

# SAHEL WEATHER AND CROP SITUATION REPORT



Report No.1, 12 June 2000

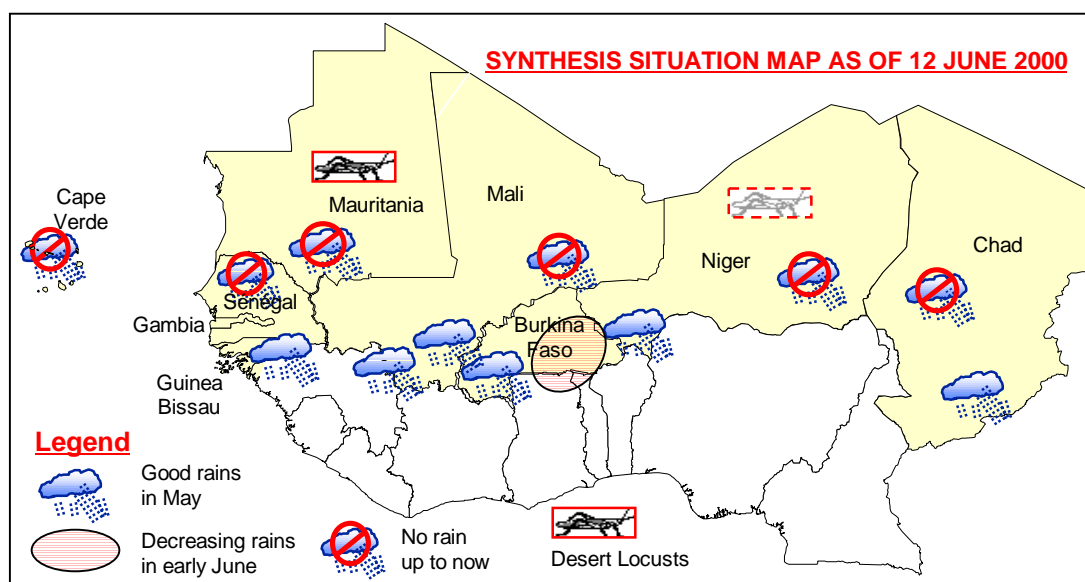
## THE RAINY SEASON HAS STARTED GENERALLY ON TIME IN THE CENTRE AND THE EAST OF THE SAHEL

### SUMMARY

The rainy season has started in late April or May in southern **Burkina Faso**, **Chad**, **Guinea Bissau** and **Mali**, in the extreme south-west of **Niger** and the extreme south-east of **Senegal**; seasonably dry conditions prevail in the rest of Senegal, **Cape Verde**, **The Gambia** and **Mauritania**. This corresponds to the normal pattern in the Sahel, except for Niger where the onset of the rains is somewhat delayed. Satellite imagery for the first dekad of June shows a decrease in the intensity of the rains in the areas where they had started in southern Burkina Faso and Niger but a significant northwards movement of cloud coverage, indicating that rains progressed over the centre of Mali, Niger and Chad.

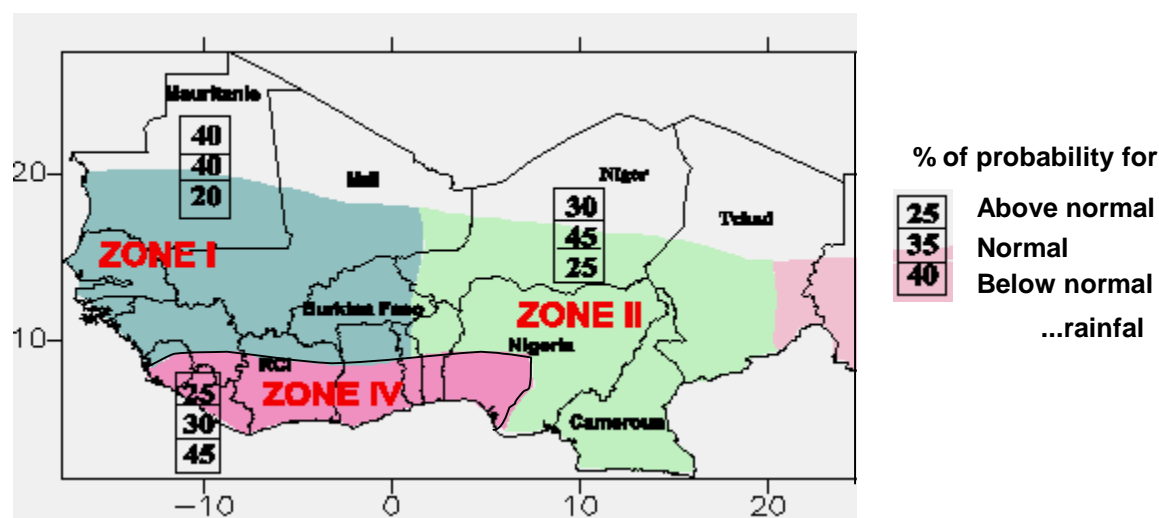
Land preparation and plantings are in progress following the onset of the rains. Dry planting is also underway in Mauritania and Niger. Crops are emerging satisfactorily in southern Burkina Faso, Chad and Mali but improved rains are needed in the coming weeks. Seed availability is generally adequate following above average to record harvests in most Sahelian countries in 1999.

The pest situation is calm. A few Desert Locusts were reported in mid-April in south-eastern Aïr in Niger and during May in Adrar in Mauritania. Low numbers of adults are likely to appear in southern Mauritania and lay with the onset of the rains.



## SEASONAL WEATHER FORECAST

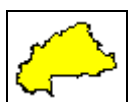
From 8 to 13 May in Ouagadougou, the ACMAD (African Centre of Meteorological Applications for Development) and the Agrhymet Centre of CILSS (Comité inter-Etats de Lutte contre la Sécheresse au Sahel) organised the Third Forum on Seasonal Climate Prediction (PRESAO) to assess expected rainfall for the period July-September 2000 over West Africa, Sudan and Ethiopia. The Sahelian region receives about 80 percent of its annual precipitation during this period. The Forum made a seasonal weather forecast based on atmospheric models together with physically based statistical models. The model estimates the probability of this year's total rainfall falling in one of three categories (above normal, below normal and near normal) defined using the recorded rainfall in the 1961-90 period.



Seasonal Rainfall Outlook for West Africa

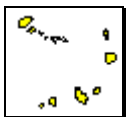
For the western Sahelian region extending from Mali and Burkina Faso to the Atlantic coast (Region I on the map), there is an increased probability this year of near normal to above normal rainfall. Moving further east, the category with the highest probability becomes near normal (Niger, northern and eastern Nigeria, much of Chad and Cameroon; Region II). For the region south of about 8 degrees north, extending from central Sierra Leone to south-western Nigeria (Region IV), there is an increased probability of the below normal rainfall category occurring.

## SITUATION BY COUNTRY



**BURKINA FASO:** The rainy season started with generally above normal rains. The first significant rains were registered in early April in the south-west and the south-east. They progressed northwards in May and were generally above normal during the first and the third dekad but the weather remained mostly dry in the north. Rains covered almost the entire country during the first dekad of June but decreased significantly, notably in the east where they were below average. Land preparation and planting of millet and sorghum is now underway in the south and the centre. More rains are needed in the east and the south in the coming weeks to avoid water stress.

Seed availability is adequate following the two successive 1998 and 1999 record harvests. No pest activity is reported.



**CAPE VERDE:** Seasonably dry conditions prevail. Planting of maize normally starts in July with the onset of the rains on the main islands. Following a record harvest in 1999, the availability of seeds should be adequate.

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**CHAD:** The growing season has started on time in the Sudanian zone. Following first sporadic rains in late March, significant rains were registered in mid-April in the extreme south. The rainy season really started in mid and late May in the south, in the Sudanian zone. Planting of coarse grains is underway in the south. Land preparation is starting in the Sahelian zone. Pastures remain good.

Seed availability is adequate following 1999 above average harvest. Grasshoppers attacks have been reported in Batha and Ouaddaï. No Desert Locusts activity is reported.

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**THE GAMBIA:** Seasonably dry conditions prevail. The rains have not yet started and farmers are currently preparing their fields. Planting is expected to start in the weeks ahead with the onset of the rains.

Following 1999 record harvest, the seed availability is adequate for cereals. However, there are indications that shortages of groundnut seeds might occur, since at least part of the stored seeds are infested.

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**GUINEA-BISSAU:** The rainy season has started in the east and the south. The first rains were registered in mid-April in the east and the south. The weather remained mostly dry in late April and during the first and second dekads of May. Precipitation resumed in the east and the south during the third dekad of May and the first one of June. Land preparation for coarse grains is underway in the east and the north. Planting of rice in seedbeds has also started. Transplanting will start in July/August after desalination of swamp rice fields with more rains.

Seed availability problems are likely in some areas following the reduced 1999 harvest. However, input distributions have been undertaken with support from FAO, UNDP and the Government of Sweden, and 120 tonnes of rice seeds have been produced and distributed in the framework of an FAO emergency project.

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**MALI:** The growing season has started in the south. The first significant rains were registered in the extreme south in April. They progressed northwards and were above normal during the first dekad of May but they decreased during the second dekad. Precipitation resumed during the last dekad. Rains improved and progressed northwards during the first dekad of June. Land preparation is underway and first planting of millet and sorghum has started in the south. Pastures are generally adequate.

Seed availability is good following the two successive record crops in 1998 and 1999. Low numbers of Desert Locusts may be present and are likely to persist in a few wadis in the Adrar des Iforas. Limited laying could occur once the seasonal rains commence.

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**MAURITANIA:** Seasonably dry conditions prevail. Planting will start following the onset of the rains in June/July. Dry plantings are underway in the south-east (Hodh El Chargui). Seed availability is generally adequate following good rainfed crop harvests in 1999 in most areas.

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During the first week of May, there was an unconfirmed report of a few flying Desert Locusts groups in Adrar, east of Oudane. No other locust activity was reported during the month. Scattered residual populations may persist in the remaining green patches of vegetation along the wadis in the Bir Moghreïn and El Hank areas. As the vegetation dries out, these populations are expected to move south towards the summer breeding areas in Tagant and the two Hodhs where they are expected to mature and lay with the onset of the rains.



**NIGER: The start of the rainy season was delayed.** Following first rains in the extreme south-west in late April, the weather remained mostly dry until the third dekad of May, when rains progressed northwards in the south-west, allowing land preparation and first plantings to start.

Satellite imagery indicates that cloud coverage progressed significantly northwards in the west and the centre during the first dekad of June. It is estimated that only 10 percent of the villages in Dosso department and 7 percent in Tahoua department had done their plantings as of late May. Dry plantings are also underway countrywide.

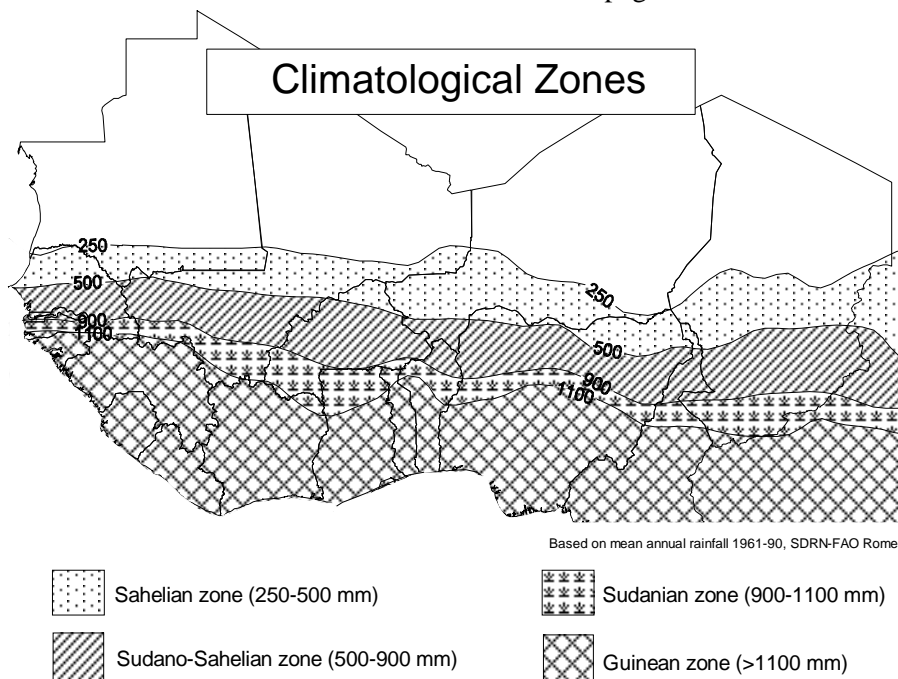
Seed availability is adequate following 1998 and 1999 bumper crops. During April, scattered Desert Locusts were seen during surveys carried out in south-eastern Air. Control operations treated 710 ha. Untreated adults may persist in the limited areas of green vegetation. These could have moved west towards Tamesna and lay if rainfall occurs.



**SENEGAL: Rains are progressing in the south-east and the centre.** Early rains were registered in the extreme south-east in mid or late May. They progressed towards the centre and the southwest during the first dekad of June. Land preparation and plantings of coarse grains are starting in the south. Plantings will progress northwards following the onset of the rains.

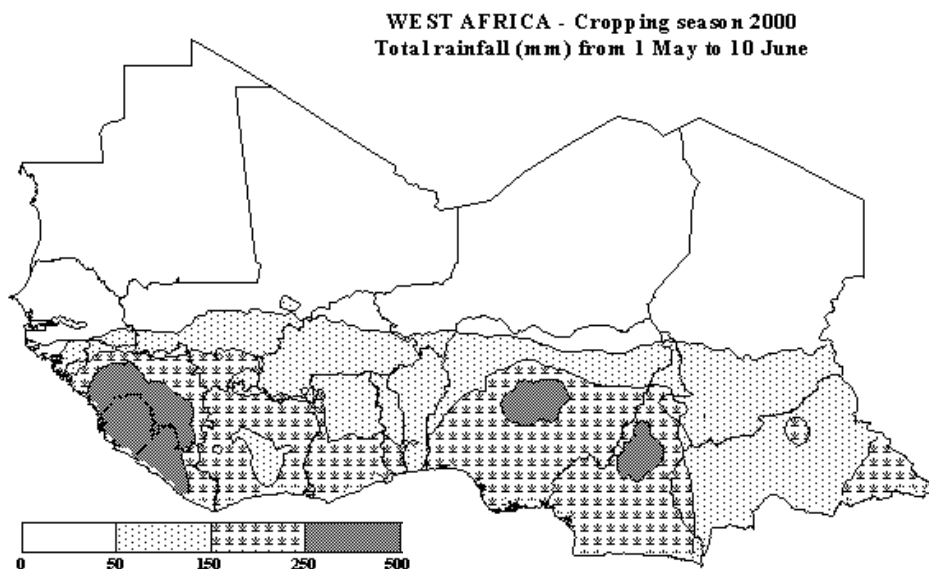
Seed availability is generally adequate following 1999 record harvest. No significant pest activity has been reported.

The following map provides reference to the different climatological zones of the Sahel as defined in the box on page 6

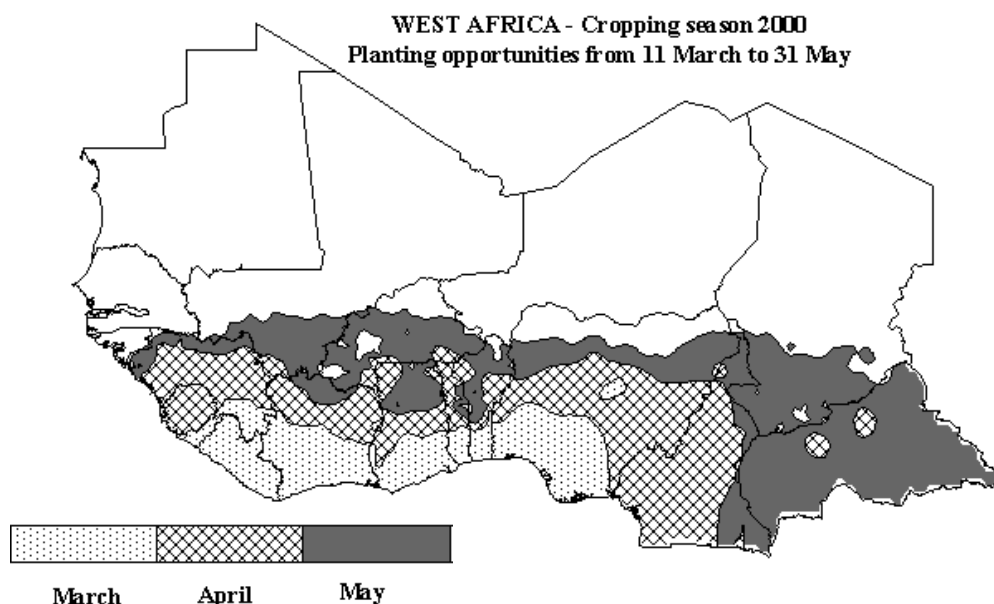


## TOTAL RAINFALL AND PLANTING OPPORTUNITY MAPS

The first map indicates the total rainfall amount from 1<sup>st</sup> May to 10<sup>th</sup> June. Data is extracted from FAO field reports and the RainFall Estimate (RFE) Satellite Imagery as produced by NOAA/USGS/FEWS/USAID project. The RFE images are obtained by interpolating various parameters recorded on the ground and obtained through remote sensing measurements such 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 the first 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 from FAO field reports and RFE imagery.



Data source: NOAA - Prepared by: FAO, SDRN, Agrometeorology Group

*This is the **first GIEWS report of the 2000 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 2000 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 Environmental 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, satellite imagery provided by FAO/ARTEMIS, field data on rainfall, FAO agro-meteorological crop monitoring field reports and information provided by FAO Representatives up to **31 May** have been utilized. The satellite images of the first dekad of June has also been utilized 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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