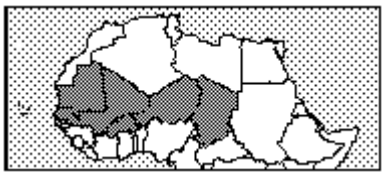


SAHEL WEATHER AND CROP SITUATION 1998

Report No.5 - 10 October 1998

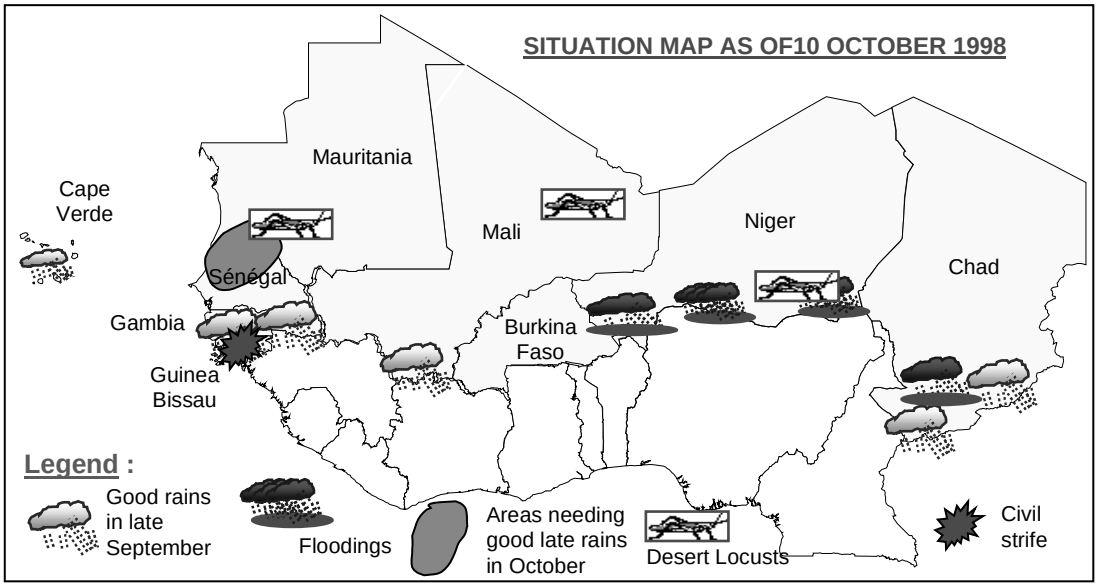
OVERALL HARVEST PROSPECTS ARE FAVOURABLE IN THE MAIN PRODUCING COUNTRIES OF THE SAHEL

SUMMARY

The rainy season is nearing its end after abundant rainfall in September. Following decreased rains in late August, precipitation was generally widespread and above normal over most producing areas of the Sahel during the first dekad of September. Torrential rains were again registered in several areas of Niger where they caused flooding. Rains remained abundant during the second dekad, except in southern Mauritania, but they decreased significantly during the last dekad. Rains became abundant on southern islands of Cape Verde in mid to late September. Rainfall was particularly abundant in Guinea-Bissau. The latest Meteosat satellite image for the first few days of October indicates that cloud cover is clearly moving southwards, marking the end of the rainy season in most northern areas.

Reflecting good rainfall, crop prospects are generally favourable in **Mali**, **Burkina Faso**, **Niger** and in **Chad** except in the Sudanian zone affected by extensive flooding. In **The Gambia** and **Senegal**, crop prospects improved following regular rains since August but in northern Senegal additional rains are needed in October as the rainy season started late this year. In **Mauritania**, growing conditions were mostly favourable for rainfed crops in September. Crop prospects have improved in **Cape Verde** following increased rains in September. They are uncertain in **Guinea-Bissau** as the impact of civil disturbances on plantings and other agricultural activities is not clear. Joint FAO/CILSS Crop Assessment Missions are scheduled from mid-October to estimate with national services the 1998 cereal production. FAO's tentative assessment of yield forecast for cereals in the Sahelian countries is shown in Annex I.

Pastures are abundant. Grasshoppers are reported in most countries. Grain eating birds and insect attacks are also worrisome in several countries. Some limited Desert Locust activity is reported in Mali, Mauritania and Niger. A few additional adults may appear in northern Mauritania and persist in northern Mali and Niger.



ASSESSMENT OF 1998 CEREAL HARVESTS IN THE SAHEL

A regional meeting was organised by CILSS from 21 to 25 September at Agrhymet Centre in Niamey, Niger, to undertake a first assessment of 1998 cropping season and harvest prospects. Representatives from all CILSS member countries presented reports on the current situation in each country. Agrhymet Centre, DIAPER project and FAO/GIEWS then made presentations at regional level on agro-climatic indicators during this season, the evolution of cereal supply/demand during the last ten years and possible scenarios for 1998/99 cereal supply/demand balance.

The final report and press release of this regional meeting indicates that crop prospects are favourable in the main producing countries of the Sahel but remain uncertain in Cape Verde, Senegal and The Gambia, following a late start of the rainy season. Improved harvests should allow a recovery in per caput consumption to levels prior to the 1997 reduced crop. They would also improve the food supply situation of the populations affected by successive poor crops. However, the production increase would not be sufficient to replenish cereal stocks, and thus the overall food security would remain fragile in the Sahel.

The annual FAO/CILSS Crop Assessment Missions will visit each country from mid-October and hold discussions with national services involved in the monitoring of the growing season (meteorological services, agricultural statistics, pest management, early warning system (SAP), price information systems (SIM), etc.) and agree on national cereal production estimates. A regional synthesis meeting will then be held in November, before the annual meeting of the Network for Prevention of Food Crises in the Sahel organised by CILSS and Club du Sahel with donor representatives on 3rd and 4th December in Dakar.

SITUATION BY COUNTRY

BURKINA FASO: Harvest prospects are favourable. Following decreased rains in late August, precipitation recovered and was generally widespread and abundant during the first two dekads of September. It decreased again in late September but soil moisture reserves are adequate. Cumulative rainfall is normal to above normal over most parts of the country and well above normal in the north and east. Millet and sorghum are in the flowering/grain formation stages in the southern half of the country and entering the maturing phase in the north. Overall crop condition is adequate except in some low-lying areas affected by excess water. A good cereal harvest is anticipated.

Pastures are abundant and of good quality. Some insect infestations have been reported locally. The total infested area since the start of the season is estimated at about 105 000 hectares of which only one part needed treatment. Disease problems appeared on cotton, millet, sorghum, niebe and pastures in some provinces of the west. Research is underway in order to determine possible treatments.

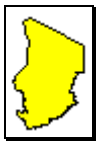
A joint FAO/CILSS Crop Assessment Mission is scheduled from 19 to 23 October to estimate the 1998 cereal production.

CAPE VERDE: Crop prospects improved following increased rains in mid/late September. Precipitation remained limited during the first dekad of September with light rains on southern islands mainly on 9 and 10 September. They increased significantly during the second dekad on all islands, but were more abundant on Fogo, Santo Antão and São Nicolau. During the third dekad, widespread rains were registered on 22, 28 and 29 September on southern islands. Maize and bean crops are generally developing satisfactorily in the humid and sub-humid zones of Santiago,

Brava and Fogo islands where soil moisture reserves are good. On Maio and Boa Vista islands, crop development varies with the regions while on São Nicolau, plantings could start only after the first significant rains of 12 September.

Grasshopper infestations have developed on most islands. They caused some damage to maize on Santiago island, notably in Praia, São Domingos, Santa Cruz and Santa Catarina areas. Treatments have been undertaken.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 2 to 6 November to estimate the 1998 cereal production.



CHAD: Precipitation remained widespread and abundant in September. Although decreasing from the levels received in August, precipitation remained generally abundant, regular and well distributed in September notably during the first two dekads. Stages of development vary in the regions according to the planting dates. Flooding in the Sudanian zone has affected large areas notably in Moundou region. Elsewhere, crops are developing mostly satisfactorily.

Pastures are abundant following above normal rains in the Sahelian zone. Low numbers of solitary adults may be present and breeding in a few places in Biltine and Ennedi south of Fada and in the Erdi.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 19 to 23 October to estimate the 1998 cereal production.

THE GAMBIA: Crop prospects improved in September. Following a late start of the season in July, rainfall was generally widespread and regular in August and September. Rains increased somewhat in early and mid-September. They decreased in late September but remained widespread. Crops are developing satisfactorily.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 12 to 16 October to estimate the 1998 cereal production.

GUINEA-BISSAU: Growing conditions are favourable but civil disturbances have affected agricultural activities. Fighting, which started in Bissau on 7 June and continued up to 26 July, the date of the signature of a cease-fire, impeded normal agricultural activities at the critical planting period. The cease-fire facilitated the resumption of normal activities in the fields but areas planted are likely to be reduced following insecurity and shortages of seeds. Satellite imagery indicates that rains remained widespread and particularly abundant over the entire country in September, leading to desalinisation of swamp rice fields and development of recently transplanted rice.

MALI: Growing conditions remained favourable. Precipitation was generally normal to above normal during September. Cumulative rainfall is also normal to above normal in most areas. River levels increased significantly. Crop conditions are generally satisfactory. Millet and sorghum are heading; maize and souna millet are maturing. Irrigated rice is tillering.

Pastures are adequate. Insect attacks are reported on sorghum in Koutiala and San areas. Grasshoppers are starting to concentrate in crop zones but damage remains limited. High populations of grain eating birds are affecting millet crops in the Mali-Mauritania border area. Isolated Desert Locust adults were seen in the Kidal region at Tin-Talassabat early in the month. There were also unconfirmed reports from nomads of high densities of adults mixed with grasshoppers between Tarlit and Tibagaten. Small scale breeding is

expected to occur and continue during October in the Tilemsi Valley and in some of the larger wadis in the Adrar des Iforas.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 26 to 31 October to estimate the 1998 cereal production.

MAURITANIA: Rainfed crops are developing generally satisfactorily reflecting good growing conditions. In early September, above normal rains, often exceeding 50mm during the dekad, were received in the producing areas where they provided good soil moisture. Precipitation remained widespread and quite abundant during the second dekad but they decreased in Assaba, Brakna and the north of the two Hodhs. In late September, crop water needs remained generally covered but soil moisture reserves decreased, which may affect late planted crops, notably in the south-east.

Pastures have regenerated satisfactorily following widespread rains in early or mid-September. Localized attacks by grasshoppers and other insects are reported. A solitary Desert Locust adult was seen south of Aioun El Atrous on 7 September and isolated mature adults were seen at a few places in Trarza and western Tagant in late September. Locust numbers are likely to increase but remain at a low and non-threatening level in the south-west and in the north between Akjoujt and Zouerate.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 2 to 6 November to estimate the 1998 cereal production.

NIGER: Crop prospects are favourable reflecting generally abundant and widespread rains during the entire season. Above normal and widespread rains were received in early or mid-September. Following those of early August, torrential rains were again registered over Niamey and its region (150 mm on 5 September). They also caused flooding in several areas of the country, notably in Diffa (in Maine Soroa), southern Dosso and southern Maradi areas. The Niger river in Niamey reached a record level and flooded several irrigated rice fields around the capital. Precipitation decreased significantly in late September signalling the end of the rainy season. Soil moisture reserves may be insufficient in some areas for late planted or long cycle crops but overall, a good, possibly record, harvest is anticipated.

Pastures are abundant. Grasshoppers and insects infestations are reported on millet in several areas, notably in Diffa, Tahoua and Zinder departments. Isolated Desert Locust adults were reported in mid September near Diffa. Low numbers of adults are likely to be present and breeding in areas of recent rains in southern Tamesna and western Air. Their numbers could increase but remain at a low and non-threatening level.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 19 to 23 October to estimate the 1998 cereal production.

SENEGAL: Growing conditions remained favourable in September. Following a late start of the rainy season in mid or late July in the centre and the centre-north, precipitation was regular in August and September. Rains increased in early September, notably in the centre and the north. They decreased but remained widespread in mid or late September, with good rains notably on 19th and 21st September. Cumulative rainfall became above 1997 level almost everywhere. The rise of river levels flooded several low-lying areas in Ballou and Sébou areas on Falamé river and in Bakel, Moudéri and Yaféra areas on the Sénégal river. Crops are generally in the reproduction/maturation phases. In the south, maize and millet are maturing or being harvested, sorghum and rainfed rice are flowering/heading. In the centre, maize and souna millet started to be harvested “in green”. In the north, millet and sorghum are flowering/heading but more rains are needed for crops to complete their growing cycle.

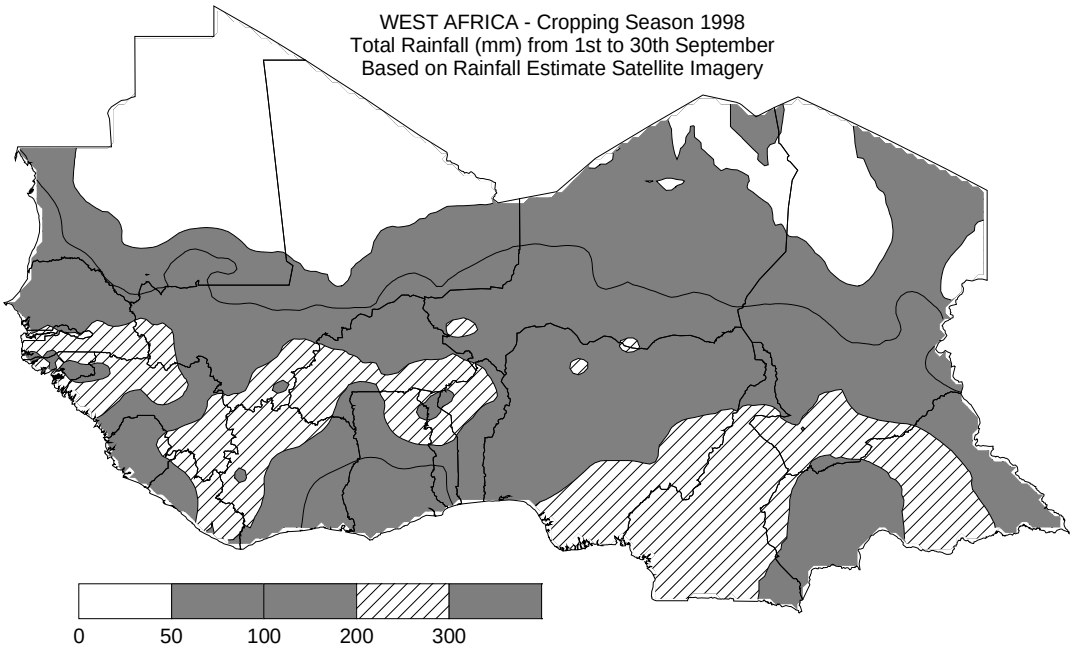
Pastures are generally abundant. Grasshopper and other insect infestations are reported on millet, niébé and groundnuts in Diourbel, Kaolack, Saint Louis and Thiès areas.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 26 to 30 October to estimate the 1998 cereal production.

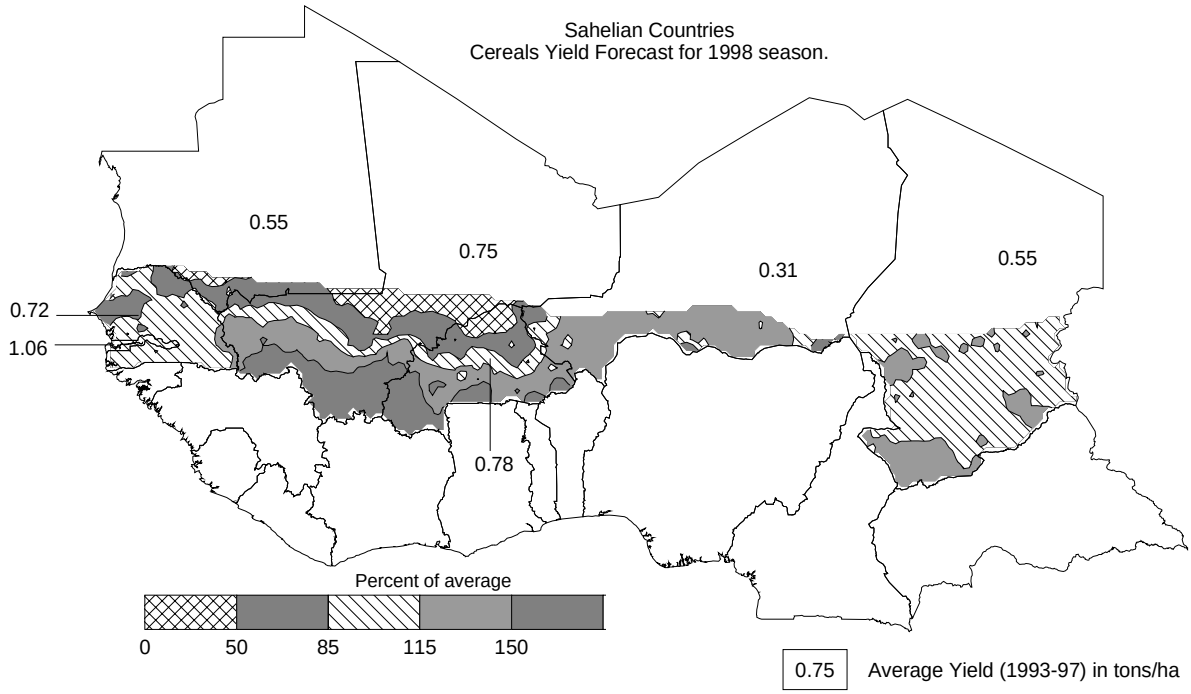
ANNEX I

TOTAL RAINFALL AND CROP YIELD FORECAST 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 forecast yield of cereals (Maize, Sorghum, Millet) for the Sahelian countries for the 1998 cropping season, as percent of the average yield of the last five years (1993-97). The map is obtained by applying to each country a yield function related statistically to the period 1982-97, the output parameters from the FAO crop specific water balance model to the crop yield. For 1998, the water balance model uses average rainfall from 1st October to the end of the crop cycle.



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

*This is the **fifth 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 30 September have been utilized. The satellite images of the first days of October 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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