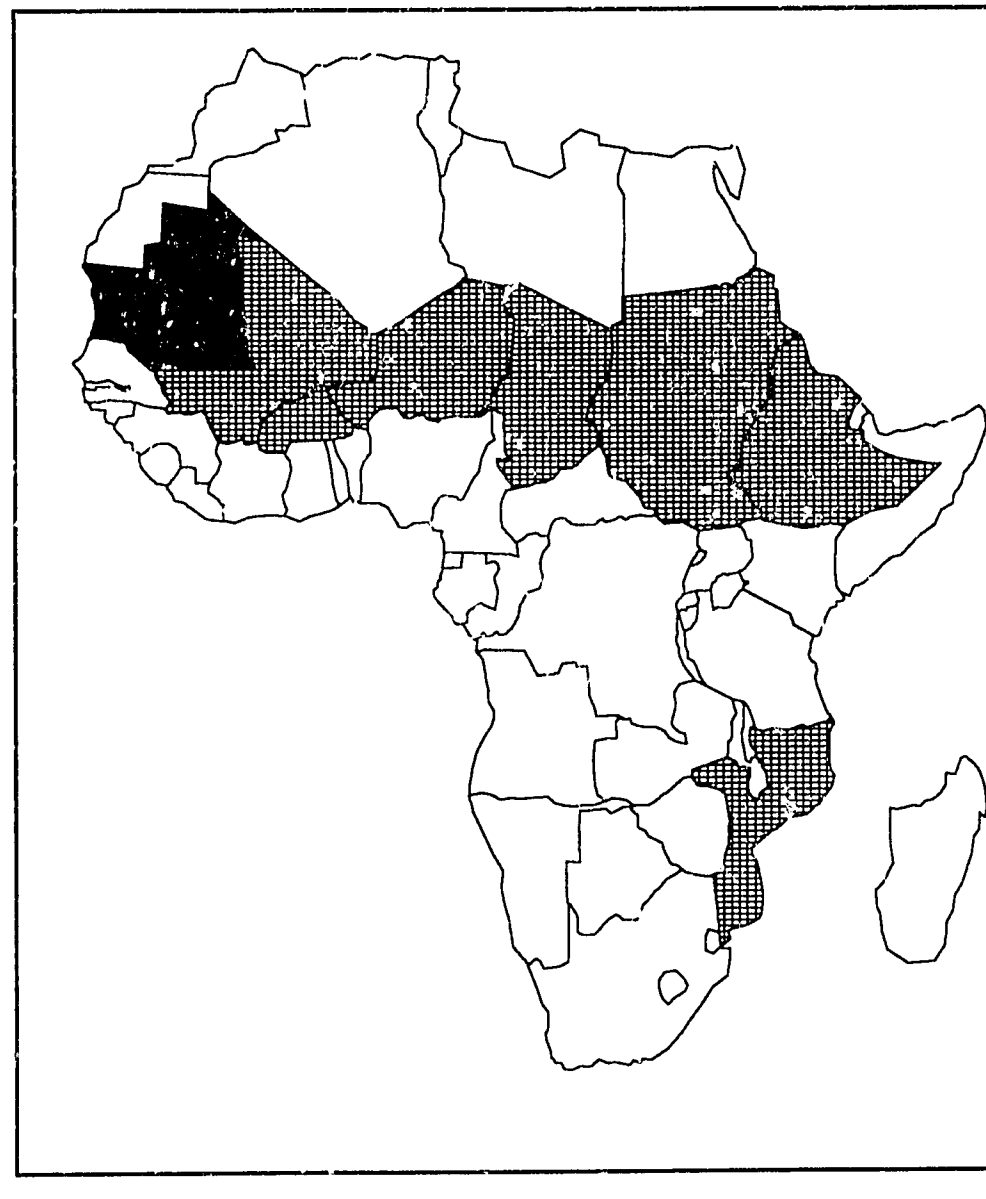
Report Number 8
January 1987

FEWS Country Report
MAURITANIA



Africa Bureau
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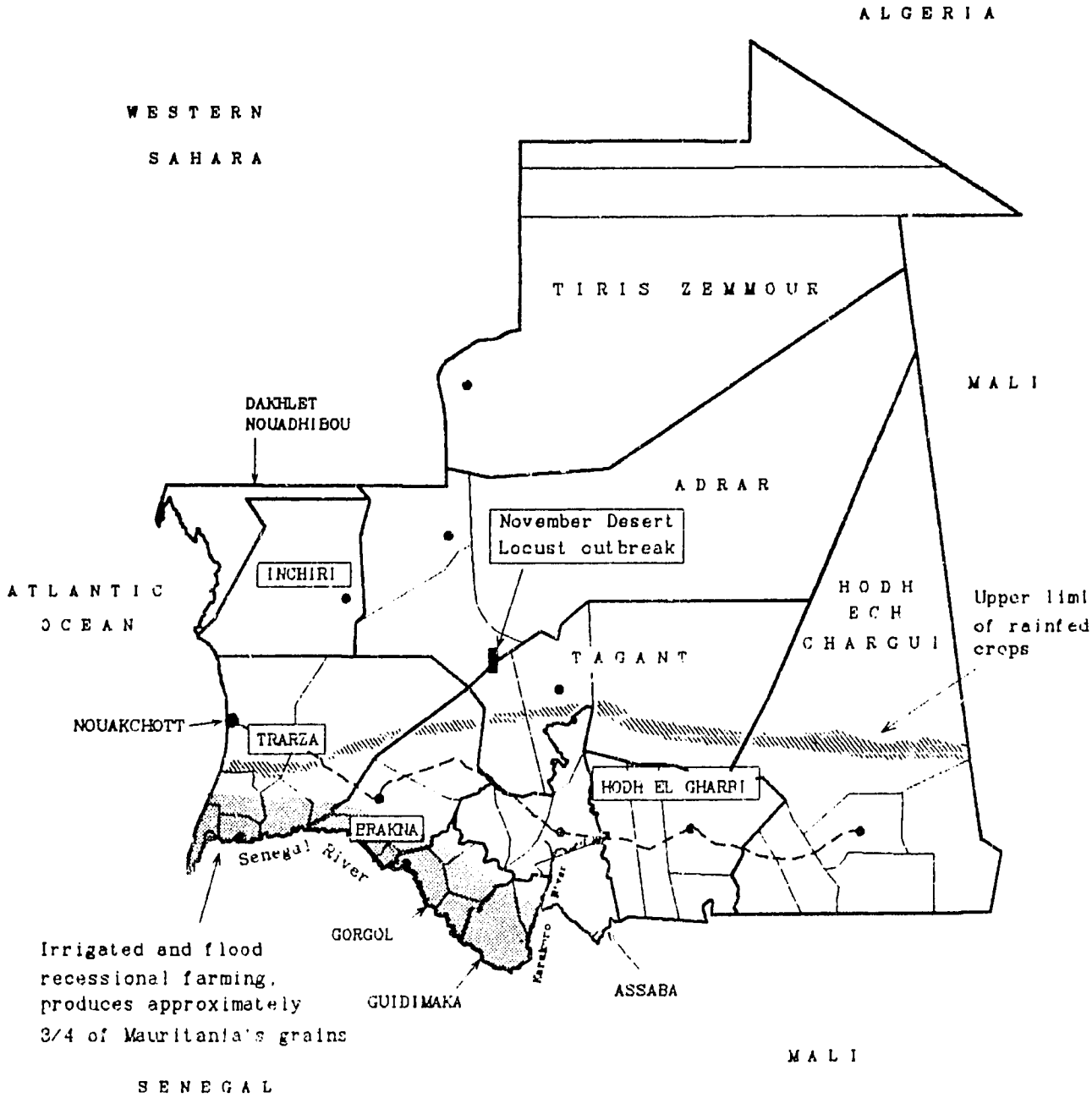
MAP 1: MAURITANIA

Summary Map



FEWS/PWA, January 1987

Famine Early Warning System Country Report

MAURITANIA

Harvest Strong, Nonetheless Imports Required

Prepared for the
Africa Bureau of the
U.S. Agency for
International Development

Prepared by
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January 1987

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INTRODUCTION

This is the eighth of a series of monthly reports issued by the Famine Early Warning System (FEWS) on Mauritania. It is designed to provide decisionmakers with current information and analysis on existing and potential nutrition emergency situations. Each situation identified is described in terms of geographical extent and the number of people involved, or at-risk, and the proximate causes insofar as they have been discerned.

Use of the term "at-risk" to identify vulnerable populations is problematical since no generally agreed upon definition exists. Yet it is necessary to identify or "target" populations in-need or "at-risk" in order to determine appropriate forms and levels of intervention. Thus for the present, until a better usage can be found, FEWS reports will employ the term "at-risk" to mean...

> ...those persons lacking sufficient food, or resources to acquire sufficient food, to avert a nutritional crisis, i.e., a progressive deterioration in their health or nutritional condition below the status quo and who, as a result, require specific intervention to avoid a life-threatening situation.

Perhaps of most importance to decisionmakers, the process underlying the deteriorating situation is highlighted by the FEWS effort, hopefully with enough specificity and forewarning to permit alternative intervention strategies to be examined and implemented. Food assistance strategies are key to famine avoidance. However, other types of intervention can be of major importance both in the short-term and in the long-run, including medical, transport, storage, economic development policy change, etc.

Where possible, food needs estimates are included in the FEWS reports. It is important to understand, however, that no direct relation exists between numbers of persons at-risk and the quantity of food assistance needed. This is because famines are the culmination of slow-onset disaster processes which can be complex in the extreme.

The food needs of individual populations at-risk depend upon when in the disaster process identification is made and the extent of its cumulative impact on the individuals concerned. Further, the amount of food assistance required, whether from internal or external sources, depends upon a host of considerations. Thus the food needs estimates presented periodically in FEWS reports should not be interpreted to mean food aid needs, e.g., as under PL480 or other donor programs.

FEWS does not collect primary data. Rather, it receives information from various domestic U.S. and international agencies and private voluntary organizations, and from government agencies in the countries under study. The information is then examined, compiled and analyzed for its predictive potential. Without the ongoing cooperation of all these organizations, FEWS could not function.

In particular, the eighth Mauritania report owes a debt to various offices of the US Agency for International Development (AID), US Department of Agriculture (USDA) and USAID/Nouakchott; the Government of the Islamic Republic of Mauritania (GIRM) Ministry of Health (MOH), Ministry of Rural Development (MRD) Agricultural Statistics Service (SSA), Commission for Food Security, National Commission for the Assistance of Populations Distressed by Drought (CNAPES), and SONIMEX; Lumiere, Vie, Amour (a private voluntary organization); the World Bank; the Permanent Interstate Committee to Combat Drought in the Sahel (CILSS); and the UN Food and Agriculture Organization (FAO) and World Food Program (WFP).

FEWS is operated by AID's Office of Technical Resources in the Bureau for Africa in cooperation with numerous USG and other organizations.

SUMMARY

From preliminary estimates, Mauritania has had an excellent cereals harvest this year. With the imports expected and food-aid pledged, there should be a surplus of 18,000 metric tons (MT) of grain remaining at the end of 1987. In order to achieve a food stock that is secure against all possible emergency food needs (as recommended by FAO), however, an additional 36,000 MT of cereals would be needed. The final figure for the total cereals stock needed in 1987 is being negotiated between Mauritania and the donors. Preparation for the 1987 grasshopper/locust campaign has begun.

Issues

- o A detailed Regional or Departmental breakdown of the 1986 harvest estimate was promised by the UN Food and Agriculture Organization for November but has not yet been received. Such statistics from the Ministry of Rural Development (MRD) are not likely to be available before the end of the crop year (March or April). Yield data for irrigated and recessional crops, which provides as much as three-quarters of the harvest, can then be assessed.

Key January Events

- o A joint Mauritania/Mali grasshopper/locust egg pod survey is to take place on either side of the Mauritania/Mali border. This will aid both countries in planning for the 1987 grasshopper/locust control campaign.

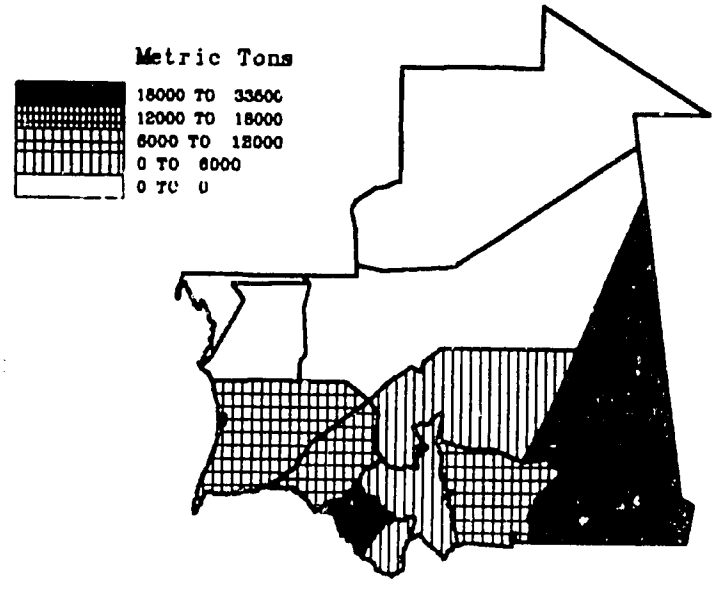
- o The Agricultural Statistics Service (SSA) of the MRD may have Regional yield data for rainfed crops available by the end of the month.

AGRICULTURE

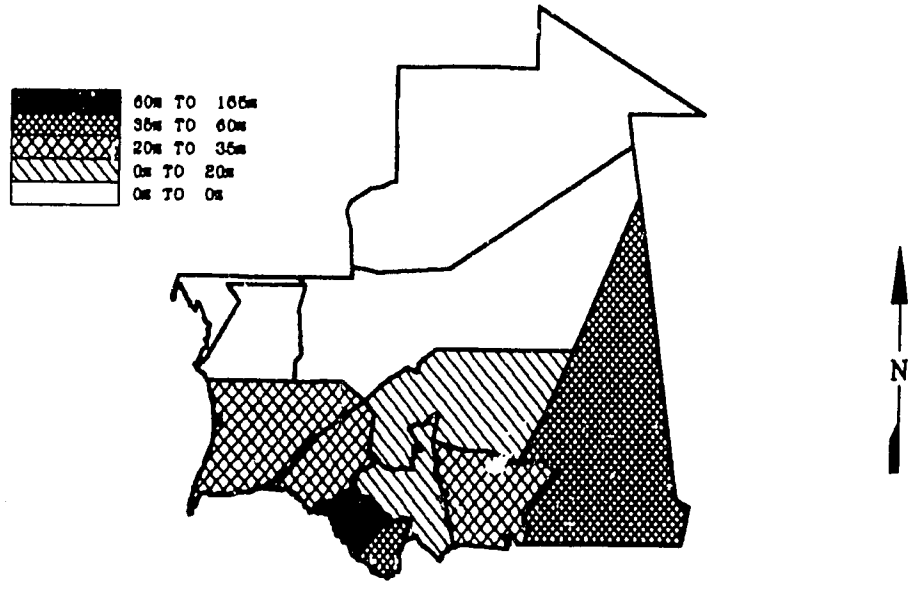
Over the past three years, the cereals harvest has improved immensely across the Sahel. According to joint Food and Agriculture Organization/Permanent Interstate Committee to Combat Drought in the Sahel (FAO/CILSS) missions, the total estimated 1986 cereal production of nine sahelian countries is 7.6 million MT, compared to 7.4 million MT in 1985 and 4.3 million MT in 1984. Mauritania has also seen a dramatic increase in its harvest, from 32,000 MT in 1984 to 57,000 MT in 1985, to a preliminary estimate of 95,000 MT in 1986. Given its limited arable land and arid climate, however, Mauritania must continue to import cereals for the foreseeable future. Even so, approximately one third of Mauritania's 1987 food needs will be met by local production, compared to less than one fifth in 1985 (Map 2).

Map 2: MAURITANIA

Percent of 1987 Food Needs Met by Local Harvest



Net 1986 Harvest



Percent of Requirement Met

Source: FAO; Mission Cables; FEWS/Mauritania
FEWS/PWA, January 1987

Rainfall

This year's outstanding cereals harvest has occurred in spite of moderate and late rainfall. Flood recessional, irrigated and lowland recessional crops, which accounts for three-quarters of the country's cereals output, is not directly dependent on rainfall in Mauritania. The extent of irrigated and flood recession croplands is affected by the amount of rainfall over the entire drainage system of the Senegal River, including areas of Mali and Senegal; the Diama Dam at Rosso, which prevents salt water intrusion into farming zones; and by new dams in Mali, which have made the flow of the Senegal River more constant over the seasons.

While the trend in production follows the downward trend in rainfall over the long-term (Figure 1), the correlation is less apparent over shorter time spans (Figure 2). Figure 1 shows the general downward trend in rainfall over the past 30 years with a concomitant downward trend in cereals production since about 1967. Figure 2 shows that in the two years with the best rainfall, 1979 and 1980, production was relatively low (as low as in 1984, a year with an exceptionally low rainfall). It could have been that rainfall was poor in Mali and Senegal during those years. Also, the dams mentioned above were not yet completed, and so would not have helped to eliminate the affect of the salt tide in the lower stretches of the Senegal River or dampen the affect of extreme variations in river depth in response to rainfall (or lack thereof) upstream. Even the 30 year trend shown in Figure 1 should be interpreted with care. The lower chart on Figure 1 shows rainfall in Mauritania since 1930. With the increase in rainfall seen in 1986 and 1987, the downward trend over the total 56 year period will not be as strong.

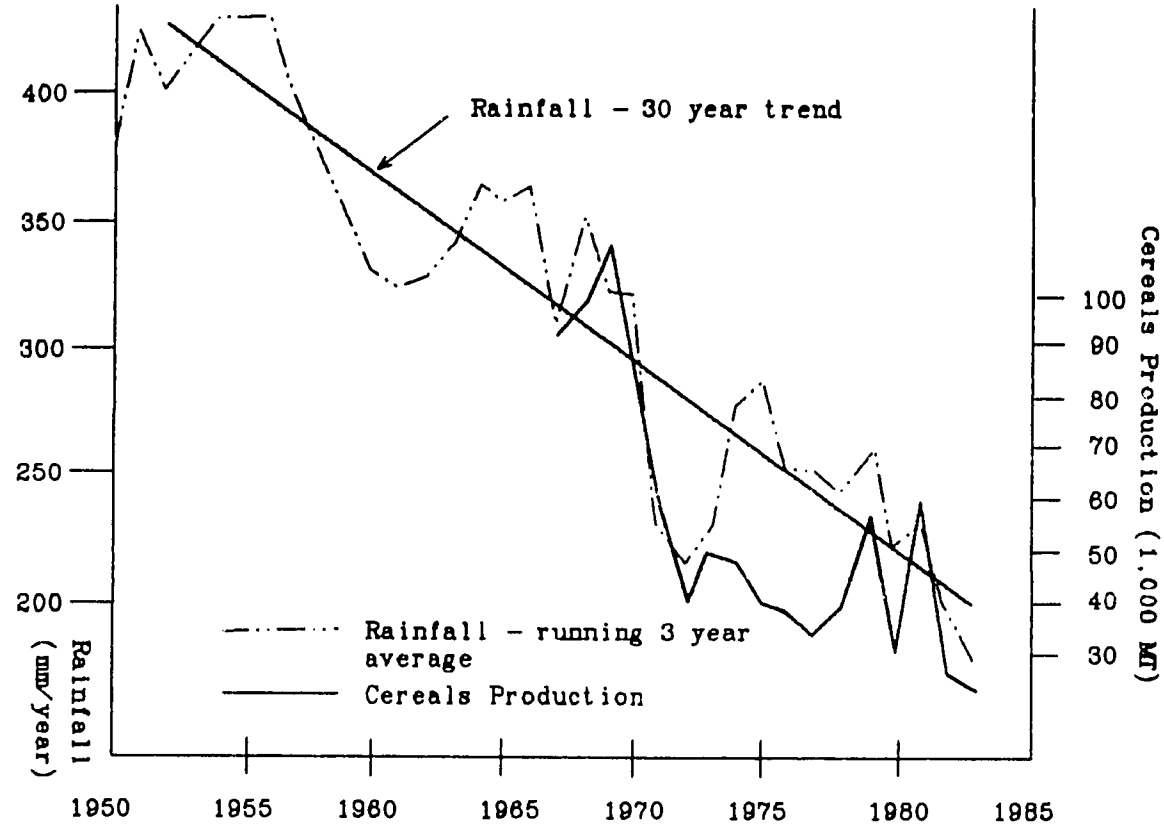
The area cultivated also varies in a way which cannot be predicted by the rainfall of the preceding year. Other climatological and socio-economic factors -- such as how far north the ITD (Inter-Tropical Discontinuity) moves, hence the northern limit of rainfed agriculture; rainfall upstream in neighboring countries; economic policies; and fluctuations in food prices -- play a role in influencing the area cultivated, which in turn affects crop production.

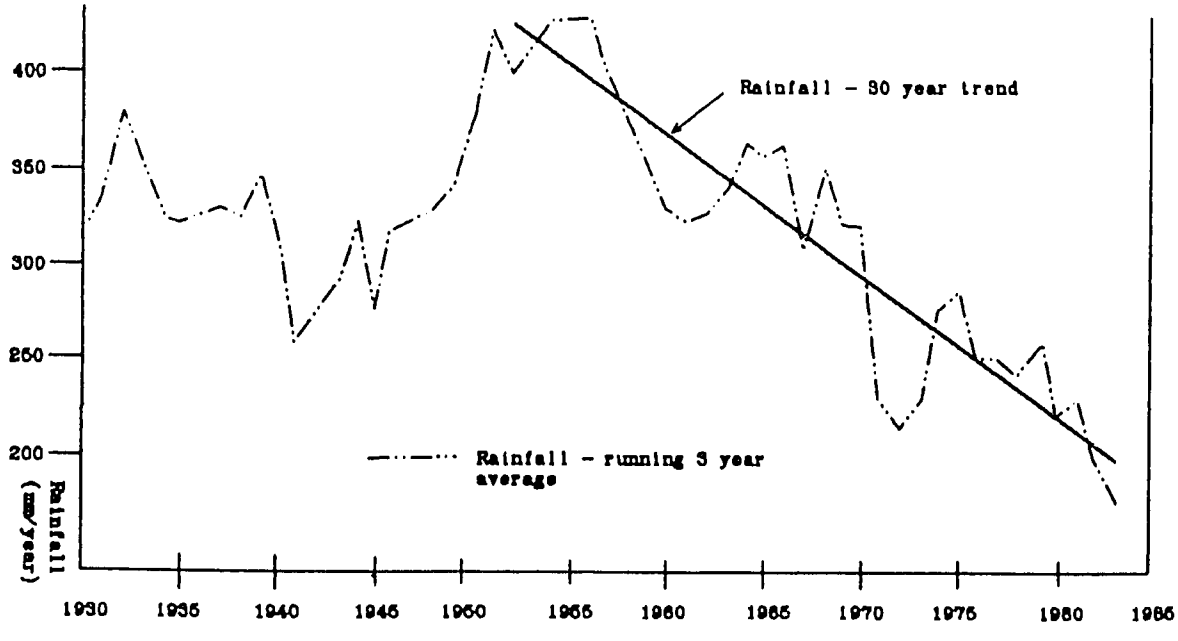
Locusts/grasshoppers

Although the Government of the Islamic Republic of Mauritania (GIRM) was prepared by early 1986 for a grasshopper/locust control campaign, in part as a result of training and equipment received from the donors, the threat of insect infestation turned out to be greater than had been foreseen. An emergency was declared and

Figure 1: MAURITANIA

Rainfall and Total Cereals Production



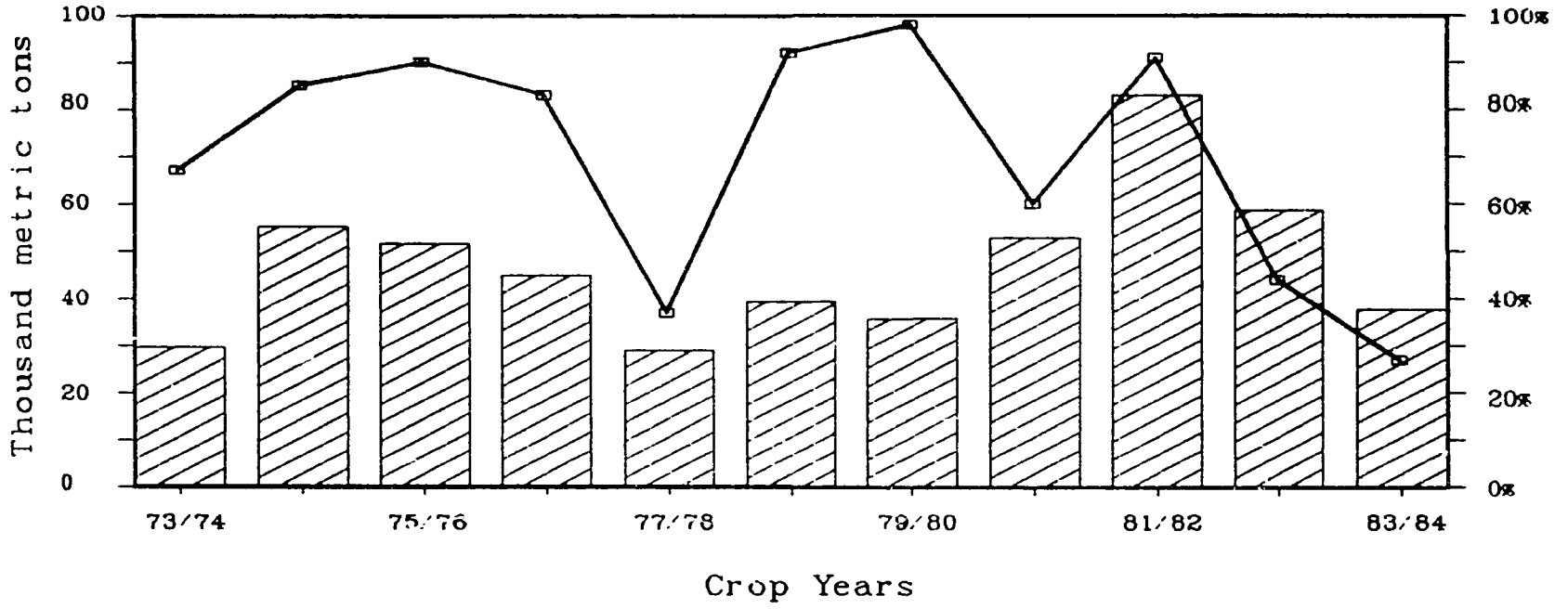


Source: FEWS/Mauritania; RAMS; CNAPES; FAO

FEWS/PWA, January 1987

Figure 2: MAURITANIA

Rainfall and Total Cereals Production, 1974 to 1984



Rainfall as % of Avg 1941-70 Rainfall

Total Cereals Production

Source: CILSS; CNAPES; SSA
FEWS/PWA, January 1987

extra aid was received from the donor community, including AID/Mali. Even so, the southeast of Mauritania was seriously hit. There was major damage to the millet crops in Hodh el Gharbi, which was confirmed by the FAO/CILSS crop assessment team.

In preparation for the 1987 grasshopper/locust campaign, a joint Mali/Mauritania grasshopper/locust egg pod survey started on January 5. Information is also being sought regarding egg pod locations in the northern river border area of Senegal. With this information in hand, Mauritania's Crop Protection Service should be in a better position to predict grasshopper outbreaks based on rainfall.

FOOD FLOWS/ NEEDS

The Mauritanian harvest is not yet fully assessed. Missing pieces include the harvest outcome for flood recessional and lowland recessional crops planted in mid to late November. Even so, USAID and the UN World Food Program (WFP), in collaboration with the GIRM Commission for Food Security (CSA), have calculated a preliminary 1987 food balance sheet for Mauritania using the provisional harvest estimate of 95,000 MT and the GIRM annual per capita cereals consumption estimate of 165 kg (Table 1).

From the figures, Mauritania will need no additional cereals in 1987. FAO, however, has advised that a security stock of 18% of calculated cereals need be kept on hand in case of emergencies. For Mauritania, this would come to 54,351 MT, and would require that an additional 36,314 MT be imported or donated. In November, the donors began negotiations with the GIRM over the exact quantity to be maintained.

Cereals have become more important in the Mauritanian diet as people have shifted from pastoral to sedentary occupations in response to the long-term drought. Even so, 165 kg per year seems high. According to the 1985 US Department of Agriculture (USDA) World Food Needs and Availability, 48% of the average Mauritanian diet is filled by cereals (1979-81). This percentage is low in comparison to Mauritania's neighbors (e.g., cereals account for 70.4% of the diet in Mali, and 63.2% of the diet in Senegal). As further evidence, in 1986 about 1.8 million Mauritanians consumed some 218,000 MT of cereals, which comes to an annual per capita cereals consumption figure of 123 kg.

Annual per capita cereals consumption is to be studied via the joint AID/World Bank Living Standard Measurement

Survey, which starts in June 1987. The study, to be executed by the Statistical Directorate of the Ministry of Economics and Finance, will provide detailed insight into the Mauritanian consumption patterns and needs. Until the results of this survey are available, FEWS will use the official estimate of 165 kg/year.

Table 1: Cereal Balance Sheet, December 1986

	FORECAST 1985-1986 (made Dec.85)	ACTUAL 1985-1986	FORECAST 1986-1987 (made Dec.86)
Estimated Population:	1,786,000	1,786,000	1,830,000
Consumption/ capita/year:	165 kg	123 kg	165 kg
TOTAL CEREAL NEED:	**294,690 MT**	**218,849 MT**	**301,950 MT**
Net production estimate:	57,000 MT	57,000 MT	95,000 MT
Stock on-hand or in pipeline:	146,420 MT	146,420 MT	108,990 MT
Commercial import:	88,000 MT	59,189 MT	73,500 MT
Food-aid pledged (for sale and free):	52,619 MT	65,230 MT	42,497 MT
TOTAL AVAILABLE:	**344,039 MT**	**327,839 MT**	**319,987 MT**
Consumption during year:	294,690 MT	218,849 MT	301,950 MT
END OF YEAR STOCKS:	**49,349 MT**	**108,990 MT**	**18,037 MT**

Source: FEWS/Mauritania: AID/Nouakchott/Food for Peace; WFP/Nouakchott

In 1985/1986 an estimated total of 42,000 MT of cereals was distributed by CSA to the indigent population. The

remaining 23,230 MT of cereals food-aid was sold in the market. For 1986-1987, a total of 28,000 MT of cereals is available for free distribution (27,000 MT in stock with CSA, and 1,000 MT pledged) and 14,497 MT is to be sold. Table 2 shows the proportion of local production, imports and food aid within the annual cereals stock between 1974 and 1984.

Caution should be used when comparing the figures in Tables 1 and 2, as the stock on-hand in Table 1 represents the total of imports, food-aid and local production carried over from the previous year, while Table 2 does not track carry over. That is, food aid represents 20% of available cereals in 1986, compared to the average 42% seen between 1974 and 1984. The 20% figure, however, may under-represent the contribution of food aid to the total stock available in 1986, as some of the stock on hand in 1986 (which accounts for 45% of available cereals) also contains food aid remaining from previous years.

Table 2: Cereals Availability, 1973/4 to 1983/4

Years	Imports		Food Aid		Local Prod		Total Supply	
	MT	%	MT	%	MT	%	MT	%
73/74	36,687	20%	116,822	64%	28,540	16%	182,049	100%
74/75	14,332	9%	85,110	55%	54,050	35%	153,492	100%
75/76	16,510	15%	40,379	38%	50,047	47%	106,936	100%
76/77	35,769	35%	24,426	24%	43,207	42%	103,402	100%
77/78	65,381	43%	60,000	39%	27,588	18%	152,969	100%
78/79	68,145	43%	53,605	34%	38,044	24%	159,794	100%
79/80	64,202	54%	23,403	20%	31,965	27%	119,570	100%
80/81	72,473	40%	59,266	33%	48,399	27%	180,138	100%
81/82	77,447	35%	63,805	29%	78,335	36%	219,587	100%
82/83	107,655	43%	88,631	36%	52,587	21%	248,873	100%
83/84	94,088	29%	197,770	61%	31,860	10%	323,718	100%
Average	59,335	33%	73,929	42%	44,057	25%	177,321	100%

Source: CILSS; MRD/SSA; WFP; SONIMEX

HEALTH

Mauritania's health system is discussed and Ministry of Health (MOH) morbidity (1985) and fertility (1981) figures are presented in the Appendix II. The morbidity statistics are not current, but more recent figures are unavailable. The figures do present a national picture of the distribution of diseases cross the Regions, as well as an initial assessment of seasonal trends. As future health statistics are compiled and combined with the 1985 numbers, a more accurate picture will appear.

APPENDIX I

Table 1: 1986 Harvest and 1987 Food Needs

Region	Population	FAO Region Product (MT)	Estimated* Net Product (MT)	Food Needs (@ 165 kg) (MT)	% Req. Met (@ 165 kg)
Adrar	82,134	-	-	13,552	0.0%
Assaba	200,519	7,720	5,966	33,086	18.0%
Brakna	182,904	12,090	9,344	30,179	31.0%
Dakhlet Nouadhibou	30,517	-	-	5,035	0.0%
Gorgol	132,207	43,243	33,420	21,814	153.2%
Guidimaka	62,485	7,445	5,754	10,310	55.8%
Hodh ech Chargui	224,156	23,700	18,316	36,986	49.5%
Hodh el Gharbi	151,949	10,025	7,748	25,072	30.9%
Inchiri	13,641	-	-	2,251	0.0%
Nouakchott	344,224	-	-	56,797	0.0%
Tagant	116,560	3,200	2,473	19,232	12.9%
Tiris Zemmour	21,036	-	-	3,471	0.0%
Trarza	265,454	15,500	11,979	43,800	27.3%
Total	1,827,786	122,923	95,000	301,585	31.5%
Rounded Population	1,830,000			301,950	31.5%

Source: FAO; Mission Cables; FEWS/Mauritania

* Net Region product was estimated by multiplying the gross Region harvest by the ratio of the total net harvest reported by CILSS and accepted by the GIRM AID/Nouakchott to the sum of Region harvests estimated by FAO and reported by FEWS/Mauritania.

APPENDIX II

Health System

The World Bank Review of Health Financing and Sectoral Strategy [in Mauritania], released in late 1985, concludes that the national health status is very poor and the health system inadequate, declining, and biased toward curative services in urban areas. At present, there is one doctor to serve every 20,770 Mauritanians, compared to 14,500 in 1980. Every nurse/rural health worker is responsible for 1,016 people, compared to 2,100 in 1980. Each midwife must be shared by 4,719 women of reproductive age.

According to the same study, 72% of the population is still rural (Table 1). Although this percentage may be overestimated, it still indicates a rural majority, which depends on health services located in the rural areas. Of the total of 88 physicians, however, 63 (71.6%) are in Nouakchott, which contains only 18.8% of the national population (Figure 3). The same urban bias is shown in the distribution of hospital beds. For instance, in Trarza Region, there are 2.9 beds per 1000 people versus 25.7 beds per 1000 people in Nouakchott.

Table 1: Population Distribution by Type (1983)

	Number	Percentage
Urban	463,246	28
Rural sedentary	722,931	44
Rural nomad	462,220	28
Total	1,648,397	100

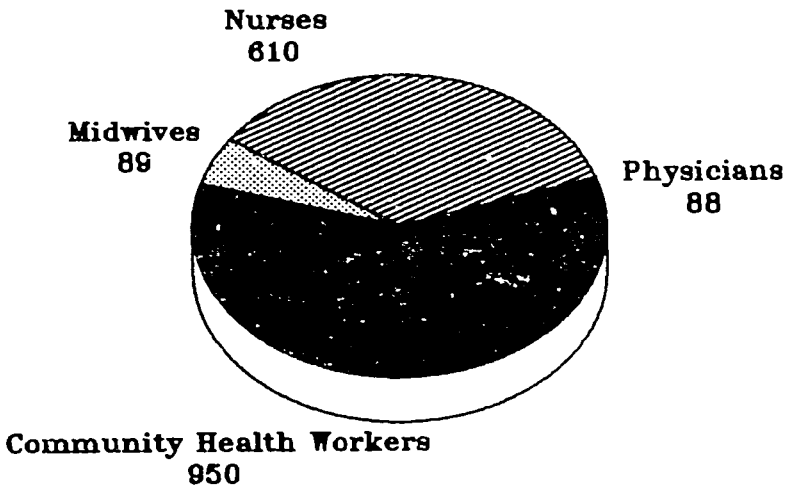
Source: World Bank

Mauritania shows a pattern of low bed occupancy (in Nouakchott National Hospital, 38%), and high outpatient attendance. Ministry of Health (MOH) statistics from 1983 mention, for instance, a total of 364,000 visits the National Hospital, i.e. almost 1000 per day. The figure seems too high given the facilities available. Even a quarter of that number of patients per day would be difficult to handle with the current shortage of experienced staff, medical equipment, and drugs.

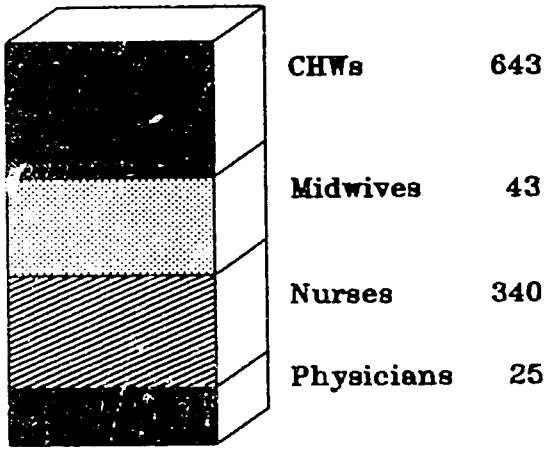
There is a primary health system under development in Mauritania, but so far it only works relatively well in Trarza Region, where the AID Rural Health Services Project operates. The nationwide Expanded Program of Immunization also functions fairly well.

Figure 3: MAURITANIA

Health Practitioners
in Mauritania



Total count



Number each category
outside of Nouakchott

Source: FEWS/Mauritania; MOH; AID/Nktt

FEWS/PWA, January 1987

The GIRM developed a four year Redressment Plan for the period of 1985 to 1988 with a budget of 52 million UM (almost $1 million US). In the budget, the following allocations are made to health and other FEWS related fields:

Table 2: Budget Share, Redressment Plan of 1985 - 88

Health & Education:	10.0 %
Agriculture:	39.1 %
Water Management:	17.7 %
Habitat & Urbanism:	2.2 %

Source: FEWS/Mauritania

The government wants to give more attention to preventive medicine. The World Health Organization (WHO) will assist the MOH in developing a 10 to 15 year health development program, as well as a water management program. A viable health information system should be built into the program. WHO has taken the initiative to create a formal information network of all health related donors and private voluntary organizations (PVOs), which will meet on a regular basis.

Health Indicators

Infant mortality in Mauritania, although reduced slightly from 171 deaths in the first year per 1000 live births in 1965, is still very high (159 deaths per 1000 live births in 1981). Half of that infant mortality is occurring in the first month of life. In spite of the high infant mortality rate, the population is increasing at 2.6% per year as a result of the high fertility rate (TFR: 6). These data are derived from the 1981 National Fertility Survey, which interviewed 3,500 women of child bearing age. Some of the other results are shown in Table 3.

With greater immunization coverage, and a system for distributing oral rehydration salts (ORS), the infant mortality rate will be reduced. The GIRM realizes that this process will have to be accompanied by a reduction in population growth. In 1981, when the GIRM was still strictly opposed to contraceptives, only 7.9% of the women admitted having heard of contraceptive methods, and 97% stated that they would refuse to use them (1% actually used them). Meanwhile, contraceptives have become available (and sold well) "under the counter" in the national and regional capitals. The government is leaving its pro-natalist position in favor of the development of a national family planning program. The rapidly increasing population should be viewed in

relation to its access to such resources as land and water, as well as to health and other social services.

Table 3: Fertility and Child Survival

Age of Mother at Interview	Avg Number Live Births	Avg Number Still Alive	Avg Percent Dead by Time of Interview
15-19	0.99	0.84	15.2
20-24	2.17	1.83	15.7
25-29	3.73	3.05	18.2
30-34	5.00	4.12	17.6
35-39	5.79	4.69	19.0
40-44	5.97	4.50	24.6
44-49	6.05	4.47	26.1
Overall Average	3.82	3.07	19.6

Source: MOH National Fertility Survey, 1981

The national health statistics are all compiled, registered and computed by hand, by one person, who receives the monthly statistical returns from health facilities nationwide. The reporting rate of these facilities is poor, and sometimes the MOH has to wait for four to six months for facility reports. The 1985 figures were compiled in October 1986 in collaboration with the Statistics Office of the Ministry of Health. The figures presented in this report are yet to be published.

It should be noted that only the figures on contagious illnesses are available. All statistics from military clinics and private clinics are excluded. The phrase "private clinic" includes not only clinics which are privately owned, but also clinics attached to state owned enterprises, such as the mining companies in Nouadhibou, Zouerat and Akjoujt. A large part of the population frequent these clinics, which usually offer better health facilities than the public clinics. This fact should be kept in mind when looking at the morbidity figures in Table 5, which are based on the total population in each Region. The figures shown understate the actual morbidity for these diseases among the population (size unknown) served by the public clinics.

Table 4 presents the number of cases for the eleven diseased seen most frequently at public clinics in Mauritania during 1985. Figure 4 presents the monthly frequency of six of those diseases during 1985. Map 3 shows the geographic distribution of four of these (chosen either for reasons of high mortality or economic importance). Each of the small maps shows the percentage of the national total of the specified disease seen at public clinics in the Regions. Table 5 shows, by Region, the morbidity (number of cases per 1000 people) of each of the four diseases shown in Map 3.

Table 4: Most Frequent Diseases, Public Clinics, 1985

Disease	Number of Cases	% of All Cases	Number of Deaths
Simple Diarrhea	144,648	25.5	109
Conjunctivitis	89,456	15.8	1
Malaria	66,360	11.7	73
Influenza	45,339	8.0	0
Scarlet Fever	43,268	7.6	0
Amoebic Dysentery	34,091	6.0	82
Gonorrhea	24,208	4.3	2
Early Syphilis	20,145	3.6	0
Bac. Dysentery	18,730	3.3	15
Worms	18,553	3.3	0
Measles	15,058	2.6	196

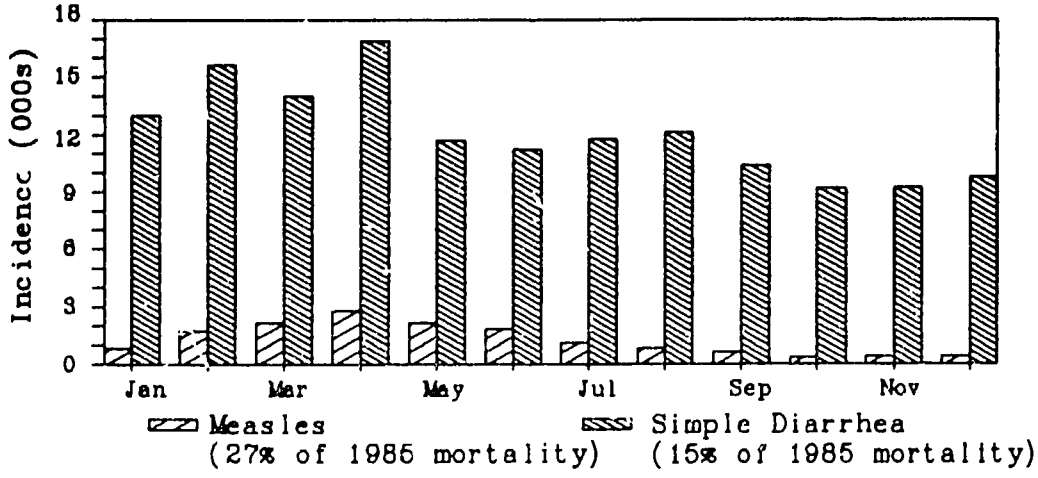
Source: FEWS/Mauritania; MOH

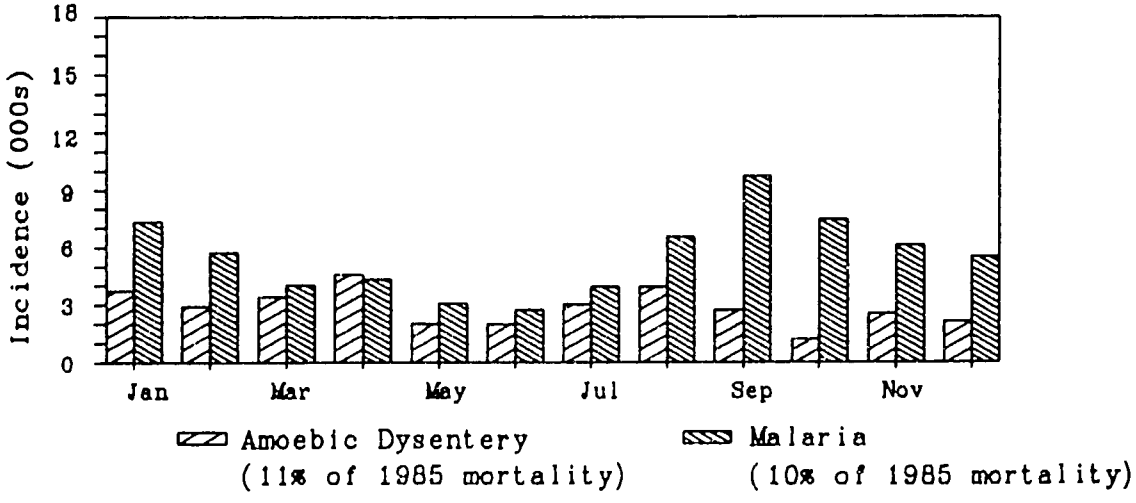
In 1985, diarrheas and dysentery were responsible for 35% of all recorded illnesses. Diarrhea, responsible for 15% of deaths recorded at public clinics in 1985, showed a rising curve during the first months of the year, with a peak in April. One explanation might be the decreased supply of water at that time of the year. Less water would heighten the risk of contact with disease bearing water and reduce the amount of washing of food, utensils, and hands.

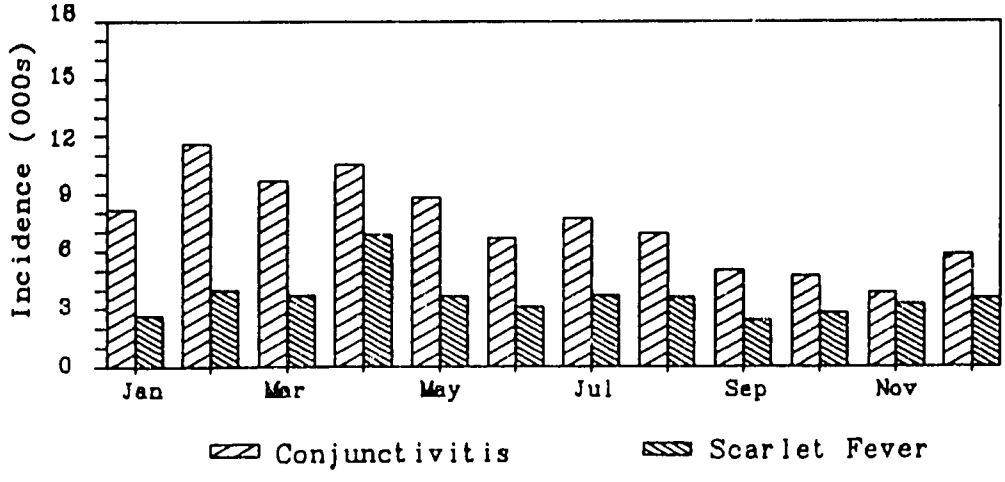
Conjunctivitis was the second most frequent illness. Due to vitamin A deficiency, especially among adults, ulcerations and perforations occur, thus increasing the chances of blindness (National Hospital, 1985: one eye amputation every two weeks). As a result of distribution of vitamin A capsules by UNICEF during the National Vaccination Days, these complications have been reduced among children. Conjunctivitis is especially stubborn in the north; in Tiris Zemmour Region, the conjunctivitis morbidity rate was 238 cases per 1000 people; in Adrar Region, the rate was 56 cases per 1000 people. This

Figure 4: Mauritania

Infectious Diseases at Public Clinics, National Statistics, 1985



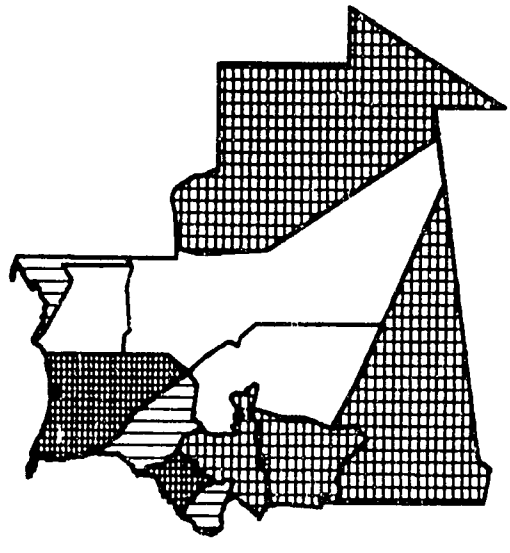




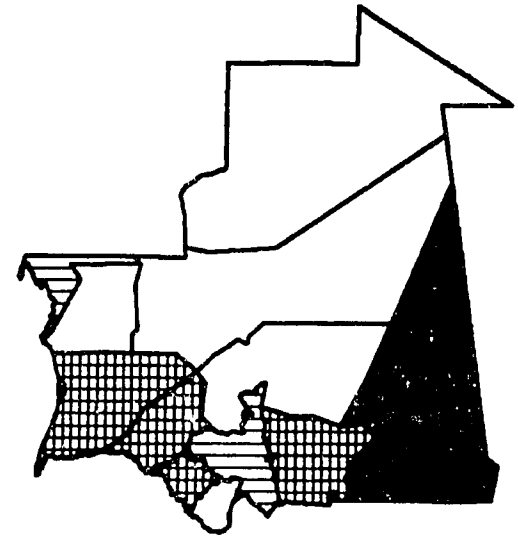
Source: GIRM/MOH

Map 3: MAURITANIA

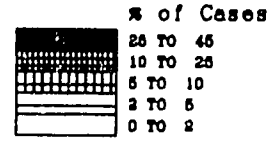
Geographic Distribution of Diseases Seen at Public Clinics

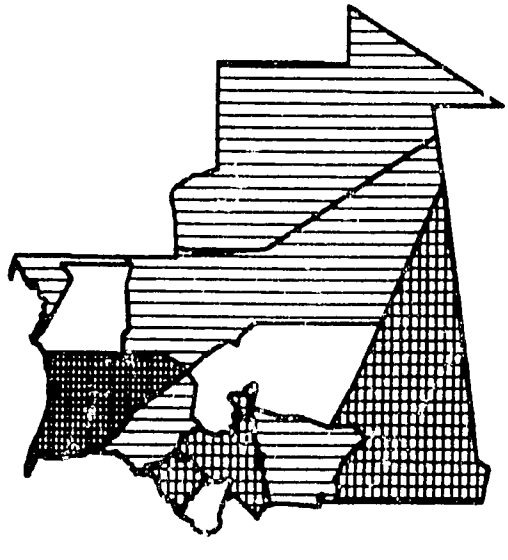


Diarrhea

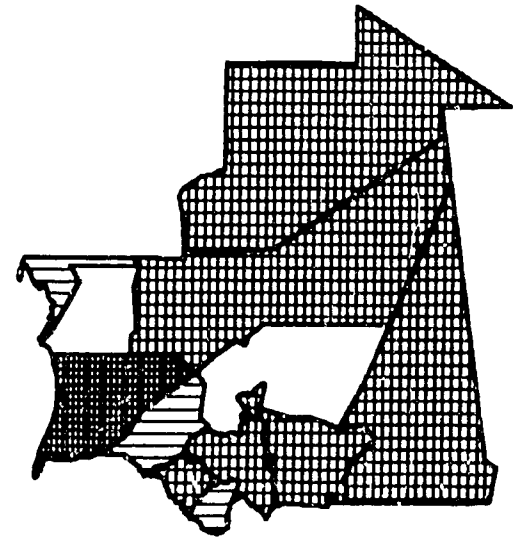


Measles





Scarlet Fever



Conjunctivitis

FEWS/PWA, January 1987

region suffers also from trachoma, another eye illness. According to a representative of the private voluntary organization (PVO) Lumiere, Vie, Amour (which specializes in ophthalmology), 40% to 95% of the children in Oujeft in Adrar Region suffer from trachoma.

Table 5: 1985 Morbidity for Measles, Diarrhea, Conjunctivitis, and Scarlet Fever by Region

Region	Measles	Diarrhea	Conjunct	Scarlet F
Adrar	3	33	56	11
Assaba	2	55	29	13
Brakna	4	38	20	11
Dakhlet Nouadhibou	21	151	92	57
Gorgol	8	152	57	23
Guidimaka	4	103	44	12
Hodh ech Chargui	17	55	26	15
Hodh el Gharbi	8	50	34	12
Inchiri	0	56	42	41
Nouakchott	14	139	100	55
Tagant	1	10	8	5
Tiris Zemmour	5	349	238	54
Trarza	6	60	40	23
Overall	8	79	49	24

Source: MOH; FEWS/Mauritania

In 1985, conjunctivitis peaked in January and caused a total morbidity rate of 49 cases per thousand people for all of Mauritania. According to the above PVO, this figure is heavily underestimated. Mauritania has just undergone a conjunctivitis epidemic with its peak in September 1986. An estimated 60% of the population was affected.

Most measles cases are in the south, especially in Hodh ech Chargui Region (Map 3). Conjunctivitis appears to be evenly spread throughout the country, although it should be kept in mind how sparsely populated Adrar and Tiris Zemmour Regions are, thus creating higher morbidity rates for a given number of cases in the Region. Tagant and Inchiri Regions appear to have few diseases, but this could be due to a combination of few facilities and reporting problems.

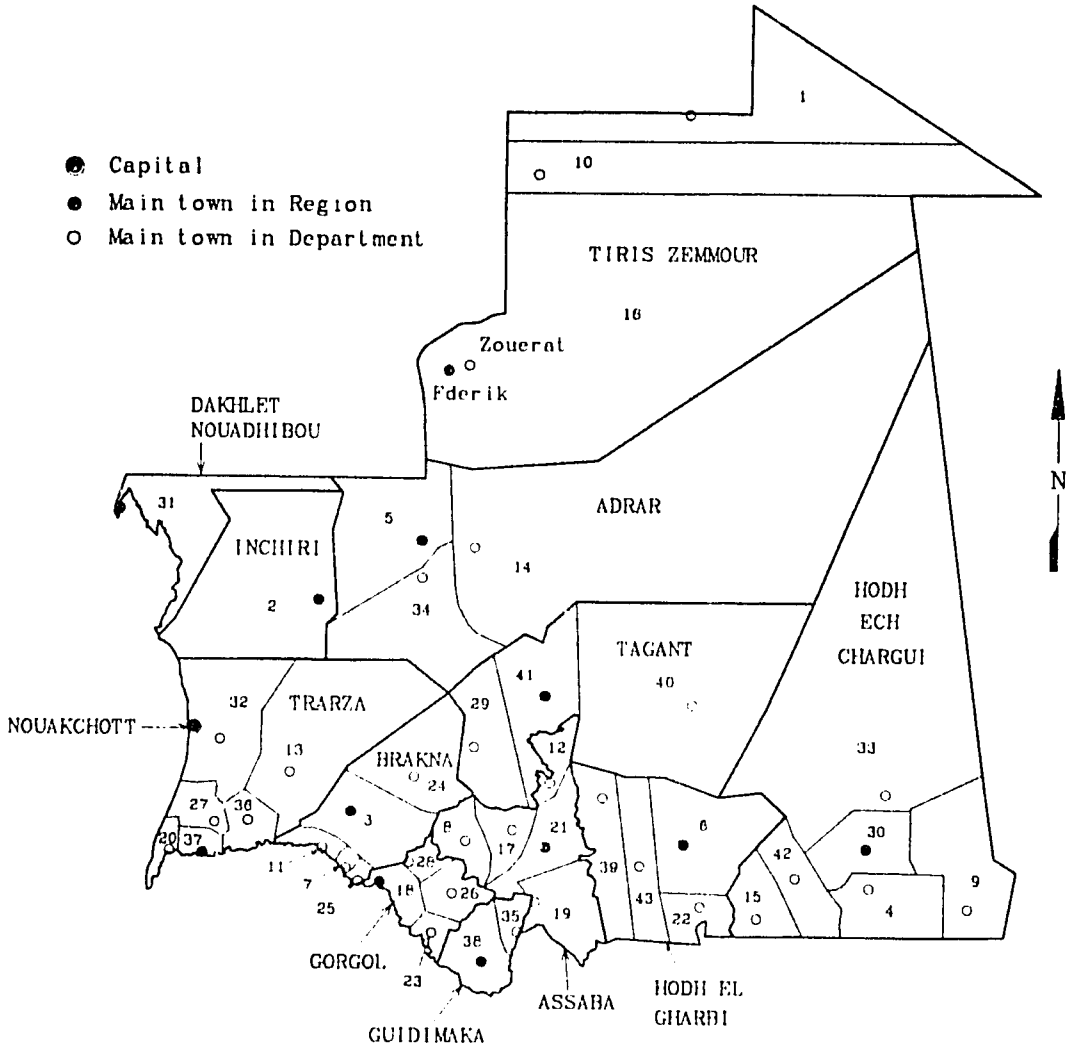
In the desert north, malaria is a negligible illness, but in the south it represents 25% of all illnesses in Gorgol, 24.5% in Hodh Gharbi, 21% in Guidimaka and 20% in Assaba. The figure is lower in the two river regions of

Brakna and Trarza -- 14.8% and 11% respectively. Malaria takes its toll, especially during the rainy season, from August to October. Of diseases in the north, scarlet fever accounts for many clinic visits (Inchiri Region 17% of all clinic visits, Tagant 12%), although most of the cases are found in Hodh ech Chargui, Trarza, Assaba and Gorgol Regions.

Mortality is not highest among the most frequent diseases. In 1985, measles caused the greatest number of deaths -- 196 deaths, or 27.2% of all deaths recorded at public clinics -- while the illness represented only 2.6% of all diseases recorded. Measles peaked in April, during both 1985 and 1986.

Map 4: MAURITANIA

Departments (Preliminary)



1.	Ain Ben Tili	TZ	16	Fderik/Zouerat	TZ	30	Nema	HC
2	Akjoujt	IN	17.	Guerou	AS	31.	Nouadhibou	DN
3.	Aleg	BR	18	Kaedi	GO	32	Ouad Naga	TR
4	Amourj	HC	19.	Kankossa	AS	33	Oualata	HC
5.	Atar	AD	20	Keur Massene	TR	34	Oujeft	AD
6	Ayoun el Atrous	HG	21.	Kiffa	AS	35	Ould Yenge	GU
7.	Bababe	BR	22	Kobenni	HG	36	Rkiz	TR
8	Barkewol el Abiod	AS	23.	Maghama	GO	37.	Rosso	TR
9	Bassikounou	HC	24.	Magta Lahjar	BR	38	Selibabi	GU
10	Bir Mogrein	TZ	25	M'Bagne	BR	39	Tamchekket	HG
11	Boghe	BR	26	Mbout	GO	40	Tichit	TA
12	Boumdeid	AS	27.	Mederdra	TR	41.	Tidjikja	TA
13	Boutilimit	TR	28	Monguel	GO	42	Timbedgha	HC
14	Chinguetti	AD	29.	Moudjeria	TA	43	Tintane	HG
15	Djiguenl	HC						

Source: FEWS/Mauritania 1986; IGN 1980
FEWS/PWA Nov. 1986