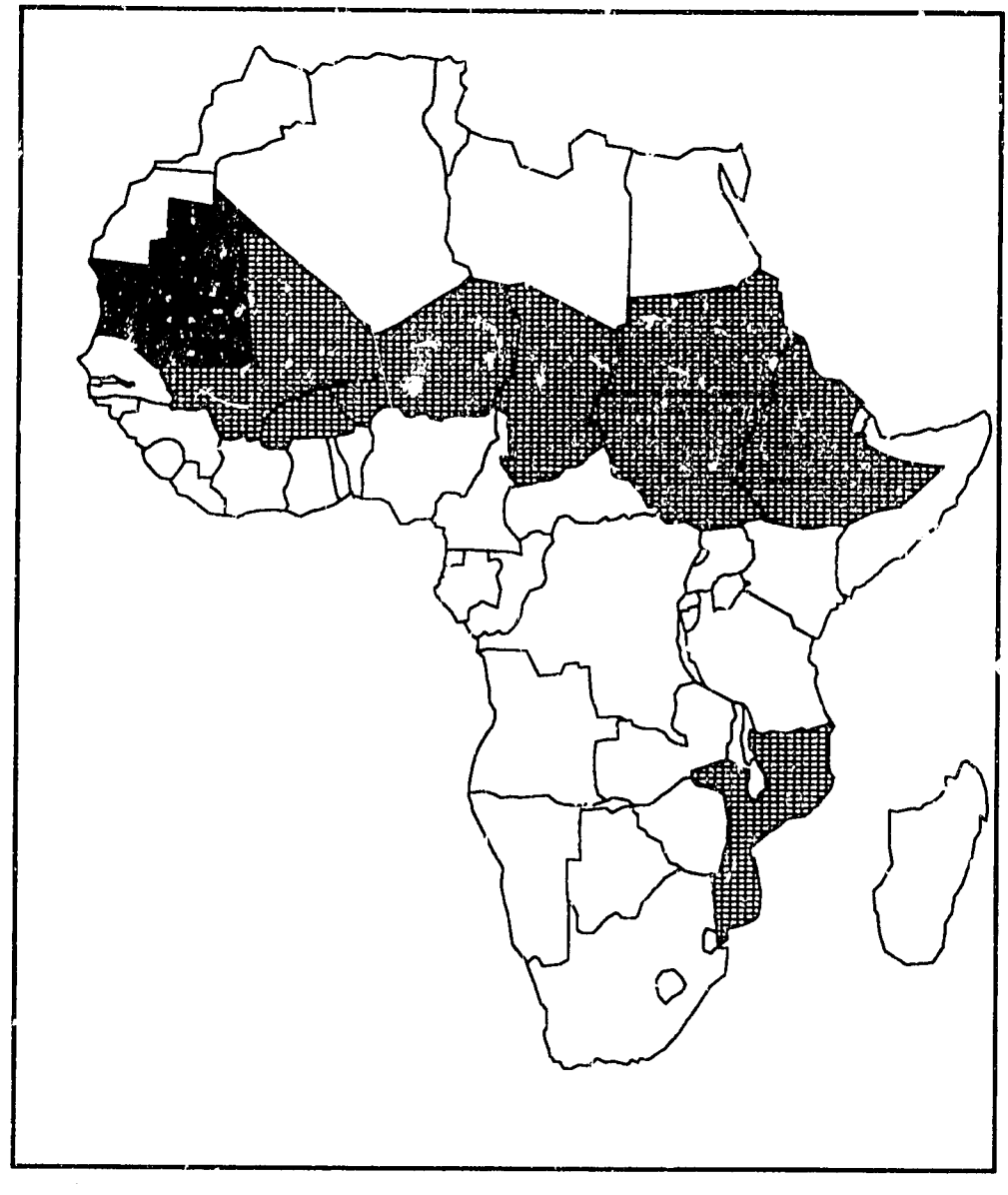
PN-AAW-110

Report Number 6
November 1986

FEWS Country Report
MAURITANIA



Africa Bureau
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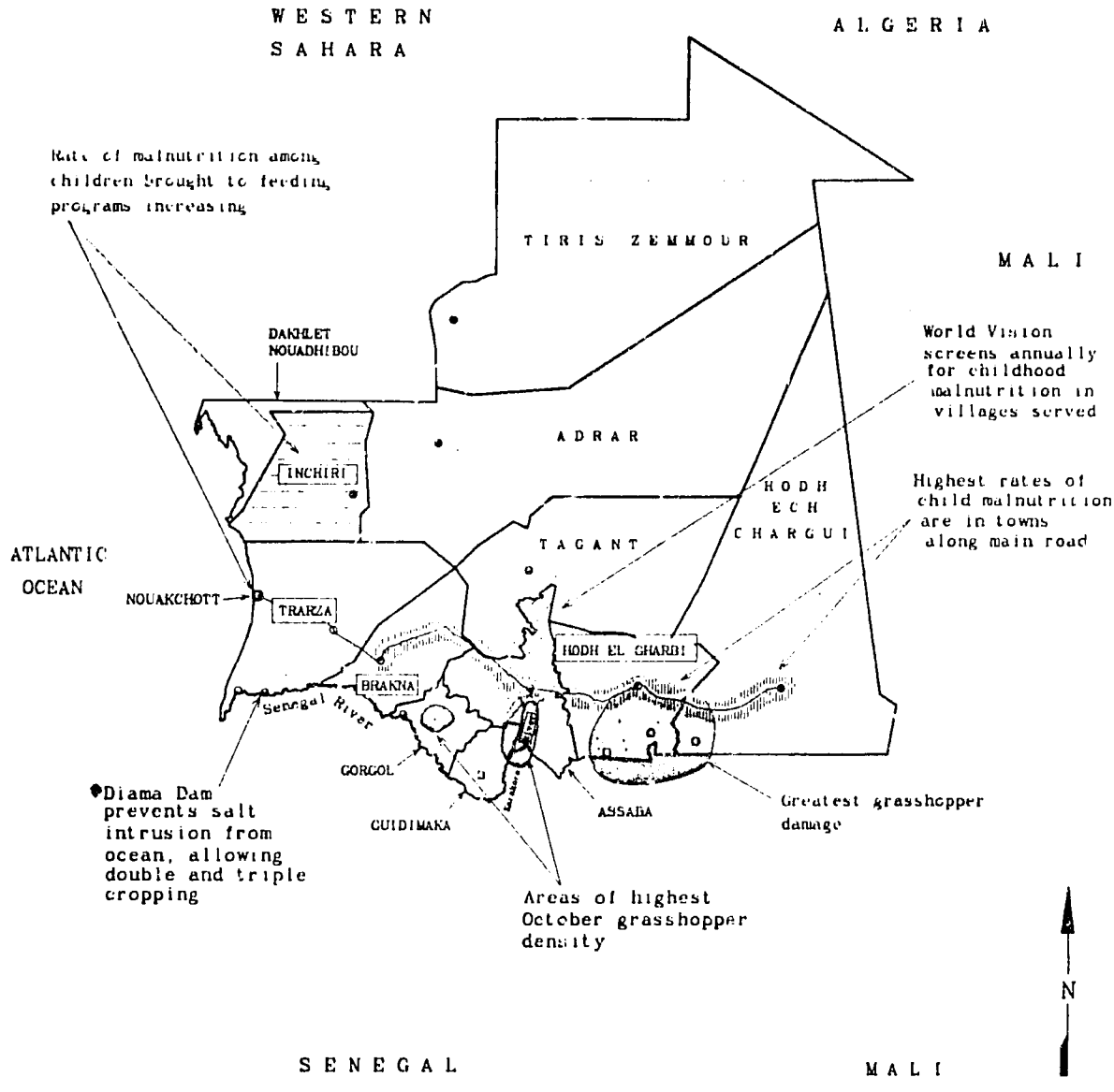
Map 1: MAURITANIA

Summary



FEWS/PWA Nov. 1986

Famine Early Warning System Country Report

MAURITANIA

Looking Up

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

Prepared by
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November 1986

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INTRODUCTION

This is the sixth 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 sixth Mauritania report owes a debt to various offices of the US Agency for International Development (AID), National Oceanic and Atmospheric Administration's National Environment Satellite, Data, and Information Service's Assessment and Information Services Center (NOAA/NESDIS/AISC), and USAID/Nouakchott; the Government of the Islamic Republic of Mauritania Ministry of Agriculture, Ministry of Public Health, Ministry of Rural Development, and Center for the Study of Demographics and Society; the Expanded Program of Immunization and the Commission for Food Security; the UN Food and Agricultural Organization and World Food Program; AGRHYMET; and CARE, Medecins sans Frontieres, Catholic Relief Service, World Vision International, and Terre des Hommes.

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

SUMMARY

The agricultural outlook has considerably in one month's time because of the September rains. Instead of fears of a bad harvest, expectations for the 1986 cereal crop are now highly positive, although the harvest still will not meet Mauritania's food needs after commercial imports. A crop assessment survey conducted during October predicts a 1986 net cereal product of 106,000 metric tons (MT), a possible 86% increase over last year (57,000 MT). If 1987 commercial imports equal those of 1986, this net cereal product would imply a preliminary food grain gap of 45,300 MT. The grasshopper threat has diminished with the intense control program and the end of the rainy season, although high density pockets still occur and spraying is still planned in certain areas. The contol effort did not prevent the current generation of insects from laying eggs, however. Next year's infestation will pose as much, if not more, of a threat to crops than this year's did. The cholera situation is under control, with only few cases recorded.

Issues

- This year's cereal harvest, substantially higher than expected, will possibly be as high as was usual before the mid-1970s (121,000 MT for millet and sorghum alone). While Mauritania will still experience a food needs gap, the gap will be substantially reduced from that of the last few years.

Key November Events

- The UN Food and Agricultural Organization crop assessment will become available; other major donors have planned to conduct a joint crop assessment in November.

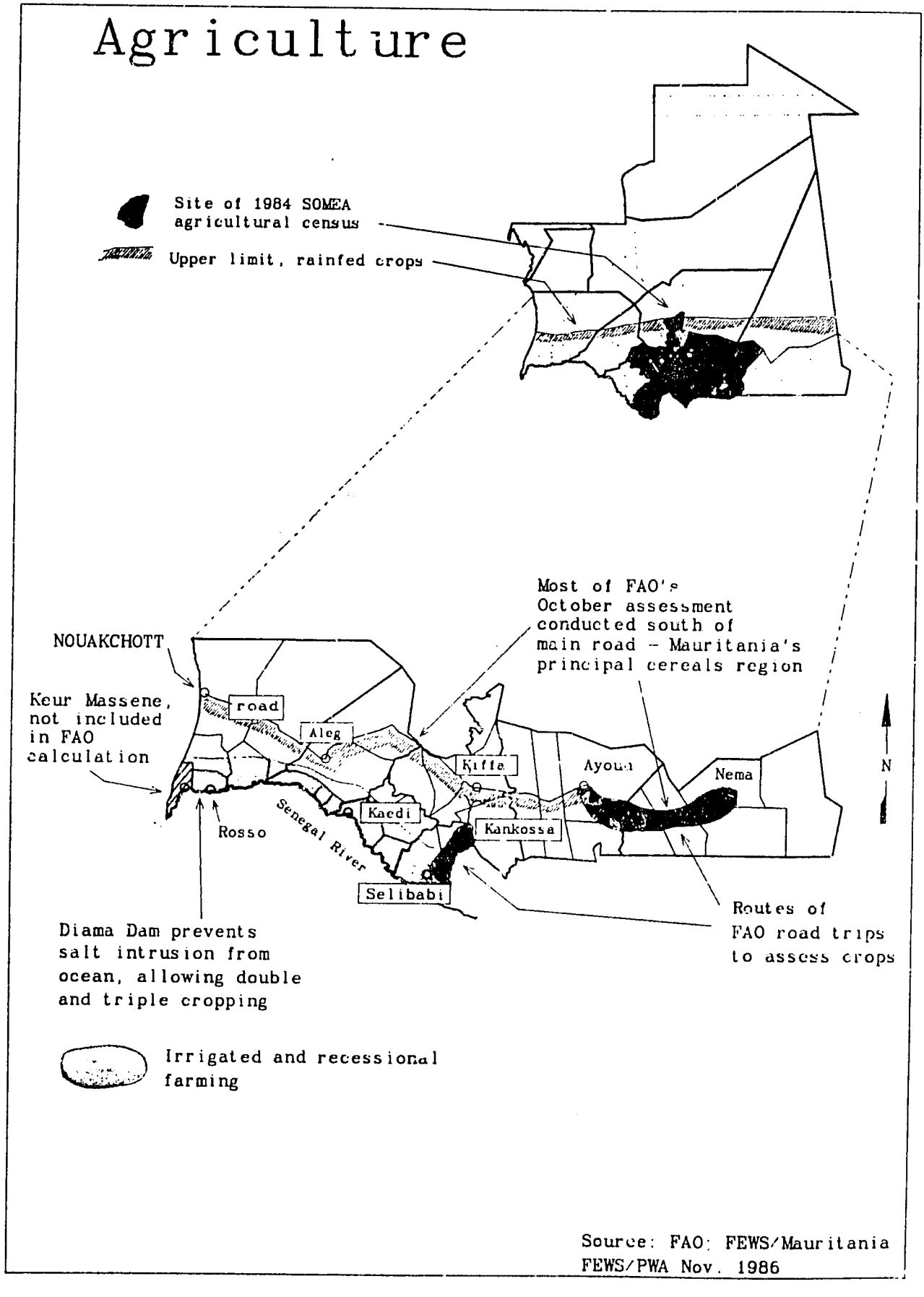
- World Vision will conduct a nutritional survey of children zero to five years of age in the villages it serves in Assaba which will bring.

RAINFALL, CROPS AND PASTURES

Whereas cumulative rainfall from the beginning of the season to the end of August was more than 40% below the same period in 1985, September rains have been sufficient to bring the 1986 total to near par. That total is still not high (see Appendix I). It should be noted that in some areas the excellent rains of September were not able to overcome previous drought stress which had caused replantings and losses. The Senegal River crested to a level close to that of last year, so the average flood recessional crop yield in the bordering regions should be at least the same (340 kg/ha, Map 2).

A UN Food and Agriculture (FAO) mission, consisting of two FAO consultants, two CILLS (Interstate Committee to Combat Drought in the Sahel) consultants, the Government of the Islamic Republic of Mauritania (GIRM) Extension

Map 2: MAURITANIA



Source: FAO: FEWS/Mauritania
FEWS/PWA Nov. 1986

Office's Director of Agriculture, a statistical officer from the Ministry of Rural Development, and a representative of the CSA (Committee for Food Security) made an estimate of 1986 crop production for Mauritania. Their assessment was presented verbally to the Minister of Rural Development and the Commissioner for Food Security in October. The figures were apparently approved by the representatives of the GIRM. The FAO team promised to send a complete report to Mauritania from Rome sometime during November. A crop assessment committee with representatives from the GIRM and the other major donors in Mauritania had been planned for November; however, no concrete preparations have been made pending receipt of the FAO report.

The FAO estimate of 1986 production was a combination of extrapolated 1984 data for three regions and the current FAO mission results. The 1984 data is from an agricultural census conducted by SOMEA, an Italian Bureau of Agricultural Statistics, for the Agricultural Statistics Department of the Ministry of Rural Development. The SOMEA census covered Assaba, Hodh el Gharbi and Guidimaka Regions (Map 2), and included measurements in the field as well as interviews with agricultural officers and farming families.

The October FAO mission covered most of Mauritanian agriculture, with the exception of Keur Massene Department of Trarza Region and areas in Adrar, Assaba, and Tagant Regions (Map 2). The mission conducted an aerial survey to obtain an estimate of area cultivated, and drove in a southern circle from Ayoun el Atrous to Nema and from Selibabi to Kankossa. Several samples of cereals were weighed at Kaedi, and their degree of humidity measured at the Center for Seed Production. The number of cereal stalks per 10 square meter were measured in the various zones. Estimates were made by region, crop (millet, sorghum, maize, rice), and type of cultivation (rainfed, recessional, bottomland, irrigated). A summary of those estimates is given in Table 1.

Table 1: FAO Crop Production Estimate - Mauritania

	1986 (FAO Est)	1985 (GIRM)
Area Cultivated (Hectares)	245,300	169,000
Average Yield (Kg/Ha)	500	475
Gross Production (MT)	123,000	80,000
Losses (milling,seed,other)	14%	29%
Net Production (MT)	106,000	57,000

Source: FAO Verbal Report; GIRM Letter of January, 1986

Approximately 30% of the 1985 crop was lost due to pests and other causes. For 1986, a loss figure of 14% was used, under the assumption that losses will be smaller due to this year's intensive grasshopper control campaign. Keur Massene Department was not included in the FAO estimate, but the Director of Agriculture estimates that 3,000 to 4,000 hectares were planted, yielding 400 kilos per hectare (1200 to 1600 MT).

Recessional Crops

The large increase in cereal product in part may be explained by changing patterns in recessional cropping not previously accounted for in GIRM estimates. The introduction of the Diama Dam at Rosso (Map 2) has prevented the annual ocean tide intrusion into the Senegal River, allowing double and triple cropping where previously only single cropping had been possible. The FAO mission estimates that, in the Kaedi Department alone, 80% of the possible recessional cropland has been cultivated. The long term rainfall deficit in Hodh ech Chargui Region has caused farmers to shift from total rainfall dependence to the bas fond recessional strategy, which allows for intensive cropping at temporary ponds in low-lying areas.

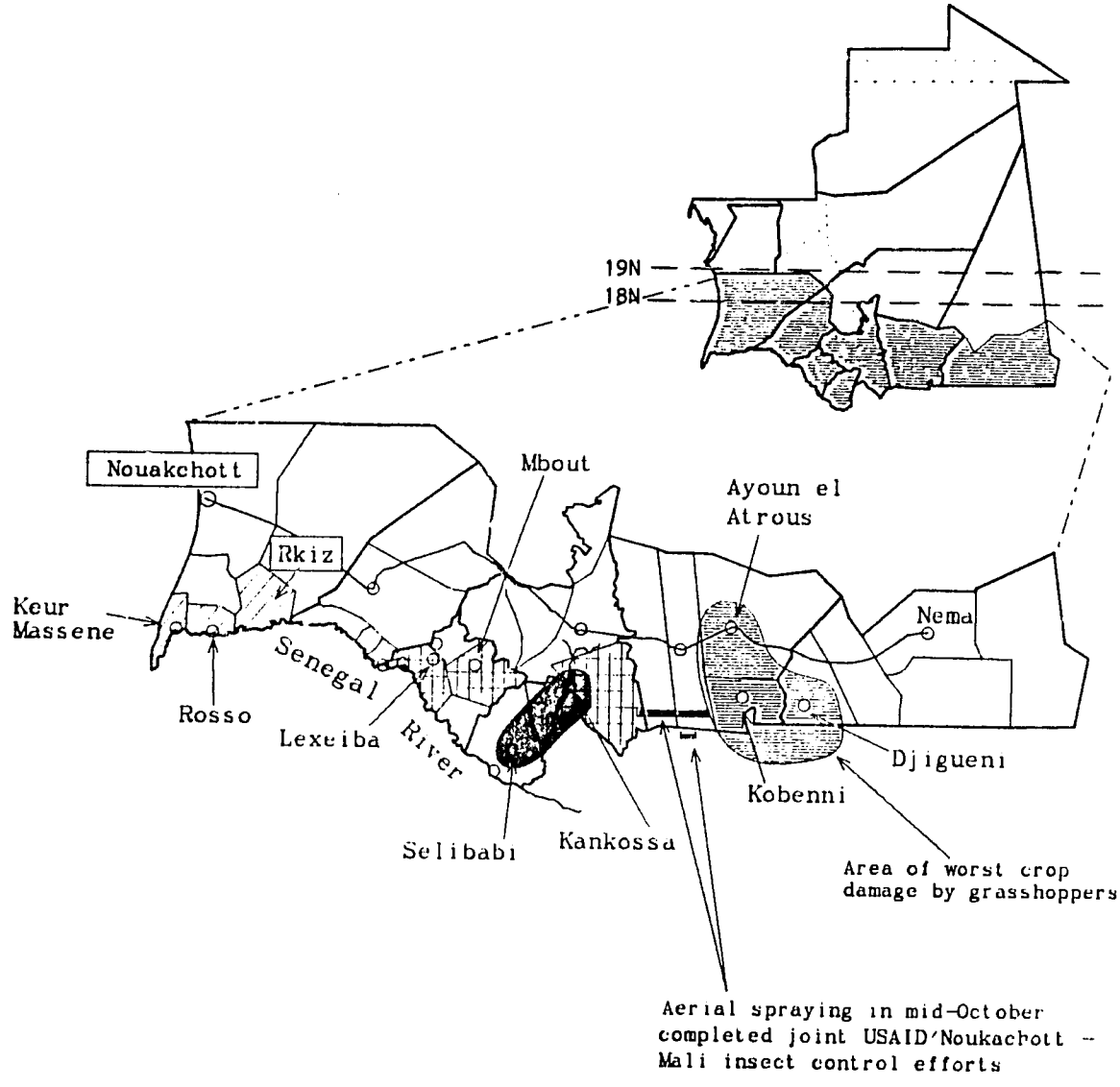
GRASSHOPPERS

The estimate of area threatened by grasshoppers has considerably diminished from the 160,000 hectares cited at the end of September. USAID/Nouakchott estimates that grasshoppers will cease as a problem this year around mid-November, due to cooler weather and lack of rain. The grounds have been laid, however, for a renewed grasshopper threat next year that will be at least as strong as this year's. The control measures have not prevented egg-laying, and the strong rains in September allowed some grasshoppers to move as far north as 18 and 19 Degrees North (Map 3), well outside of the current control area. The present area at risk is estimated at 50,000 hectares, located near the eastern Mauritania/Mali border and in pockets in Guidimaka and Gorgol. Especially at risk is the Karakoro Valley from Selibabi to Kankossa, according to USAID/Nouakchott (Map 3).

FAO estimates grasshopper densities in Kankossa (Guidimaka Region) at 50-60 per square meter, in Lexeiba (Gorgol Region) 100, and Mbout (Gorgol Region) 50-60. There is no information on the grasshopper situation in southwestern Mauritania (Rosso, Keur Massene, and Rkiz Departments of Trarza Region), although a French spray-helicopter is operating there. An AID/Mali mission to the eastern Mauritania/Mali border area on October 7/8

Map 3: MAURITANIA

Grasshoppers



Area at greatest risk of crop damage by grasshoppers

Other areas threatened by grasshoppers

Areas for which there is no new pest information, although aerial spraying took place in October

N

Source: Mission Cables
FEWS/PWA Nov. 1986

discovered that the insects have condensed into a smaller area, which has been partially sprayed via airplane on October 14.

Grasshoppers continue to threaten to move southward from the now rich pastures to damage ripening millet fields in the bas fond areas. At the end of October, the insects were in a larval state, starting to grow wings. The grasshoppers so far have had the worst impact on crops around Ayoun el Atrous (Hodh el Gharbi Region), Kobenni, and Djigueni (both in Hodh ech Chargui Region, Map 3), although farmers say that this year was not worse than the last three years.

Control

USAID/Mali, for logistical reasons, planned to spray 40,000 hectares in Mauritania. Activities started September 19, and by September 28th, two helicopters had covered 16,000 hectares. On October 14, three American DC-7s operating from Dakar sprayed Malathion on two major areas, one in Mauritania, and one in Mali near the Mauritanian border (Map 3). This spraying activity finishes the USAID/Mali obligation.

USAID/Nouakchott has purchased an additional 20,000 liters of Malathion for $113,000, which is enough for 40,000 hectares (0.5 liter per hectare). When the Algerian planes that have been promised arrive, the final spraying can begin. Operations will be conducted from Ayoun el Atrous (Hodh el Gharbi Region) with transport costs and crews' salaries paid by the World Bank. US Government funding is available for fuel, oil and some technical assistance.

DEMOGRAPHIC DATA

The demographic data used by most agencies and the GIRM are based on an extrapolation of the 1977 population census, carried out by CEDES (Center for the Study of Demographics and Society). These figures do not take into account the dramatic changes in the population's geographic distribution as a result of the drought of the early 1980s. A national census which will address these changes is to be taken in late 1986 or early 1987. Until this census is published, however, FEWS will use a geographical population distribution estimate based on data from CEDES, CSA (Center for Food Security), CARE, and PEV (EPI, Expanded Program for Immunization).

Departmental Population

CARE publishes reports on the total number of beneficiary families by Department (the administrative level below Regions). From these lists one can derive an approximate population served, assuming an average of five indivi-

duals per family. The second CARE distribution (July 1985) was to more or less 100 percent of the population. While the population arrived at by this method is probably inflated (estimated total number of food aid recipients was 1,989,759), the proportions across Departments are a reasonable picture of the current situation. FEWS analyzed and compared population figures from CEDES, CSA, and PEV with those from the second 1985 CARE food-aid distribution to arrive at an adjusted population distribution that accommodated all four databases.

The FEWS estimate of Departmental population outside of Nouakchott was computed by multiplying the CEDES total population less Nouakchott (1,483,562) by the adjusted CARE population distribution (Appendix I, Table 3; Map 4). For Nouakchott, where no CARE data were available, estimates of distribution were arrived at through interviews with the local authorities and with CSA.

Urban Population

The CEDES estimates of population of the cities and towns reflect the same dependence on unadjusted extrapolations from 1977 data as mentioned above. An immunization survey by PEV/PRSSR in April 1986 for several cities in Mauritania, enabled an estimate of the population of the towns of Nema, Ayoun el Atrous, Boghe, Atar and Tidjikja (also Appendix I, Table 3; Map 4).

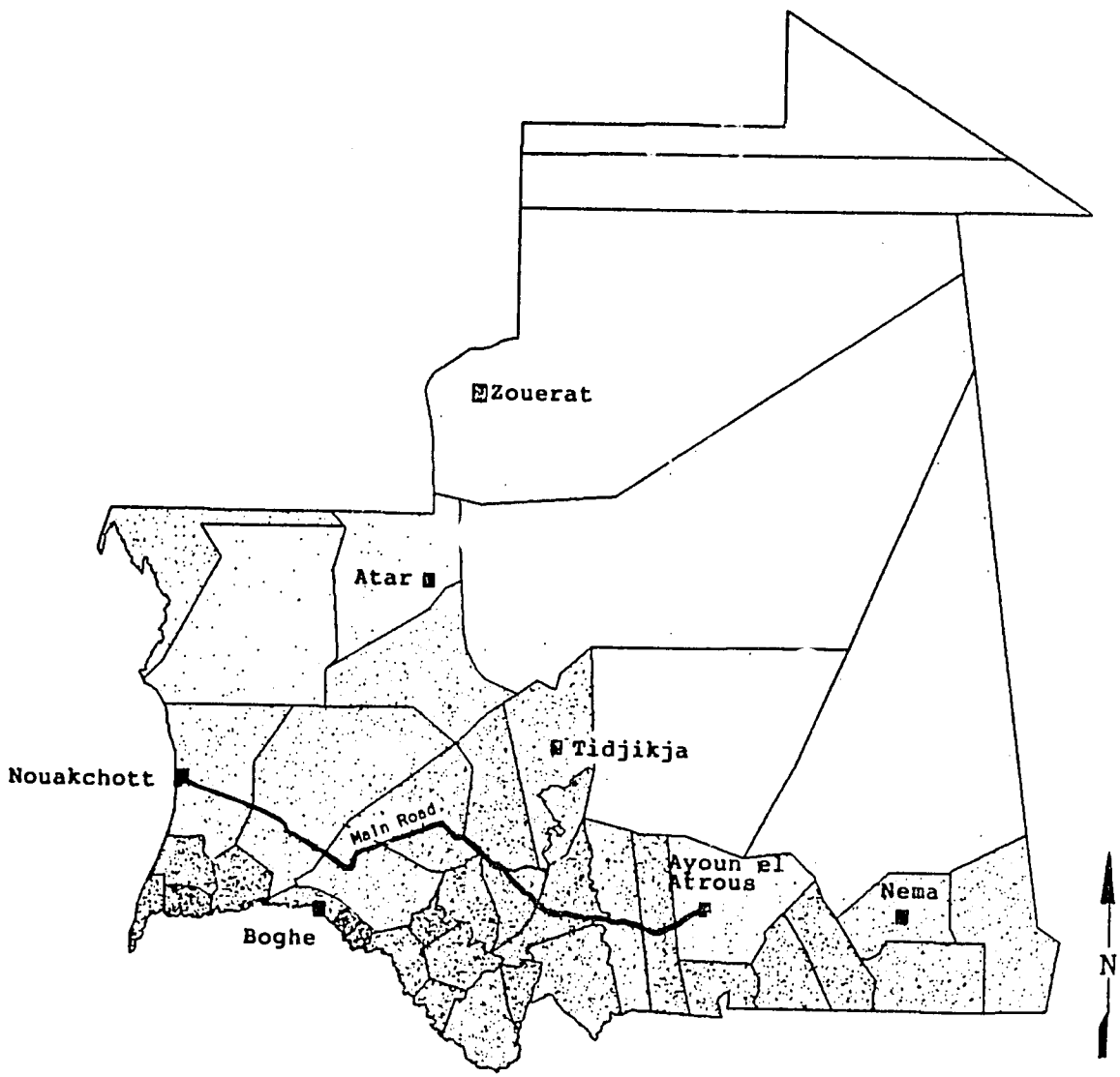
The urban population of Mauritania has been increasing steadily in the past decades. Table 4 in Appendix I shows the evolution of urban population from 1961 to 1977, the year of the census. After 1977 the drought has probably intensified the rural exodus. A World Bank report (Population Problems in Sub Saharan Africa; Washington, August 1986) states that the urban population has increased from seven percent in 1965 to 25% in 1983 (source unknown). The next national census will show how quickly urbanization is proceeding after the years of drought. One conclusion which can be drawn from the immunization survey data is that the population of Nouakchott has been wildly overestimated. Instead of one third of the population of the country, one fifth or even less is probably nearer to the truth.

Female-Male Ratio

One possible consequence of rapid urbanization is the disequilibrium in the ratio of males to females, both in the rural and urban zones. For Mauritania, no data exist on this issue after 1977, but it can be assumed that the trend has continued; a majority of males in the urban areas, and a majority of women in the rural areas. It

Map 4: MAURITANIA

Population Density



Source: FEWS/Mauritania

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appears that men are only over-represented in those towns which are economically important and fast growing, such as Nouadhibou, Nouakchott and Akjoujt. The yearly repatriation campaign of farmers to the rural zones, on the other hand, might slightly counterbalance the male-female disequilibrium.

In the traditional rural towns, such as Atar, Selibabi and Kaedi, women are a majority. Eyewitness accounts underline this fact; in the rural areas there is an important but unknown number of female headed households. The women find themselves burdened with extra tasks and financial obligations, which used to be handled by the men. These are added to their already important workload and financial responsibilities, like buying medicine and food items for the family. It should be noted that not only migration, but also the high divorce rate, accounts for the important number of female headed households.

Although a high rate of female headed households cannot be seen as a direct indicator of any crisis or famine, it is a demographic reality which is likely to cause stress on the human resources available. For example, the World Vision report of September 1986 for Assaba Region mentioned a high rate of absence at the CACs (Community Feeding Centers for malnourished children) due to the amount of time the mothers had to spend in the fields. Any program aimed at rural target groups, be it an emergency relief or an agricultural development program, must take into account the various roles of women in Mauritania as farmers, entrepreneurs, community members, and of course as those responsible for child rearing, family feeding, and health care; roles which are not always compatible.

NUTRITION

The Mauritania lacks an operating nutritional surveillance system. It is possible, even so, to make qualitative assessments of nutritional status via a patchwork of data from different sources and of differing quality such as monthly reporting systems and episodic surveys.

Available data from such sources indicate that within the CRS feeding centers, malnutrition rates have been somewhat stable in a majority of centers, although rates are increasing in Nouakchott and in Inchiri Region; that malnutrition rates in Assaba Region are higher than in Nouakchott, although the rates in both areas are relatively high; that malnutrition rates appear highest in those towns along the road; and that the figures of World Vision and Terre des Homme show that, at the moderate stage, girls are more malnourished than boys in the

Assaba and Nouakchott, while there is no gender difference in the rates of severely malnourished children, a probable reflection of traditional feeding patterns versus true desperation.

Data Sources

- The nutritional status of children in feeding centers as the CACs, the CRENs (Nutritional Education and Recuperation Centers), and Catholic Relief Services (CRS) feeding centers, is measured on a monthly basis. CRS reports the nutritional status of the children at its centers all over the country, using weight for age. World Vision reports on the Assaba Region, and sometimes on the Tagant Region CACs, using the weight for height standard. The data derived from these surveillance activities are not representative of the whole population of children; however, they do show trends within the feeding centers.

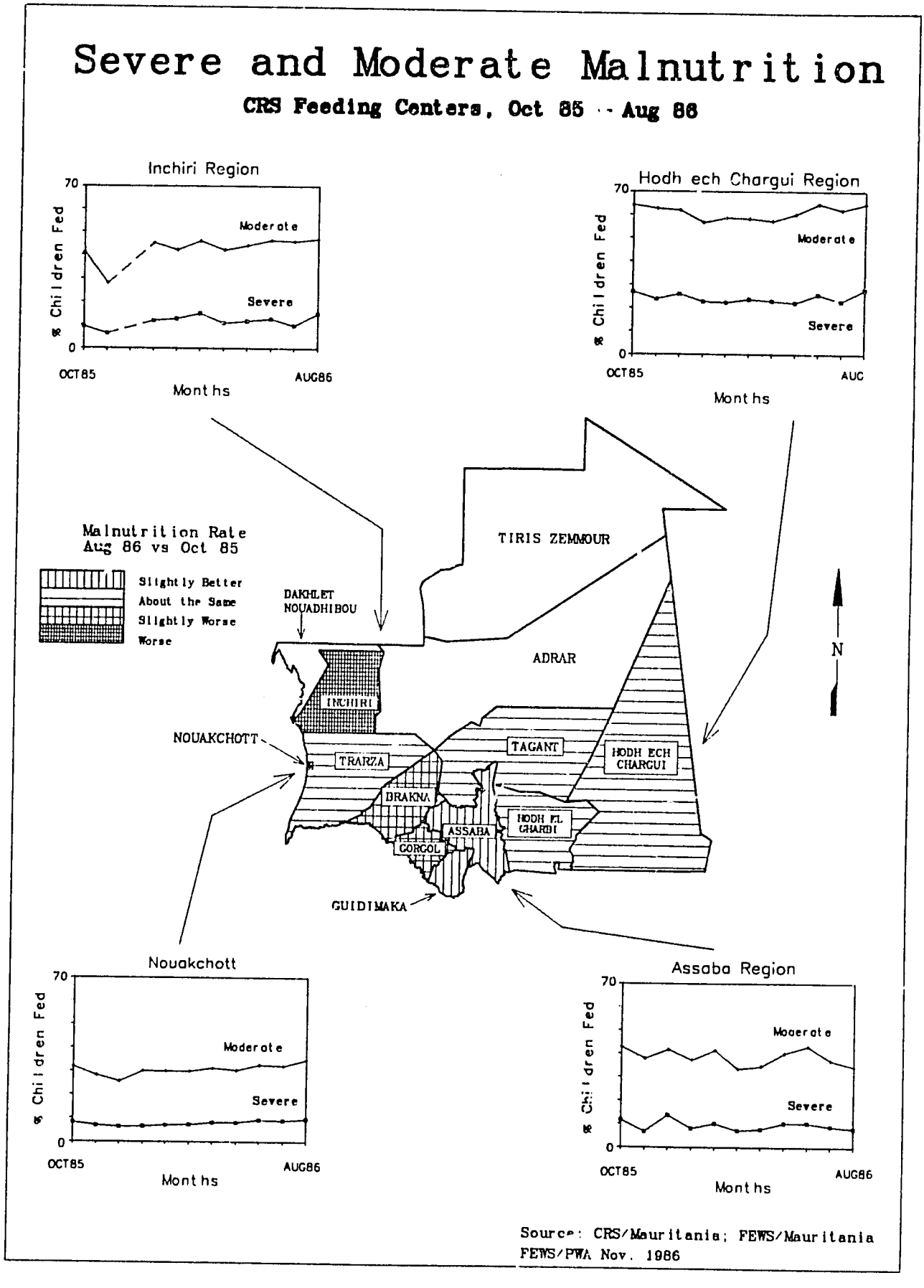
- USAID/Nouakchott conducted a nutritional survey in three regions in 1984. World Vision, in Assaba Region, does small monthly nutritional surveys in the villages where they assist the CACs. During the last twelve months three small screening campaigns were held, all using the weight for height measure: PMIs (maternal and child health centers) in Nouakchott (Winter 85/86); a screening of children of all villages regularly visited by World Vision (February 1986); and the Terre des Hommes survey of children at Zone 21, the Wharf district of Elmina Department, Nouakchott.

- Medecins Sans Frontieres (MSF) organizes screening activities in Hodh el Gharbi Region from time to time. Since spring 1986, they have concentrated on the cholera campaign, and have made no new reports concerning malnutrition.

CRS Data

In Assaba and Guidimaka Regions the degree of moderate malnutrition of the children in the CRS program diminished slightly between October, 1985, and August, 1986, while in Brakna and Gorgol Regions there has been a slight increase over the same period. Nouakchott and Inchiri Region, however, have shown a strong trend of increase in both severe and moderate malnutrition rates among children seen (Map 5) In both cases, the rate of increase in severe malnutrition is about half that for moderate malnutrition. Hodh el Gharbi also showed an increase in severe malnutrition through February, but the situation at the end of the summer is unknown. Further discussion with CRS will be needed to better understand the trends. In several of the agricultural regions,

Map 5: MAURITANIA



there seems to be a dip in the malnutrition rate around February and March. This may in part be explained by the spring harvest which occurs along the Senegal River.

The average malnutrition rate hides intra-regional differences. For instance, within Brakna Region, malnutrition in Aleg Department is much higher than at the Senegal River, due to agro-climatic and socio-economic differences. Also, in some Regions, only one feeding center is assisted by CRS (e.g. Hodh el Chargui and Inchiri), while in others five or six centers are available for data averaging. Thus, the data may be more or less representative of each Region as a whole.

CRS/Nouakchott is undertaking a study of the impact of the feeding and nutrition education program in Nema Department, Hodh el Chargui Region, which shows a very high rate of malnutrition. The results should be available in the early spring (Map 5; Tables 5 & 6, App I).

World Vision Data

The World Vision (WV) team of Assaba has conducted annual nutritional surveys covering the total population of children zero to five years of age in the villages included in the WV program. The Community Feeding Centers (CACs) of Kiffa Department, Assaba Region, were closed during the summer due to cholera, and many CACs suffered from low attendance due to the summer agricultural campaign.

The February 1986 WV survey shows that malnutrition is worst at the age of around one year, which corresponds with the weaning period. Overall, girls show a higher rate of malnutrition, indicating less access to food than for boys. It appears, however, that there is no gender difference among the most severely malnourished children. World Vision is planning a similar nutritional survey in November. Table 7 in Appendix I shows summary nutritional figures, comparing 1985 with 1986.

The rate of malnutrition in the villages has somewhat decreased from 1985 to 1986. From the data it appears that those villages situated in urban centers or at the asphalt road from Nouakchott to Nema have a higher rate of malnutrition than those in the hinterlands. This could be explained by the fact that people in the hinterland grow crops and keep cattle, however harsh their life is. The villages or towns on the main road contain many displaced people who are dependent on food-aid and who may have come to the towns because they lack other resources. Also, among these semi-urban villages the community bond is less strong, so that the CACs function

less well. The person responsible for the CAC in a distant village may travel far to organize his or her CAC food ration, but the rural CAC is still better organized than the semi-urban CAC.

Terre des Hommes Data

In September of this year, Terre des Hommes (TDH) started a four month health, nutritional and immunization survey among all the children aged zero to five years of the Wharf, a district of Elmina Department, Nouakchott containing about 3,000 people in the semi-industrial area around the new harbor. No health facilities exist as yet. The local authorities have helped the TDH nurse to list all the children, and participation in the survey is obligatory. As with the World Vision data, the Terre des Hommes data shows a higher rate of malnutrition among girls. More research is needed, however, before any general conclusions can be drawn.

Table 8 in Appendix I compares the malnutrition figures of Assaba Region, the Wharf district, and the Nouakchott Departments. The rate of malnutrition is much higher in the region of Assaba than in the shanty towns of Nouakchott. Within Nouakchott, Teyerett ("premiere") Department, housing people who have migrated from the north, shows a far higher rate than the other Departments, approaching the high rates seen in Assaba Region. As mentioned above, the semi-urban centers within the Assaba show the highest rates of malnutrition. It would be interesting to see if, following the expected good harvest, the rate of malnutrition measured by the next WV survey in the Assaba will have decreased.

HEALTH

In 1977, the Expanded Program of Immunization (PEV) started under the department of Preventive Medicine of the Ministry of Health. PEV has an objective of immunizing all children of less than 5 years against measles, tuberculosis, diphtheria, whooping cough, tetanus and poliomyelitis. The program operates through the PMIs (maternal and child health centers) and through mobile teams (one per region), that visit villages and camps on a trimester basis. In 1985, AID, UNICEF and other donors financed National Vaccination Days (JNV) in Nouakchott and other major cities in order to reduce the number of older non-vaccinated children and allow PEV to concentrate on children of less than one year. From 1984 to 1986 the coverage rate of children of 12 to 35 months in Mauritania has increased from 20 to 60% (Table 9, Appendix I). In Nouakchott alone, the mass campaign doubled the vaccination coverage rate within one year.

Morbidity

Cholera has lost its grip on Mauritania since the last report. Occasional cases are still found in Nouakchott and Nema. The MOH has built up a well working detection--isolation-treatment system, which can be set into motion again at any time.

FOOD FLOWS/ NEEDS

The food-aid stock present in Mauritania in early November was estimated by CSA to be at 70,000 MT. FEWS does not know current commercial stock. In mid-October, food-aid warehouses in M'Bagne and Bababe Towns, both in Brakna Region, were almost full. A large warehouse at Kaedi, the chief town of Gorgol Region, also contains an important stock.

The UN World Food Program (WFP/PAM) produces a monthly information sheet for Mauritania with the food stock arrivals. The figures for quantities distributed to Regional centers or quantities disbursed from Regional warehouses are not readily available, however, making a cross-check of food grains available difficult.

The following figures are derived from the WFP sheet:

Table 2: Food Stock Arrivals, November 1985 - September 1986

Commodity (MT)	Food-Aid Free Distr	Food-Aid Sale	Nov-Aug Commercial Import	Total Arrived	Expected By End of Year
cereals	87,978	71,362	42,258	201,598	38,113
milk	10,141	na	7,973	18,114	1,686
oil/butter	9,332	na	2,468 (oil only)	11,800	794

Source: WFP/PAM

In Mauritania, five nation-wide free food-aid distributions have been organized by the CSA since March, 1985. CARE was responsible for the transport and monitoring of these distributions for the second to the fourth distributions. CARE has published reports after each distribution, detailing the logistics.

Production Deficit

The total population of Mauritania is 1,827,786 people. At the FAO standard grain portion for Mauritania of 165 kg per capita, Mauritania will need 301,600 MT of grain for calendar year 1987. The current food-aid grain stock is 70,000 MT, and an additional 38,000 MT are expected to arrive before the end of 1986. This brings the unmet 1987 grain need to 193,600 MT before commercial imports,

and discounting any current commercial stock. Expected imports for 1987 are unkown, but if equal to the 1986 figure noted above, would bring the unmet 1987 grain need to 151,300 MT.

It was noted above that FAO predicts a net 1986 cereal product for Mauritania of 106,000 MT. A more conservative estimate is 85,000 MT after a 15% loss to pests, milling and seed stock. Table 5 gives the expected grain deficit for 1987 at several predicted harvest levels.

Table 3: Mauritania 1987 Food Grain Deficit

Possible Net Harvest Level (MT)	Deficit (MT)
106,000	45,300
100,000	51,300
85,000	66,300

Source: FAO/Mauritania; FEWS/Mauritania

The deficit will have to made up through further commercial imports and through food-aid from the various donor groups during 1987. These potential food-aid needs are much less than had been expected before the strong September rains.

Appendix I

Table 1: Mauritania Rainfall, September 1986 (mm)

Region	Station	1st Decade	2nd Decade	3rd Decade	Cumulative thru September 1986	Cumulative thru September 1985
Nouakchott	Nouakchott	6.4	18.9	10.9	45.0	35.9
Adrar	Atar	61.3	15.4	-	137.9	72.5
Inchiri	Akjoujt	11.7	27.8	-	84.1	19.4
Trarza	Boutilimit	26.8	71.5	11.1	134.9	147.6
	Rosso	106.7	16.9	23.8	267.0	153.1
	Tekane	5.0	-	30.0	85.0	159.6
Brakna	Aleg	25.4	64.5	29.7	260.6	116.8
	Magta Lahjar	50.5	20.0	17.5	147.5	147.5
	Boghe	7.3	50.5	25.8	169.1	151.2
	M'Bagne	29.1	83.7	45.5	257.7	-
	Dionaba	46.0	33.5	26.2	139.1	-
	Mal	47.5	25.0	61.0	201.5	-
Tagant	Tidjikja	11.1	13.4	0.9	46.5	117.0
	Moudjeria	44.0	-	-	-	62.5
	N'Beika	36.7	3.8	-	-	38.2
Gorgol	Kaedi	43.6	60.8	47.9	235.5	171.5
	Foum-Gleita	88.9	40.5	40.0	299.0	298.5
	Maghama	33.0	46.0	-	-	280.7
Assaba	Kiffa	64.8	9.6	79.9	235.7	186.1
	Boumbeid	7.4	3.5	4.6	77.7	-
	Kankossa	53.7	35.0	57.5	257.6	292.1
	Barkewol	60.3	34.7	37.0	261.6	-
Hodh Gharbi	Ayoun	45.5	0.6	4.6	140.8	144.8
	Tintane	24.0	20.0	16.0	166.5	257.4
	Tamchekket	33.0	0.0	56.0	195.0	130.0
	Kobenni	8.1	18.5	-	-	218.5
Hodh Chargui	Nema	26.3	5.7	30.9	134.3	138.0
	Timbedgha	42.0	20.0	30.0	-	153.4
	Oualata	7.8	16.7	-	-	-
Guidimaka	Selibabi	56.0	39.5	71.2	307.4	453.5
	Ould Yenge	127.5	43.0	36.8	314.2	256.2

Source: AGRHYMET: FEWS/Mauritania

Table 2: Total Grain Product, by Region

1986 (FAO Estimate)

Region	Area (ha)	Yield (kg/ha)	Product (mt)	Loss (%)	Net Prod (mt)	Net Yld (kg/ha)
Assaba	19300	400	7720			
Brakna	21720	557	12090			
Gorgol	71330	606	43243			
Guidimaka	11950	623	7445			
Hodh ech Chargui	75000	316	23700			
Hodh el Gharbi	28500	352	10025			
Tagant	8000	400	3200			
Trarza	9500	1632	15500			
Total	245300	501	122923	14%	105714	431

1985 (GIRM Report)

Region	Area (ha)	Yield (kg/ha)	Product (mt)	Loss (%)	Net Prod (mt)	Net Yld (kg/ha)
Assaba	23000	459	10561	37	6698	291
Brakna	21751	520	11320	27	8270	380
Gorgol	41515	441	18324	27	13363	322
Guidimaka	17712	823	14570	27	10656	602
Hodh ech Chargui	22700	274	6230	34	4106	181
Hodh el Gharbi	11000	303	3330	22	2585	235
Tagant	7500	323	2426	36	1564	209
Trarza	23870	566	13508	28	9674	405
Total	169048	475	80269	29	56916	337

Source: FAO/Mauritania; FEWS/Mauritania; GIRM Letter to US Ambassador, January, 1986

Table 3: Department & Town (known) Population and Area

Region	Dept (Town)	Population	Area (Sq Km)	Pop Density (Per Sq Km)
Adrar	Atar Town	26643	-	-
	Atar	6756	23900	0.28
	Chinguetti	9243	16600	0.56
	Oujeft	39500	25400	1.56
Assaba	Barkewol	48256	6700	7.2
	Boumdeid	14045	4500	3.12
	Guerou	30145	2800	10.77
	Kankossa	42134	11700	3.6
	Kiffa	65939	10900	6.05

Table 3 (cont'd): Department & Town (known) Population and Area

Region	Dept (Town)	Population	Area (Sq Km)	Pop Density (Per Sq Km)
Brakna	Aleg	24578	16300	1.51
	Bababe	26513	900	29.46
	Boghe Town	28056	-	-
	Boghe	19059	1600	11.91
	M'Bagne	26334	600	43.89
	Magta Lahjar	58354	13600	4.29
D. Nouadhibou	Nouadhibou	30517	17800	1.71
Gorgol	Kaedi	30503	4000	7.63
	Maghama	24174	2600	9.3
	Mbout	42423	5200	8.16
	Monguel	35107	1800	19.5
Guidimaka	Ould Yenge	26377	3700	7.13
	Selibabi	36108	6600	5.47
Hodh Chargui	Amourj	40562	9300	4.36
	Bassikounou	41980	16500	2.54
	Djigueni	33580	3900	8.61
	Nema Town	25809	-	-
	Nema	22272	9900	2.25
	Oualata	10582	134000	0.08
	Timbedgha	49371	9100	5.43
Hodh Gharbi	Ayoun	12220	17900	0.68
	Ayoun Town	21263	-	-
	Kobenni	33483	9500	3.52
	Tamchekket	25763	14600	1.76
	Tintane	59220	11400	5.19
Inchiri	Akjoujt	13641	46800	0.29
Nouakchott	Nouakchott	344224	-	-
Tagant	Moudjeria	57012	11800	4.83
	Tichit	2712	68200	0.04
	Tidjikja Town	14790	-	-
	Tidjikja	42046	15200	2.77
Tiris Zemmour	Ain Ben Tili	na	na	na
	Bir Mogrein	2633	85800	0.03
	Fderik	3498	167000	0.02
	Zouerat	14905	100	149.05
Trarza	Boutilimit	54453	28400	1.92
	Keur Massene	27694	2800	9.89
	Mederdra	39053	7700	5.07
	Ouad Naga	30722	19800	1.55
	Rkiz	61357	7700	7.97
	Rosso	52175	1400	37.27
Total		1827786	1,030,000	2.09

Source: FEWS/Mauritania; CEDES; CARE

876,000

Table 4: Evolution of Urban Population (1961-1977)

City	Population (000s) 1977	1975	Average Annual Growth Rate (%) 1961/62	61/61-75	1975-77
Nouakchott	134.7	104.1	5.8	23.8	13.8
Nouadhibou	21.9	23.0	5.3	11.5	-2.3
Kaedi	20.7	20.0	9.2	6.3	2.4
Zouerat	19.5	23.1	4.7	12.8	-8.1
Rosso	16.5	19.5	4.8	10.9	-8.1
Atar	16.2	18.9	9.5	5.6	-7.5
Kiffa	10.3	16.7	4.4	11.4	-21.7
Ayoun	8.5	13.6	4.9	8.6	-20.9
Akjoujt	8.0	13.0	2.5	14.0	-21.4
Nema	7.9	9.2	3.9	7.1	-7.3
Tidjikja	7.9	9.2	3.7	6.6	-1.9
Boghe	7.8	11.6	5.9	5.2	-17.9
Boutilimit	7.3	7.6	2.8	8.4	-2.4
Selibabi	6.0	5.8	2.7	6.2	1.8
Aleg	5.3	5.2	1.4	11.4	0.9
Timbedgha	5.3	-	1.8	-	-
Total	303.8	299.3	76.1%	11.8%	-0.1%

Source: FEWS/Mauritania; RAMS Statistical Compendium

Table 5: Average Regional Percent of Children Seen who are Severely Malnourished CRS Feeding Centers, October 1985 to August 1986

Region	Oct85 (%)	Nov85 (%)	Dec85 (%)	Jan86 (%)	Feb86 (%)	Mar86 (%)	Apr86 (%)	May86 (%)	Jun86 (%)	Jul86 (%)	Aug86 (%)
Assaba	11.6	6.7	13.8	8.2	10.2	7.2	7.8	10.4	10.4	9.0	8.0
Brakna	11.6	11.9	9.2	7.6	8.5	9.7	10.3	10.7	10.2	11.9	8.7
Gorgol	10.6	13.4	9.5	9.1	14.3	8.7	na	14.4	na	13.1	11.0
Guidimaka	4.9	6.3	5.4	4.3	3.7	3.9	4.1	4.1	4.2	3.6	4.0
Hodh Chargui	26.9	23.7	25.9	22.7	22.3	23.8	23.0	22.2	25.8	22.8	28.0
Hodh Gharbi	13.2	13.9	8.1	18.3	15.5	na	na	na	na	na	na
Inchiri	9.3	6.3	na	11.8	12.6	15.0	10.8	11.6	12.6	9.7	15.0
Nouakchott	8.2	6.9	6.3	6.5	7.0	7.3	8.2	8.1	9.3	9.0	9.6
Tagant	14.4	9.8	11.0	8.1	10.5	10.5	13.5	13.1	8.0	12.6	12.0
Trarza	10.5	8.0	7.5	6.7	7.6	5.6	6.8	7.2	8.5	7.8	7.7

Source: CRS/Mauritania; FEWS/Mauritania

Table 6: Average Regional Percent of Children Seen who are Moderately Malnourished CRS Feeding Centers, October 1985 to August 1986

Region	Oct85 (%)	Nov85 (%)	Dec85 (%)	Jan86 (%)	Feb86 (%)	Mar86 (%)	Apr86 (%)	May86 (%)	Jun86 (%)	Jul86 (%)	Aug86 (%)
Assaba	42.8	37.8	41.7	37.2	41.5	33.5	34.6	40.2	43.1	37.0	34.4
Brakna	39.7	39.3	36.6	33.0	34.5	38.0	37.7	41.8	39.8	41.2	40.1
Gorgol	45.3	48.3	36.1	39.5	48.1	39.2	na	50.0	na	48.6	47.4
Guidimaka	28.7	29.8	26.2	23.2	20.5	23.5	22.4	26.5	23.8	24.6	24.0
H Chargui	64.2	62.6	61.9	56.5	58.5	58.3	57.2	60.1	64.6	62.0	64.7
H Gharbi	8.3	38.7	34.4	40.8	35.3	na	na	na	na	na	na
Inchiri	41.1	27.8	na	45.1	42.1	46.1	42.2	44.0	46.3	45.8	46.9
N'kchott	1.9	28.2	25.6	30.1	29.9	30.0	31.3	30.4	32.7	32.3	35.0
Tagant	42.4	27.3	42.0	34.8	39.7	39.7	46.4	44.6	26.0	46.6	43.2
Trarza	38.4	33.9	33.6	30.9	30.7	29.2	32.8	32.3	34.9	35.3	34.1

Source: CRS/Mauritania; FEWS/Mauritania

Table 7: Nutritional Status in Feeding Center Villages, Assaba Region, 1985-1986

Village	Children Screened		% Severely Malnourished		% Moderately Malnourished		% Well Off	
	1985	1986	1985	1986	1985	1986	1985	1986
Boumdeid	117	105	-	-	15.4	12.5	36.0	58.0
Leftah	37	30	-	-	5.5	10.0	67.0	50.0
Hassey-Tine	54	17	-	-	0.0	0.0	27.0	52.9
El Ghaire	281	94	0.4	4.2	17.7	10.6	30.0	37.0
Lebheyr	90	70	-	-	10.0	1.4	40.0	68.0
Barkewol	121	109	0.8	2.7	11.6	7.3	48.0	56.8
Gabra	122	93	-	1.1	18.8	6.4	48.4	53.7
Seif	71	61	17.0	1.6	34.0	4.9	32.0	60.6
Khleigh	70	115	4.2	2.6	34.2	10.4	27.1	59.1
Touemiritt	213	241	2.0	1.6	17.0	10.3	46.0	55.0
Sonadar	178	66	0.6	-	14.0	12.1	43.2	42.4
Sagatar	132	40	0.8	5.0	20.4	17.5	35.7	32.5
Khadima	65	52	20.0	5.8	33.8	13.7	12.4	27.4
Brouda	56	34	-	-	17.0	8.0	44.0	88.0
Kankossa	119	67	-	3.0	6.0	7.5	67.0	49.2
Lekdheirat	92	92	5.4	-	42.4	4.3	22.0	71.7
Elgherd	96	45	7.0	-	33.0	11.0	16.0	60.0
Guerou	224	176	2.6	3.4	13.3	17.7	35.0	42.2
N'Takat	193	70	0.5	1.4	12.4	17.0	46.6	32.8
Total	2331	1577	3.2	1.7	18.8	9.6	38.1	52.5

Source: World Vision

Table 8: Nutritional Status of Screened Children

Place	Number Screened	Malnourished (%)	Borderline (%)	Well Off (%)
Assaba Region	1579	11.90	35.15	52.94
Wharf District	264	5.57	29.11	65.32
Elmina Dept	302	6.00	26.60	67.40
Ksar Dept	1028	5.00	24.10	71.90
Teyerett Dept	353	10.00	30.90	59.10
Sebkha Dept	690	6.00	29.90	74.10
Total	4216	7.41	29.29	65.13

Sources: WV (Assaba/Feb86); PEV (Nktt/Winter 85-86); TDH (Wharf/Sep86)

Table 9: Vaccine Coverage of Children Aged 12 to 35 Months, '84-'86

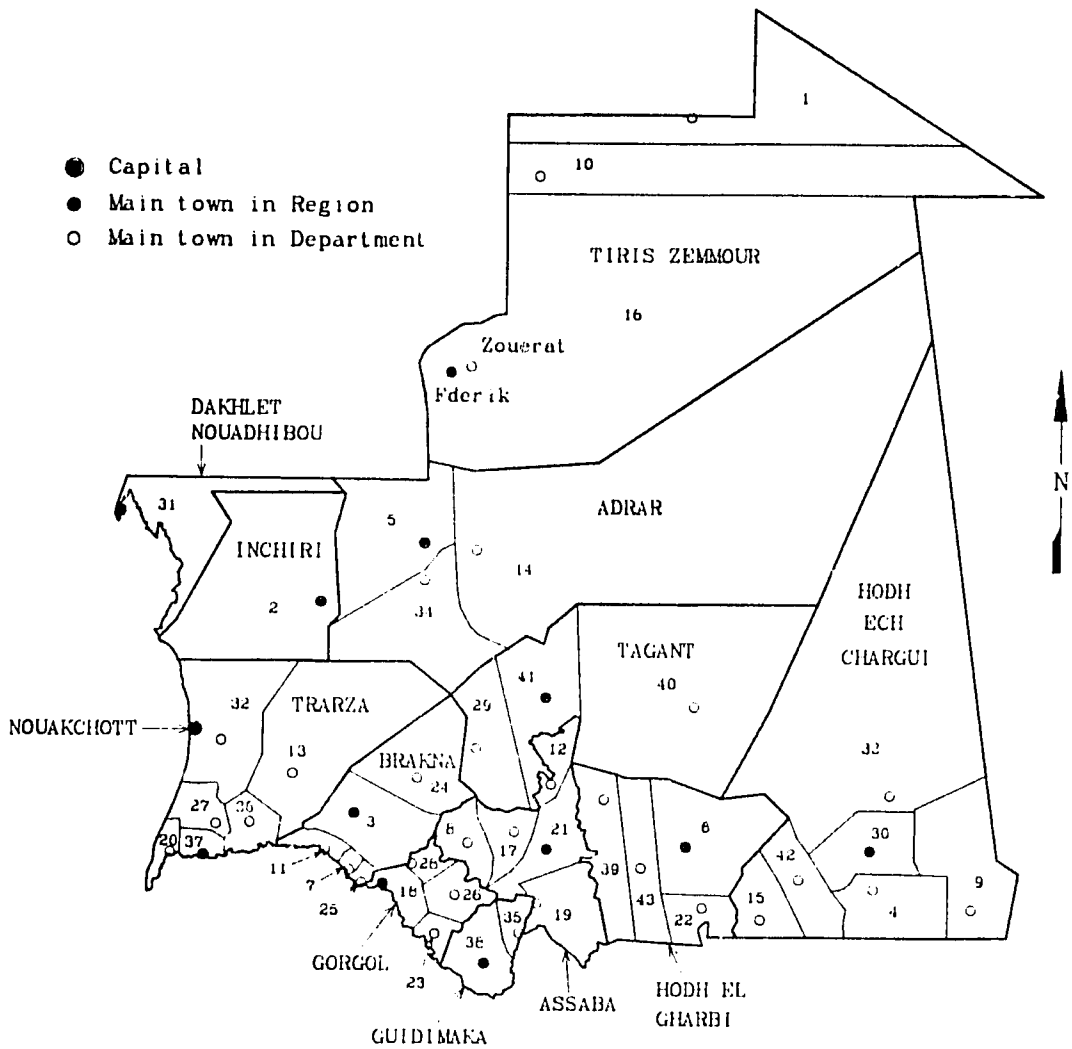
Region/Site	Number Seen	BCG* (%)	DPT 1^ (%)	DPT 2 (%)	DPT 3 (%)	MEASLES (%)	ALL (%)
1984 (Rural)							
Adrar	-	54.8	53.8	27.1	14.3	33.8	11.9
Aaaaba	-	66.7	60.1	36.7	27.6	55.2	27.6
Brakna	-	60.4	53.5	26.2	10.5	47.1	8.1
Gorgol	-	85.7	62.9	4.3	15.7	52.9	12.4
Guidimaka	-	66.2	59.0	26.2	12.4	47.1	11.0
H Chargui	-	48.1	44.3	17.1	8.6	33.3	6.7
H Gharbi	-	99.5	98.6	63.6	37.1	96.7	35.2
Tagant	-	89.0	87.1	57.6	29.5	79.5	29.0
Trarza	-	96.7	91.4	64.8	36.7	81.0	35.7
Total 1984	1890	-	-	-	-	-	20.0
1986 (Urban)							
Atar (AD)	214	95.8	93.0	89.7	76.6	69.6	65.4+
Kiffa (AS)	224	68.3	62.5	47.3	39.7	65.6	32.1
Boghe (BR)	224	99.6	98.7	92.9	84.8	84.8	80.8
Nouadhibou(DN)	222	86.5	68.5	27.9	20.7	20.7	43.7
Kaedi (GO)	219	98.6	97.3	89.5	79.9	81.3	74.9
Nema (HC)	223	97.8	96.4	87.4	78.5	78.5	74.9
Ayoun (HG)	213	99.5	95.3	92.5	82.2	79.8	70.9
Akjoujt (IN)	219	96.8	87.7	76.3	67.6	68.5	58.9
Nouakchott(NO)	1299	91.4	89.3	88.3	70.4	69.6	58.2
Tidjikja (TR)	215	94.9	89.3	79.5	64.2	71.2	55.3
Zouerat (TZ)	221	71.5	43.4	32.1	22.2	22.2	52.9
Total 1986	3493	91.1	85.4	77.6	64.8	63.7	59.9

Source: FEWS/Mauritania; 1984-PEV; 1986-PEV/PRSSR

*BCG - for tuberculosis
^DPT n - for diptheria, pertussis, and tetanus, rounds 1-3
+ includes polio, rounds one through three, also

Map 6: 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	Djiguent	HC						

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