SAHEL WEATHER AND CROP SITUATION REPORT

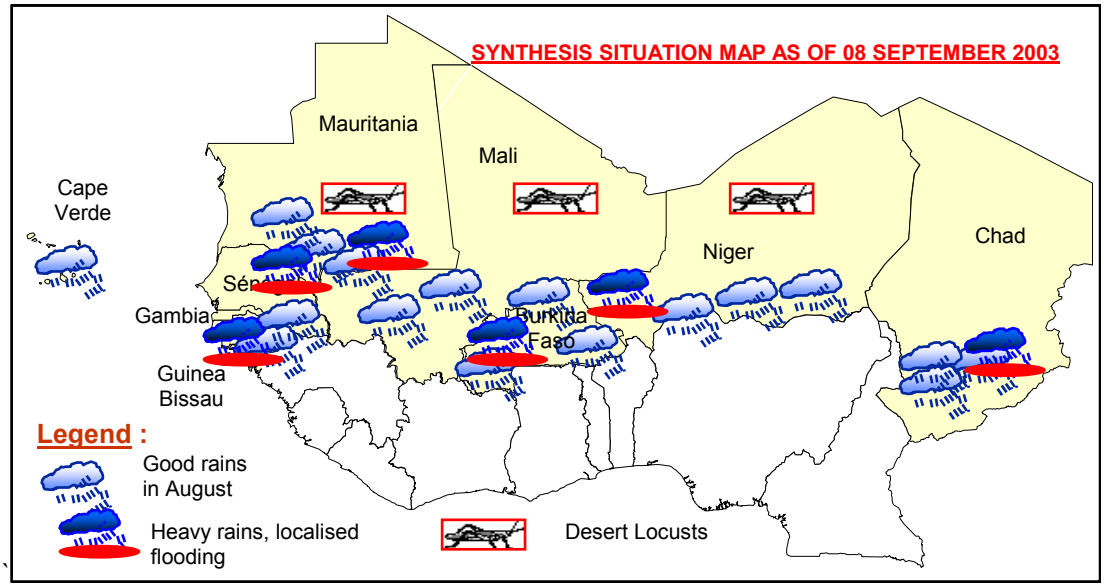
Report No.4, 11 September 2003

HIGHER RAINFALL IN THE WESTERN PART OF THE SAHEL IMPROVES CROP PROSPECTS

SUMMARY

After limited rainfall in **Senegal** and **Mauritania** until late July, precipitation increased significantly in August over the main producing areas, thus replenishing soil water reserves and improving crop prospects. In **Cape Verde**, abundant rains were received in August on all agricultural islands. In spite of localized flooding in several regions of **Burkina Faso**, **Chad**, **the Gambia**, **Mali** and **Niger**, crop prospects remain generally favourable, following widespread rains. By contrast, in **Guinea Bissau** the final outcome of the season will depend on the performance of the swamp rice crop, as prospects for coarse grain crops have been compromised by large-scale infestations of grasshoppers in northern and eastern regions.

Grasshoppers are also reported in Chad, the Gambia, Mali, Niger, Mauritania and Senegal but damages are limited. Grain-eating birds are reported in Mali, while Desert Locusts are reported on a limited scale in Mali, Mauritania and Niger. Small-scale breeding of Desert Locust is reported to be in progress, due to favourable ecological conditions.



SITUATION BY COUNTRY

BURKINA FASO

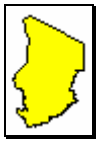
Harvest prospects are favourable reflecting widespread and abundant precipitation. Good growing conditions in July were followed by abundant and well distributed rains in August. The rains were particularly abundant and well above normal during the last dekad. Despite localised floods in the south and south-east, growing conditions are generally adequate for crop development. Millet and sorghum are generally in the heading and early maturation stages.

Pastures are abundant. The overall pest situation is calm. Army worms infestations reported in several locations in early August have been contained by successful treatments.

CAPE VERDE

The onset of regular rains in late July permitted widespread maize plantings on the agricultural islands. Rains continued in early August and became more abundant at the end of the month. Soil moisture reserves are adequate in most areas. Crops are emerging satisfactorily.

Pastures are regenerating well and the overall pest situation is calm.



CHAD

Growing conditions remain mostly favourable. Rains in August were abundant and widespread. Soil moisture may be excessive in some areas, following localised heavy rains, notably in the south-east, but so far overall crop development is satisfactory. Early planted cereals are maturing while late plantings are at flowering stage.

Pastures are abundant countrywide. The overall pest situation is calm. Scattered adults of Desert Locust are likely to be breeding in the northeast between Biltine and Ennedi.

THE GAMBIA

Overall crop prospects are mostly favourable despite excessive rains in parts. Rains in August were abundant and widespread. Some fields may have been flooded but coarse grains and upland rice crops are developing satisfactorily, while recently transplanted rice is emerging or tillering.

Grasshopper infestations are reported in parts.

GUINEA-BISSAU

Crop prospects remain unfavourable. Rains have been abundant and widespread since July, causing localized flooding. However, very few farms have been treated, following large-scale grasshopper infestations on sorghum, maize and millet crops in Gabu, Bafata and Oio, where over 50 percent of cereal production was officially estimated to be at risk. Although the grasshoppers' damages have lessened in the East, due to increased and heavier rains, the final outcome of the season will depend heavily on the performance of the swamp rice crop.

MALI

Harvest prospects are generally favourable reflecting abundant and widespread rains in August. Precipitation remained generally widespread and abundant in July and August. Crops are developing satisfactorily. However, heavy rains caused localized flooding affecting crops in several regions, like Douentza where 580 ha of millet/sorghum crops and 77 ha of rice crops have been damaged. Millet and sorghum are in the leafing or heading stages but transplantating of irrigated rice is still underway. Harvesting of early maize crops has started in some regions.

Pastures are generally good. Large scale grasshopper attacks are reported in the Sahelian zone, where about 2 210 hectares have been treated. Grain eating birds are reported in the Office du Niger zone in Segou and in Mopti and Gao regions. Army worm attacks are also reported in the Office du Niger and treatments have been undertaken. Low numbers of Desert Locusts are reported in the Adrar des Iforas, Tilemsi Valley and Timetrine.

MAURITANIA

Regular rains in August benefited recently planted coarse grains. Following the firm start of the rainy season in mid or late July over most producing areas, which permitted widespread planting of coarse grains, precipitation remained abundant and regular during August, except in Trarza where mostly dry conditions still prevail. Heavy rains caused considerable casualties and damage to crops and livestock in several localities of Adrar, Brakna, Gorgol, Hodh EChargui, Hodh El Gharbi and Guidimakha. Planting and replanting of "dieri'(rainfed) crops are still underway countrywide, except in Brakna and Hodh Echargui, where they are tillering. Irrigated rice is being transplanted.

Pastures are regenerating, improving livestock condition. Grasshopper infestations are reported in the south, where small-scale breeding of Desert Locusts is also in progress.

NIGER

Harvest prospects are generally favourable reflecting adequate growing conditions since July. Precipitation remained generally regular and widespread in August. In spite of localised heavy rains and floods damaging crops in Tillabéri and Zinder regions, crops are generally developing satisfactorily and overall harvest prospects favourable. Harvesting of early millet, beans and groundnuts has started in Diffa, Dosso and Maradi regions, improving food supply and lowering prices. Stages of crop development vary in the regions according to planting dates.

Pastures are abundant reflecting good rains in pastoral zones. Infestations of grasshoppers, army worms and floral insects are reported in several areas. Desert Locust numbers are forecast to gradually increase in Tamesna and Aïr and may extend to the Tillaberi region.

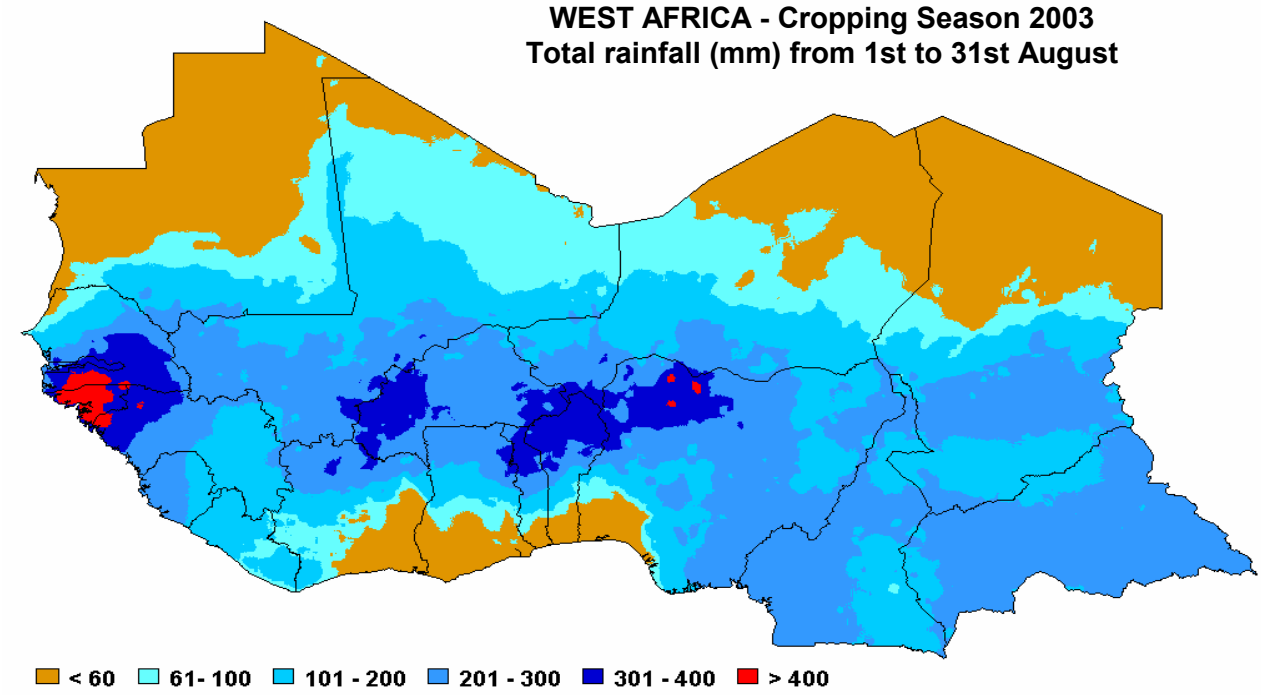
SENEGAL

Crop prospects improved following regular rains in August. Precipitation increased significantly in the centre and the north, where mostly dry conditions prevailed until late July. Although cumulative rainfall as of late August was still below average in most of Saint Louis, Louga, and Diourbel regions, soil moisture reserves are generally adequate for satisfactory crop development. However, the final outcome in these regions will depend heavily on the continuation of the rains up to mid-October. In the South and the East, precipitation has been regular and abundant, causing flooding in several areas. Millet and sorghum are generally at the heading stage in the south. Maize is maturing. Rice is growing satisfactorily although some fields have been flooded following heavy rains in August. In the north, coarse grains are tillering/leafing. Overall crop conditions are reported to be much better than last year and cereal production is expected to increase.

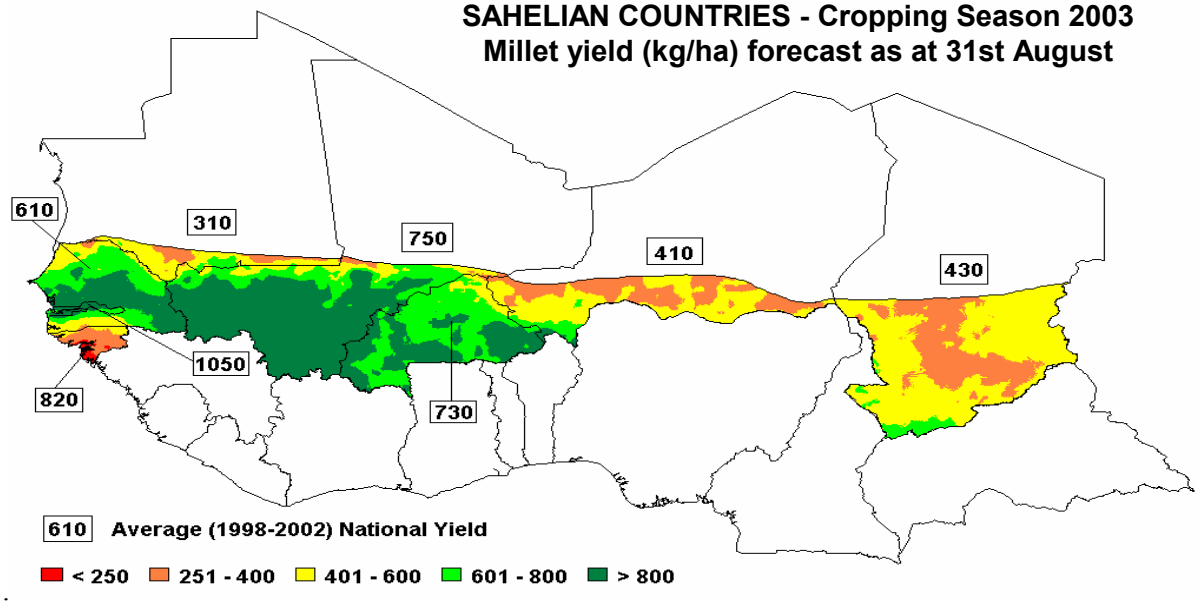
Pastures are regenerating, improving livestock conditions. Large-scale grasshopper infestations are reported in Thiès, Diourbel and Fatick regions and treatments are underway. Army worm attacks are reported in Louga region. Other insects are also reported in Ziguinchor.

TOTAL RAINFALL AND CROP YIELD FORECAST MAPS

The first map indicates the total rainfall amount from 1st to 31st August. Data is extracted from FAO field reports, data received through GTS (Global Telecommunication System) of WMO (World Meteorological Organization), 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 forecasted yield of millet for the Sahelian countries for the 2003 cropping season. The map is obtained by applying to each country a function which relates, in a statistical way for the period 1982 to 2002, the output parameters from the FAO crop specific water balance model to the crop yield. For 2003, the water balance model is using average rainfall from 1st September to the end of the crop cycle.



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

*This is the **fourth GIEWS report on the 2003 season on weather and crop conditions in the Sahelian countries of western Africa**. Geographical coverage of these reports includes 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 are issued each month from June to November. The final report for 2003 with the first production estimates will be issued in late-November*

*These reports are prepared with data from, and in close collaboration with, FAO Representatives, the Agro-Meteorology Group and the Environmental Monitoring Group (SDRN), the Emergency Centre for Locust Operations (ECLO), the Emergency Operations Service (TCEO), 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 August** have been utilized. The satellite images of the first dekad of September have 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:*

***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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