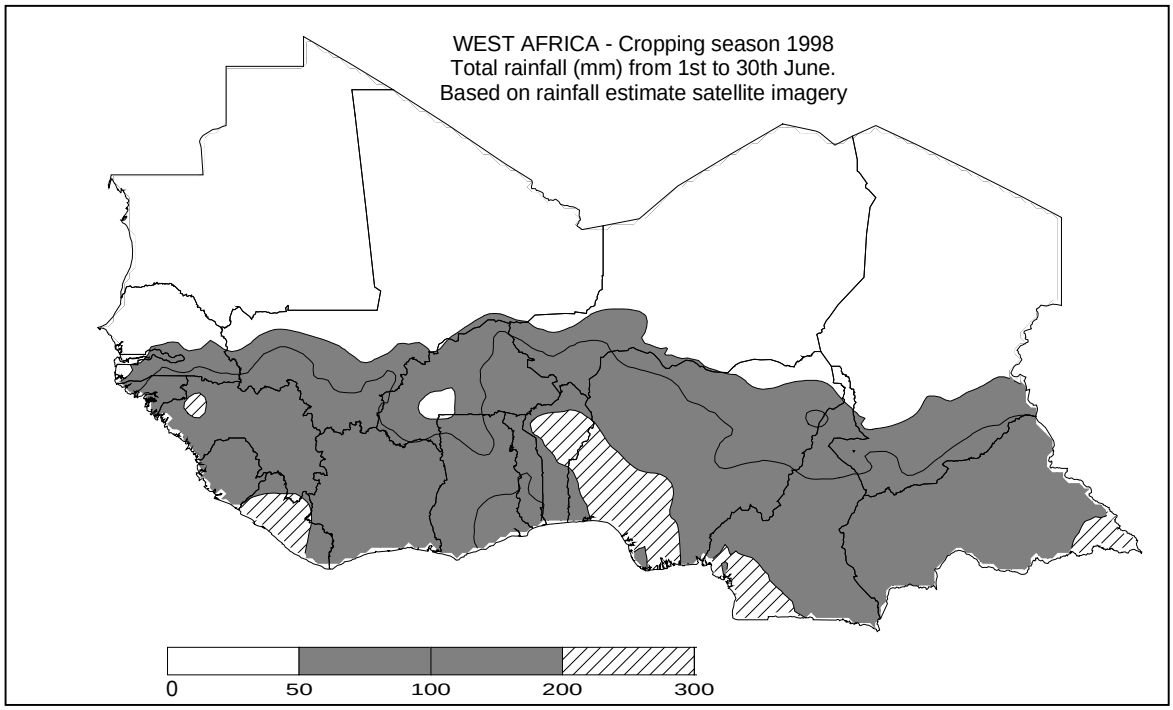
SIERRA LEONE: Scattered rains occurred in April over the eastern part of the country, but the growing season really started in May, when abundant rainfall was recorded over the entire country. Rainfed rice was planted in April in the east and in May in the rest of the country, while the planting of maize, millet and sorghum is drawing to an end in the north and the centre. Cumulative rainfall is normal to below normal, with scarce rains during the first and second dekads of June over the centre and the west. Vegetation satellite images show below normal vegetation coverage in the region surrounding Freetown, where a below normal cereal output might be expected. However, due to many years of civil strife, the country will continue to rely mostly on food assistance to cover its needs.



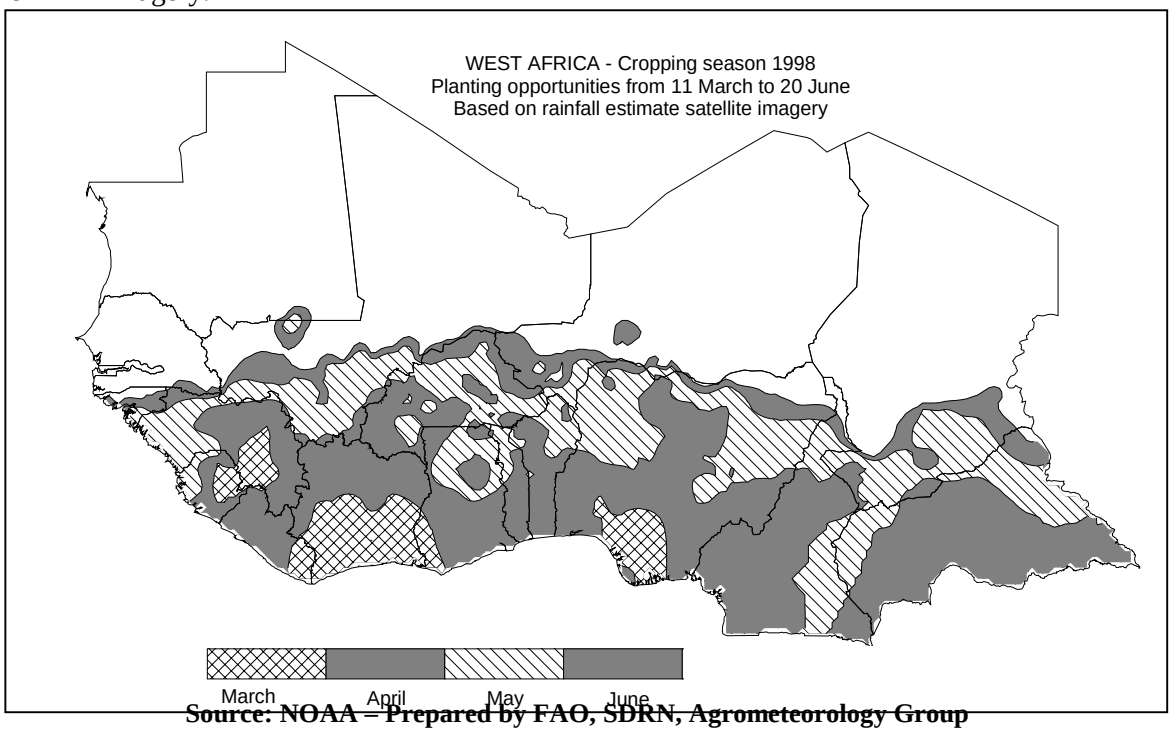
TOGO: Limited rains occurred from late March in the south, and became abundant over the whole country in mid April. Vegetation satellite images show that the start of the growing season has been quite late in the south and the centre and the first maize crop was planted in April. Recently planted rainfed rice and millet and sorghum crops are growing satisfactorily following limited but widespread rainfall in May and June.

TOTAL RAINFALL AND PLANTING OPPORTUNITY MAPS

The first map indicates the total rainfall amount for the whole month to which the bulletin refers. Data are extracted from the RainFall Estimate (RFE) Satellite Imagery as produced by NOAA/USGS/FEWS/USAID project. The RFE images are obtained by interpolating various parameters recorded at ground and obtained through remote sensing measurements as: rainfall, relative humidity, wind speed, elevation, cold cloud temperatures.



The map below shows the estimated planting time (opportunity) as defined by the dekad (10-day) satisfying the following requisites: during that dekad, 25 mm of rainfall should be measured and a total rainfall of at least 20 mm should be recorded during the two next dekads. Data used for this analysis are also based on RFE imagery.



Source: NOAA – Prepared by FAO, SDRN, Agrometeorology Group

*This is the **second GIEWS report of the 1998 season on weather and crop conditions in the Sahelian countries of western Africa**. Geographical coverage of these reports include the nine CILSS (Permanent Inter-State Committee for Drought Control in the Sahel) member states: Burkina Faso, Cape Verde, Chad, Gambia, Guinea-Bissau, Mali, Mauritania, Niger and Senegal. Reports will be issued each month from June to November. The final report for 1998 with the first production estimates will be issued in late-November.*

These reports are prepared with data from, and in close collaboration with, out-posted FAO Representatives, the Agro-Meteorology Group and the Environment Monitoring Group (SDRN), the Emergency Centre for Locust Operations (ECLO), the Special Relief Operations Service (TCOR), the World Food Programme (WFP), as well as various Non-Governmental Organizations (NGO's). In This report FAO/ARTEMIS rainfall estimates, field data on rainfall, FAO agro-meteorological crop monitoring field reports and information provided by FAO Representations up to 30June have been utilized. The satellite images of the first days of July have also been consulted for final updating

*In these reports, reference will be made to four different **eco-climatic zones** based on the average annual precipitation and agricultural features, i.e. Sahelian zone, Sudano-Sahelian zone, Sudanian zone and Guinean zone. They are shown in the map on page 4 and described below:*

***Sahelian zone**: Where average annual precipitation ranges between 250 and 500 mm. This zone is at the limit of perennial vegetation. In parts where precipitation is less than 350 mm, only pastures and occasional short-cycle drought-resistant cereal crops are grown; all cropping in this zone is subject to high risk.*

***Sudano-Sahelian zone**: Where average annual precipitation ranges from 500 to 900 mm. In those parts of this zone where precipitation is less than 700 mm, mostly crops with a short growing cycle of 90 days are generally cultivated predominantly sorghum and millet.*

***Sudanian zone**: Where average annual precipitation ranges from 900 to 1 100 mm. In this zone, most cereal crops have a growing cycle of 120 days or more. Most cereals, notably maize, root and cash crops are grown in this zone.*

***Guinean zone**: Where average annual precipitation exceeds 1 100 mm. Guinea-Bissau and a small area of southern Burkina Faso belong to this zone, more suited to root crop cultivation.*

*Reference will also be made to the **Intertropical Convergence Zone (ITCZ)**, also known by its trace on the earth's surface, called the **Intertropical Front**. The ITCZ is a quasi-permanent zone between two air masses separating the northern and southern hemisphere trade winds. The ITCZ moves north and south of the equator and usually reaches its most **northerly position in July. Its position defines the northern limits of possible precipitation in the Sahel; rain-bearing clouds are generally situated 150-200 km south of the Intertropical Front.***

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