
Disaster In The Desert

Failures of International Relief
in the
West African Drought

Hal Sheets

Roger Morris,
Project Director

SPECIAL REPORT
Humanitarian Policy Studies
The Carnegie Endowment for International Peace

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The Carnegie Endowment for International Peace
Washington

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On the Scope of the Study

This study began in the summer of 1973 as a relatively limited inquiry into the role of planning in disaster relief. As the work progressed, the scope of study inevitably broadened to include other dimensions of the United States and United Nations response to the tragedy in the Sahel. What follows, however, is still only a fragment of the complex and far-reaching story of the disaster and the continuing international relief effort. It is mainly an account of how the crisis was dealt with by the U.S. Government. As such, it is only a beginning of the research and analysis that should be prompted by this catastrophe.

This study scarcely touches a number of other critical problems: the internal politics and bureaucratic rivalries in the U.N.; the role of other donors, such as the French, so conspicuous by their relative indifference to the tragedy; the issues of national and international food policies in an era when the priorities between commercial purchases and humanitarian relief can be matters of life and death; the role of the media in reporting such disasters; the responsibility of national legislatures for humane and responsive relief policies.

Like the survival of the people of the Sahel, these issues urgently demand greater attention.

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By the autumn of 1972, five years of relentless drought had brought catastrophe to millions of people in the sub-Saharan region of West Africa known as the Sahel. Though emergency international relief over the following spring and summer saved many lives, famine took a grim toll among the 22 million people of the area. In a nutritional survey in four of the six Sahelian countries, U.S. Public Health Service experts calculated at least 100,000 deaths from the drought during 1973 alone. Most of the dead were children. On a proportional basis, it was as if more than a million Americans had been struck down by a natural disaster.

The human cost of the drought was not only in lives lost but in the destruction of a way of life for two million pastoral people. Their camels and cattle herds wiped out, their livelihood gone, the nomads survived the famine only to face despair, disease and still uncertain food supply in squalid refugee camps and settlements across six countries. For an already impoverished region, this mass of humanity driven from its economy and culture would be yet another burden, and a potential source of social or political turmoil for generations to come.

In 1973 the rains were again meagre, the land barren. In the words of the League of Red Cross Societies, the plight of the Sahel was "desperate" and its needs "urgent and immense."

Engaged in drought relief in the area since 1968, agencies of the United States Government and the United Nations assumed major roles in international relief for the Sahel in 1973, much as they had led similar humanitarian efforts in such disasters elsewhere in the world for more than a quarter century. In some measure, this emergency effort was generous and effective. By mid-October 1973, more than twenty countries had provided some \$150 million in aid. The U.S. was the largest contributor with \$50 million. American officials claimed early in August in a report to President Nixon that "mass famine had been

averted.” And it was clear that grain shipments rushed to Africa through the summer of 1973 prevented starvation deaths from mounting toward the even greater numbers many observers had earlier feared.

According to reliable sources, however, the drought in the Sahel also revealed serious flaws in the organization of the international relief effort. Behind humanitarian intentions and official claims of success lay bureaucracies often unprepared, or unable, to take measures that might have further reduced the tragedy. Despite decades of international experience in dealing with mass famine, relief for the Sahel seemed haunted by rudimentary failures to heed early warnings, to plan in advance, and to monitor and coordinate the rescue efforts.

Drawn mainly from interviews with responsible officials and from several unpublished official documents, this study recounts from a Washington vantage point these and similar problems in the administration of drought relief by the U.S. Agency for International Development (AID) and, to some extent, the U.N. Food and Agriculture Organization (FAO), the leading participants in the relief effort in the Sahel. The role of one government or organization in this single tragedy, however, is only illustrative. Weighed against the humane purpose and accomplishments of the U.S. and U.N. relief efforts, and against the comparative lethargy of other governments, those failures might be overlooked—were not the stakes so high. But for thousands in the Sahel, the stakes were high enough. And the problems revealed in the drought seem likely to plague international relief efforts elsewhere in future disasters affecting untold numbers of people.

The catastrophe of the drought did not happen suddenly. For at least four years, scores of officials from the U.S. and U.N. were in the region, observing that the states of the Sahel were essentially helpless to deal with the drought, reporting the gathering disaster, and dispensing some relief. Yet neither the U.S. nor the U.N. had contingency plans to deal with the tragedy as it reached overwhelming proportions by the fall of 1972. Aid that American and European medical experts believed might have saved many and perhaps most of the lives lost, such as measles immunizations among hunger-weakened children, had not been planned. For tens of thousands it apparently came too late.

Although U.S. reports since 1969 stressed the need for ready information on factors such as the specific transport capabilities of the needy countries, it was precisely the lack of such data that hampered

vital relief efforts. There were also predictable bureaucratic delays in providing U.S. aid because of red tape in Washington that might have been avoided or counteracted. Even after food shipments began to move into the Sahel in major quantities, there was little capacity in the relief effort to monitor their proper use or measure their impact, despite evidence of waste and discrimination in distribution. Reports from several sources, for example, indicate that ethnic or political rivalries in some African countries had led to gross inequities in the provision of food to the nomadic peoples suffering most from the drought. In any event, authoritative information gathered by U.S. Public Health officers on the severe malnutrition of the pastoralists and on other crucial aspects of the famine and relief effort was poorly disseminated, if at all, within the American Government or among the U.N. and private relief organizations.

Over the entire episode, in spite of the dedication of many officials at all levels, there was the shadow of bureaucratic factors in the U.S. or U.N. scarcely related to human suffering in Africa—programs continued or initiatives neglected out of institutional inertia, rivalries between offices and agencies, an unwillingness to acknowledge failures to the public or even within official circles. Seen in an historical perspective, the drought not only raised doubts regarding the management of international disaster relief in 1973, but also left unanswered questions about the approach of the United States and other donors to the basic problems of world poverty and human needs over the last decade.

I

Background

*“The poorer you are,
the less you get”*

The drought thrust before the world countries largely forgotten in international affairs. Lying across 2,600 miles of arid steppe and savannah bordering the southern edge of the Sahara Desert, the six countries of the Sahel—Senegal, Mauritania, Mali, Upper Volta, Niger and Chad—seem to epitomize much of the tragedy of African history. While European cultures still languished, the Sahel was the site of early medieval African empires with a thriving commerce and culture. Timbuktu in Mali—to become in 1973 a symbol to the world of the want and topor of societies ravaged by the drought—once flourished as a seat of learning with a great library and university. But by the late nineteenth century, that rich past had given way to a collection of indigent French colonies heavily dependent on external aid for their very survival as organized societies.

A half century of French colonial rule did little to develop the stagnant agricultural and herding economies of the area. As other colonial powers in Africa, France had gradually educated a small African elite clustered about the urban centers in each country. From that elite came the political impulse towards nationalism that led to the independence of the Sahelian states along with most other African countries in the early nineteen sixties. Without the natural resources or possible value of other colonies, however, the Sahel remained, after

independence as before, a relative backwater of French involvement in Africa, its states sovereign but its predominantly rural population among the poorest in the world.

Though complete records of French foreign aid are not made public, several sources indicate that French assistance to the Sahel has seldom been proportionate to the needs or population of the region as compared to other former colonies of France. Confidential French figures given to an international agency for the years 1968-1971, for instance, show total government aid to the six countries as averaging under \$60 million yearly—little more than half the amount of French assistance to Algeria alone in any one year during the interval, and less than one fourth of all French assistance to Black Africa over the same period. Similarly, in terms of national development, French private investment in the Sahel was also insignificant.

The primary French influence in the Sahel was the pervasive cultural and administrative presence that has been the special legacy of French colonialism in Africa. In the years following independence, there remained in the area substantial numbers of French governmental advisors, teachers, merchants, and military instructors. The regimes of the Sahel were made up of French-speaking African politicians and civil servants closely tied to France both culturally and politically. In Chad, French military aid was crucial in containing an obscure but bloody insurgency in the late sixties.

Yet by the 1970s, this French influence showed signs of waning in what President Leopold Senghor of Senegal called Francophone Africa's "second war of independence." The change had come in part from the internal political pressure of unemployed African graduates seeking jobs held by Frenchmen, in part as the product of anti-Western Arab initiatives in West Africa, and to some degree out of rising political resentment at either French interference or, conversely, the limited amount of French aid. As a result, the Sahelian countries in the last few years had joined other Francophone states in tangibly reducing Paris' influence by severing bilateral cultural and economic ties or moving to replace expatriate French employees with Africans.

"The French contributed to their own demise by creating African elites," said one scholar. "France stayed in the Sahel," another expert observed, "because she saw herself as a great power maintaining its influence, but the good times of the early sixties turned later to discontent on both sides and the realization that neither the French nor the Africans were getting much out of it." As the drought culminated

in famine and social disruption in 1972-1973, French support and involvement in most of the affected countries, never a major commitment, would be in many ways less than at any time since colonization.

While French help for the Sahel was limited and declining, other aid donors, particularly the United States, seem to have decided that the needy states of the region were to be France's responsibility in any case. There were several reasons for Washington's comparative indifference to the Sahel. For some of the countries, it seemed the U.S. had no choice. By the mid-sixties, Mali was closely tied to the Soviet Union and vocally hostile to the United States at the U.N. and elsewhere. Mauritania was to break relations over U.S. support of Israel in the 1967 Middle East war. During the period of Franco-American estrangement under President de Gaulle in the 1960s, countries under major French influence such as Chad or Senegal seemed to many U.S. policy-makers distinctly inhospitable to greater American assistance. Added to these obstacles in the political climate in the Sahel was a growing scarcity of U.S. foreign aid money for Africa in general. By 1966, foreign aid was already falling an annual casualty to U.S. Congressional resentment over the war in Vietnam. There was rising political pressure in general to quit international programs in favor of pressing domestic needs. The African aid budget, always relatively small, presented an especially tempting target for Congressional cuts. It was in this setting that U.S. aid policy toward the six countries was made initially under President Kennedy and continued under subsequent administrations.

U.S. aid to the Sahel was marginal even when American assistance to Africa was at its peak in the early sixties. Total American assistance to the six countries from 1962-1965 was approximately \$40 million, or less than half the support given Liberia for the same years. By 1966-1967, Washington had formally adopted an African aid policy which strictly confined bilateral development assistance (which constituted two thirds or more of total American assistance to the Continent) to some ten emphasis countries.* U.S. bilateral aid was ended for other African states, including the six nations of the Sahel, for whom assistance would henceforth be limited to small "self help" programs

*Liberia, Ethiopia, Ghana, Nigeria, Morocco, Tunisia, Zaire, Kenya, Tanzania and Uganda—the latter three combined in a regional grouping of "East Africa." U.S. aid also "concentrated" on Sudan before that country broke relations after the 1967 Middle East war.

averaging less than \$100,000 yearly for each recipient, or to “regional” projects among two or more nations.

The policy document codifying this approach to U.S. foreign aid for Africa was known as the Korrry Report, after Edward M. Korrry, then U.S. Ambassador to Ethiopia who chaired a six-person State Department and AID task force which wrote the document. Some 150 pages completed in July 1966, the Korrry Report was ostensibly the product of a searching official study of American interests and economic needs on the Continent. Former and present officials recall the study less as a critical and innovative examination of assistance and development, however, than as a bureaucratic rationalization of decisions already made to maintain the existing U.S. aid programs in Africa, particularly in the face of dwindling Congressional appropriations. “Every year was getting tougher on the Hill,” remembered one former policy-maker. “The Korrry Report made a virtue of necessity and kept our hand in where it mattered.”

How the U.S. Government determined in the mid-sixties “where it mattered”—the rationale for giving the bulk of available aid to ten African countries—only reinforced neglect of the Sahel. As with other aid donors, the United States gave foreign assistance in the 1960s on grounds of development potential and diplomatic interests rather than on the basis of human needs. A 1969 public report to the Congress by AID justified the concentration solely in terms of such political and economic self interest: Morocco and Tunisia had “excellent relations with Western Europe,” and “a moderate independent policy within the Arab world;” Ghana and the Congo (now Zaire) had “considerable capacities for economic growth” and “should exercise a constructive influence in Africa;” Nigeria held “a fifth of Black Africa’s population” and the “promise of self-sufficiency in the mid-to-late 1970s;” Ethiopia and Liberia had “long-standing relationships with the United States;” Kenya, Tanzania and Uganda had formed a regional economic community which was “the most advanced example of the potential benefits of regional integration and cooperation—a major theme of U.S. aid policy in Africa.” Beneath these reasons, say several sources, was powerful bureaucratic inertia in AID simply to “keep its hand” where it already was, to continue on-going programs in the ten “emphasis” countries which had already amounted to more than \$1 billion in the period 1962-1965.

Declassified in 1973, the Korrry Report itself added little to the policy justification for a particular concentration of aid. The “empha-

sis" countries were getting roughly 75% of U.S. aid. "Thereafter," said the Report, "the correlation between the amount of assistance and the 'importance' of the countries becomes very hazy." (The Report's specific recommendation and rationale on concentration of aid are included in the appendix of this study.)

For the states of the Sahel, lacking apparent diplomatic assets, economic promise, a past aid relationship with the U.S. (and thus a bureaucratic constituency in Washington), the Korry Report promised still less assistance. "Our study concluded that their potential was fuzzy," said one source who participated in the policy review. "As far as those countries were concerned," recounted another former official close to the Report, "the idea was to make sure that France kept paying the bills; it was the one place they were." The Korry Report did not pause long, then, for the Sahel or its poverty. After the emphasis countries, the Sahel fell into the anonymous category of "the rest" which the Report dismissed as "accidents of colonial history." If the Report only codified earlier decisions, however, it was also a lost bureaucratic opportunity to question the policy emphasis on development and political interests over humanitarian considerations.

The figures reflecting these decisions and policies were no accident. Over the decade 1962-1973, U.S. assistance to the Sahel was about \$175 million; to the "emphasis" countries over \$3 billion. Moreover, assistance from other bilateral donors and from international organizations—the U.N., World Bank, and European Economic Community—largely followed the flow of French and American aid bypassing the Sahel. From 1953 to 1972, development support from international organizations to the six Sahelian states was some \$800 million, while assistance to the same African countries emphasized in Washington's aid program was \$2.2 billion, nearly three times greater. Even after the drought had struck in 1969 and 1970, total bilateral aid to the Sahel from the major donors—including the U.S., France, U.K., Germany, Canada, Japan and other Europeans—was little more than \$50 million per annum, less each year than the same donors gave to Ghana alone.

A decade after independence, the Sahel remained poor almost beyond measure. When the United Nations Economic and Social Council identified the thirteen least developed countries in the world in 1971, four were in the Sahel. Mali, Upper Volta, Chad and Niger, the U.N. found, had per capita gross national products of less than \$100 and under 10% adult literacy. Three of the Sahelian countries—includ-

ing Senegal with the highest per capita GNP in the region at \$200—recorded no growth rate at all for 1960-1970! World Bank figures for the decade showed Upper Volta and Niger to be suffering a *negative* growth rate.

There would be no simple cause and effect relationship between the comparative lack of aid to the Sahel, its unrelieved poverty, and the calamity of the drought. Experts would later assert that some of the assistance that did go into the Sahel during the sixties—such as well drilling in marginal areas adjacent to the desert and augmenting livestock herds without safeguards against overgrazing—may have contributed to the worsening of the drought by lowering water tables and stripping large areas of protective vegetation. More money for such projects might only have compounded these effects. Nor are there altogether clear lessons of policy for the donors. Whatever the official rationale for aid, there existed authentic and pressing human needs in those countries which received more generous outside aid. Ethiopia and Tanzania, two among the U.S. “emphasis” recipients, also appeared on the U.N. list of the least developed nations.

But there seems little doubt that more proportionate international assistance to the Sahel in some areas—transportation, training of personnel, technical assistance, health services—might have eased the worst human ravages of the drought, not to mention the daily plight of countries where life expectancy in 1972 was still hardly forty. With greater aid might have come too the added attention, the vested interests of bureaucracies and governments, that could have led to urgent new programs to combat the physical impact of the drought before it became calamitous. As it was, the peoples of the Sahel faced the deepening crisis of drought and hunger from 1968 until the spring of 1973 almost entirely without that help or attention which might have alleviated the disaster. Their remote countries were of little moment for international aid programs in which political, economic, or bureaucratic factors more often outweighed sheer human need.

President Diiori of Niger would tell a visiting journalist in 1973 that aid policies had been determined by a simple dictum. “The poorer you are,” said the President, “the less you get.”

The drought struck the Sahel with savage effect. French colonial records chronicle poor harvests and acute famine in the area in 1910-1914, and again with lesser severity in 1941-1942. But the disaster of 1968-1973 was in many respects unprecedented. From the spring of 1968 there were ebbing water supplies, chronic crop failures

and a recurrent need for emergency food shipments to a million or more people. The disaster was visibly etched in the ecology of the region. By 1971, Lake Chad was reduced to one-third its normal size. The great Senegal and Niger Rivers were shrunken in many places to shallow streams. Each year the wasteland of the Sahara moved relentlessly southward across the 2,600 mile belt. Ten miles here, fifty miles there, the desert consumed the parched land without vegetation or moisture to hold it back. The flight of some pastoral people began as early as 1968 as hunger hit various areas of Mali, Niger and Senegal. By 1972 the migrations were massive, ending in the refugee camps, new urban slums, or death. AID reports estimated the loss of livestock, the livelihood of nine out of ten people in the region, at between 33 per cent at the lowest in Niger to virtual annihilation in Mali. Governments of the Sahel, dependent mainly on tax collections from this agricultural base, confronted the worst crisis of their history with their sources of revenue wiped out for years to come. Commercial crops, primarily peanuts in Senegal and some cotton in Mali, were also crippled by the drought. Early in 1973, the FAO Associate Director-General for African Affairs, Moise C. Mensah, announced that the drought had slashed the gross national product of the six states by an estimated fifty per cent, leaving them by far the most destitute countries on earth.

To some watching this sequence—the encroachment of the desert, the crushing burden of the refugees, the portent of economic collapse—ultimate tragedy in the Sahel seemed almost inescapable. “We don’t know if they will even be here in ten years,” one U.S. intelligence analyst said of the six countries and their twenty-two million people. “It may be that all we can do is forestall the doom.”

* * * * *

U.S. involvement in drought relief in the Sahel began in 1968 when Mali, Niger and Senegal asked Washington for emergency food rations for more than a million people suffering from crop failures. The evolving role of AID in the disaster over the next four years—a role that would make the United States Government a major influence in the international rescue effort in 1973—was the result of several circumstances.

Whatever the deliberate limits on U.S. development aid for Africa, there was and remains a standing U.S. policy to provide emergency aid to help relieve disasters throughout the developing world. The

responsibility for executing that policy had routinely gone to AID as the bureaucratic offspring of the great post-war recovery programs and as a far-flung apparatus with observers and administrators in or near virtually every poor country. In 1968 AID was occupied in relief operations in a half dozen places in Africa, dealing with problems ranging from local epidemics to the massive famine caused by the Nigerian Civil War. And despite the relatively insignificant U.S. foreign aid to the Sahel in the sixties, there were nonetheless at that time substantial numbers of AID personnel in the U.S. Embassies in the region. In fact, since 1967 AID maintained a staff of between 35 and 75 full-time employees stationed throughout the Sahel, with the exception of Mauritania, which had broken relations with the U.S. following the Middle East war of 1967.

Not least, the American role in the drought (as in other such calamities) stemmed from the fact that the U.S. was a principal source of surplus food for famine relief. No other country had given so much of its resources to emergency assistance, or seemed so able and willing to continue. The policy and bureaucratic constraints that severely limited U.S. development aid to the area did not extend to the provision of disaster aid. As did their colleagues in the Agency's African Bureau in Washington, AID officers in the Sahel saw drought relief in their countries as a logical outgrowth of both established policy and AID's considerable experience with disasters elsewhere. By the end of the 1960s, reliance on American relief seems to have hardened into habit in international affairs. There was an expectation of U.S. relief not only from the victims but also by potential donors, like the French, who apparently assumed that the relief of the Sahel was to be Washington's province, much as the U.S. had consigned the region's earlier development to the French. It was in this setting that the African Governments first turned to Washington for food aid in 1968.

AID's *Foreign Disaster Emergency Relief Reports* for 1968-1971 chart a developing pattern of disaster assistance to the Sahel in which the United States was the major and sometimes sole contributor. Emergency food aid to the Sahel during 1968 amounted to some \$2.6 million. A further \$600,000 went to Chad, Upper Volta and Mali in 1969. For fiscal year 1971, AID instituted in Mali, Senegal, Upper Volta and Niger a "Grain Stabilization Program" which provided grants of grain costing \$9.3 million. A response to the high cost and short-lived benefits of the mounting relief rations to the Sahel, the grain stabilization scheme was more than an effort to make up food deficits

caused by the drought. It was also an attempt to use the grain shipments and proceeds from its sale within the countries to improve production, storage and marketing of crops. But by 1971 the drought would leave no respite for such resurrection of the battered agricultural economies of the area. After the shipment of the first 77,000 tons (of a projected 200,000), the remainder of the grain to be provided under the stabilization program had to be given simply as emergency grants. Nations struggling to survive could afford no resources for comparative luxuries such as storage or market reform. Of international drought relief provided the Sahel from 1968 through mid-1971, the United States contributed more than \$13 million. Other donors supplied roughly \$3 million, with Canadian grain accounting for half of that aid.

In addition to the AID presence and the growing U.S. drought relief in the Sahel, there was another American involvement in the region during the late sixties that would become important during the 1972-1973 crisis. From 1966 to the fall of 1972, Sahelian states were included in the West African smallpox and measles eradication programs of the U.S. Public Health Service from the Center for Disease Control (CDC) in Atlanta, Georgia. More than one hundred U.S. physicians and other experts participated in that effort, acquiring in the process considerable experience and information with respect to the peoples of the area.

Outnumbering both the AID and CDC observers in the region, however, were officials under field projects of the other leading participant in the 1973 international relief effort—the Food and Agriculture Organization of the United Nations. One of the largest and busiest of the U.N. agencies, the FAO was designed specifically to deal with problems of food supply throughout the developing world. Among its main functions, according to its own description, is “to predict food shortages as well as to assist in planning and assessing food aid requirements . . .” U.N. development aid to the area remained low and there was only token relief aid from the U.N. in the initial years of the drought. But from 1968 to 1972, in the period when the Sahelian drought worsened so visibly, the FAO maintained every year more than one hundred officials working on agricultural or livestock improvement programs in the region, with several representatives in each of the six countries.

Everywhere in the Sahel, say many sources, these numerous AID and FAO officials encountered African bureaucracies largely unequipped to recognize or to cope alone with the accumulating problems of

the drought. "Their administrative quality was very thin," said a high-ranking AID official. "These are fragile, weak governments," observed another U.S. policy-maker, "severely limited in their technical resources and data on their countrysides."

American and FAO officials in the Sahel, on the other hand, reported to formidable headquarter bureaucracies. AID cables from the area, according to many who read them, went not only to the Agency's African Bureau with its Administrator and Deputy Administrators and its desk officers and Directors for each country, but also to several other offices and bureaus ranging from the AID Foreign Disaster Relief Coordinator to AID Offices of Technical Assistance, Planning, Nutrition and Health, to senior AID Administrators overseeing the entire Agency, and beyond AID to the State Department's Bureau of African Affairs and the Departments of Agriculture and Defense. "Telegrams on something like a major drought," recalled one former U.S. aide, "can go into a hundred in-boxes all over the government. But that doesn't say how much they're actually read." It was this Washington bureaucracy that decided on the emergency aid given each year after 1968—with requests originating in U.S. embassies in the Sahel, filtering through AID desk officers and Directors for each country, "cleared" by the State Department and Agriculture, eventually to be approved, depending on the amount, by a senior AID official at the Bureau or some higher level. Of the existence and mounting severity of the drought over four years, there could have been little doubt among responsible AID officials at all levels.

In 1972-73, there were a number of AID officials responsible for drought relief, either by bureaucratic circumstance or by statute. All sources agree that the main authority lay with the established hierarchy in AID's African Bureau—from Assistant Administrator for Africa, Samuel Adams, to Deputy Administrator Donald Brown, to the Director of Central West African Regional Affairs, Fermino Spencer, to finally the Officer-in-Charge of the Sahelian Drought Emergency, Hunter Farnham. It was this hierarchy that was the center, initially and still, of various operational and planning activities. By statute, responsibility was to be shared by AID's Foreign Disaster Relief Coordinator, Russell McClure. Created in 1964, the Office of the Foreign Disaster Relief Coordinator was designed to act as a focal point for the full range of international relief activities participated in by the U.S. government. But by all accounts, the Office has never in fact played that role, its policy and operational perogatives remaining, along

with bureaucratic power, in the various regional bureaus. In any event, McClure's weakened bureaucratic position was further eroded by the appointment in March 1973 of Maurice Williams as Special Presidential Relief Coordinator. Though Williams became the chief negotiator and a public figure in the U.S. relief effort, however, he was still dependent upon the regional bureau for policy advice and operational control. The drought for Williams was only one among many major concerns, including disaster relief in Bangladesh, the rehabilitation of North Vietnam, and his duties as Deputy Administrator and sometimes Acting Administrator for AID. All the above officials are career officers either in AID or the Foreign Service of the Department of State.

FAO field employees similarly reported to the officialdom in Rome numbering some 3,000 and divided regionally and functionally. "It's a huge operation," said a U.S. diplomat who deals with the FAO, "like a major foreign ministry with lines running all over." And just as AID, the FAO bureaucracy in Rome presided over field reports, yearly budgets for programs, and a thickening collection of specific evidence on the drought.

Meanwhile, the medical data gathered by the U.S. Public Health experts was duly stored in the computers and files of the Center for Disease Control in Atlanta, documenting tens of thousands of children and adults saved from measles or smallpox. The CDC also knew there would be a continuing need to sustain the measles immunization program with each new generation of vulnerable children, particularly among the nomadic peoples of the Sahel.

Yet none of the organizations had clear lines of responsibility—either internationally or self-assumed—with regard to the course of the disaster in the Sahel. Both AID and FAO knew the African states would require major outside help to cope with any calamity. At the same time, there seem to have been only the vaguest expectations in Rome or Washington with regard to who would do exactly what. These vast bureaucracies with their "lines running all over" had no effective lines of coordination or joint planning to deal with the onrushing devastation of the area in which they were so substantially involved from 1968 to 1972.

To the AID and FAO bureaucracies from 1968 onward came significant and ever-increasing intelligence on the catastrophe overtaking the Sahel. The scope, depth and momentum of the drought year by year were methodically recorded in the annual public reports by AID on disaster relief. The 1969 report spoke of the "prolonged drought

across West Africa," of "drought conditions . . . general" throughout the region, "complete crop failure" in Senegal. By 1970, there were more than three million people requiring emergency food. "This was not a new disaster," the document that year explained for Mali, "but a continuation of that which was reported" in the previous report. Famine in Upper Volta, continued the report, "was brought on by the same drought problem which was plaguing other countries across West Africa." "Hunger, if not starvation, has become increasingly frequent [and] emergency imports have become the rule rather than the exception," concluded the 1970 report. A year later, the description had become almost perfunctory, "Many African countries are plagued by droughts *year after year*" (emphasis added), observed AID's 1971 disaster relief report in describing emergency aid to over a half million victims in the Sahel.

Other intelligence reports coming into Washington, such as accounts of West African crop failures by agricultural attaches in U.S. Embassies in the Sahelian countries, consistently bore out AID's accumulating evidence of the extraordinary severity and duration of the drought. From April 1969 to December 1973, for example, Department of Agriculture statistical reports repeatedly detailed the "severe droughts," the "consecutive poor harvests," and the "prolonged period of drought" which were crippling Senegal's peanut crops.

Speaking to the FAO Council in Rome in February 1972, a senior official from Chad portrayed vividly the environmental destruction of the drought. "Our country is already half desert and our arable lands left are extremely reduced," the official said, "but even these are threatened by the inexorable advance of the desert sands from the north." On the basis of numerous field reports, the Director-General of the FAO told an intergovernmental committee of the U.N.'s World Food Program later that spring of 1972 that drought in the Sahel had become "endemic," making it necessary to give the area "special treatment" in providing emergency food aid. Both the speech of the Chadian official and the Director General's remarks to the intergovernmental committee were duly cabled to AID in Washington by the U.S. Embassy in Rome. But not until September, 1972, according to an FAO document, did the Organization's field reports signal in Rome an "early warning" of disaster. There was, said the FAO, "an acute emergency situation developing in large areas due to exceptionally (*sic*) poor harvests in the Sahel."

As these reports gathered in Washington, as people and livestock in

the Sahel began to die in the autumn of the fifth year of drought, AID produced in October 1972 what it called an "in-house report" on the area. An outgrowth of another AID study earlier in August on desert encroachment on arable land, the report represented, in its own words, no more than a "general overview" conceived "only as the initial vehicle for stimulating and guiding future discussions." It was not a plan for specific actions or needs. It did not recommend particular "programmatic responses." Yet, in retrospect, the October report seems in many ways an extraordinary document.

In 160 pages of figures and understated bureaucratic prose, the study depicted a region of 22 million people in a mortal and losing battle with environmental destruction. In the process, the study became a lengthy indictment of past aid programs in the area by the U.S. and others, and foreshadowed many of the problems that would beset the international relief effort in the months that followed. "Man's intervention in the delicately-balanced ecological zones bordering desert areas has been narrowly conceived and poorly implemented," began the report. "Past levels of development assistance," it continued, "have been inadequate to make more than a dent in the situation . . ." Moreover, the bureaucratic intervention and poor planning reduced effectiveness even of the limited aid available to the region. There had been "a major obstacle to progress" in the "lack of coordination and cooperation" between those engaged in development projects "because individuals and institutions are content with—and in fact have shown a preference for—carrying out and protecting their own specialized discipline-oriented programs."

Among the most serious problems of coordination, the study found, was a failure to assemble and use the available information on the crisis. "The very first need is for a functioning data retrieval system," said the report. "It is incredibly wasteful to repeat again and again surveys whose results lie—often unanalyzed—in our own files." There was also an urgent requirement for "better pre-project planning and integrated approaches to project design and implementation" since development projects in the past had often had "undesirable side-effects which reduce or offset anticipated benefits . . ." The survival of the Sahel required too the application of "much of the available scientific information and technologies [which] have not been applied successfully in the past."

The AID report clearly recognized as well the schism between pastoral and sedentary peoples in the Sahel that would lead to harsh

inequities in the distribution of relief in 1973. Most colonial and post-independence development had benefited "primarily the urban sector." "Thus large elements of the rural population," the study observed, "have become estranged from their urban compatriots . . ." The report's summary on the region was chilling. "Continuing neglect and misuse of the land and water resources of the Steppe/Savannah zone south of the Sahara," the study concluded, "is resulting in a rapid and extensive deterioration of the subsistence base for millions of people in the region." In short, the Sahel was dying.

The October report remained an obscure internal AID document, never widely circulated within the government or published. It seems noteworthy now as further evidence of how much AID knew, or could have known, before the drought crisis culminated in late 1972 and 1973 in thousands of deaths. The study was apparently the first serious attempt to look critically at the character and organization of previous efforts to combat the drought. But it was two years too late. In the fall of 1972, there was no time left in the Sahel for a "general overview" or for more study. Wells were long since dry, the earth cracked at jagged angles, the nomads' cattle dead or dying, the famine among an already weakened people worse and more widespread than in any of the four years before. By October 1972, indicate several sources, children and the elderly had already begun to succumb.

Yet months were to elapse before the emergency international relief effort was marshalled and functioning. Even then, much of the rescue operation was improvised and ill-planned. Having chronicled the drought for five years, with repeated documentation of its severity and cumulative devastation, neither AID nor the FAO had contingency plans ready that autumn to help the Sahelian countries deal with the first huge wave of hunger and disease breaking over them.

This failure to prepare for the crisis of 1972-1973 was at once an illustration of the very problems AID's October report had ascribed to lack of coordination and the neglect of scientific tools. "Everybody thought that it was just a temporary climatic aberration," explained one U.S. relief official. "Nobody anticipated that the drought would last this long." Another observer saw the same mentality among AID officials in Washington in the period 1968-1972. "They just kept thinking that each year would be the last," he said. The Grain Stabilization Program had been seen by many officials as something "to tide them over," said the source, as if the drought were somehow a brief episode.

From data recorded on the water tables of the area—data available at the World Climatic Record in Suitland, Maryland, a suburb of Washington—there could have been no such illusion. “In 1970 there was no recharge at all. In 1971 there was less than average recharge, and in 1972 the situation was set for disaster,” said Professor Norman McLeod, an agronomist and research scientist at American University. “I don’t think people thought that an examination of climatic data was really worthwhile. If it [the data] had been examined . . . the situation that developed in 1972 would have been seen.”

But then falling water tables were not the only index of crisis at hand. There were the persistent crop failures and the visible shrinking of lakes and rivers. Obvious too was the growing population of people and animals which had been made possible, ironically, by outside assistance such as the U.S. smallpox eradication program and cattle vaccination projects. That population was making unprecedented demands on grazing land and wells precisely at a time when the water and forage of the Sahel were being exhausted as well by climate—what the October report had called one of the “undesirable side-effects” of the unplanned development aid of the past decade.

In the months before mass famine hit the Sahel in late 1972, these realities were variously known and understood by disparate parts of the AID bureaucracy, by other agencies in the U.S. Government, by private authorities, by the FAO, by other donors and by the Africans themselves. Donald S. Brown, AID Deputy Assistant Administrator for Africa, told the Senate Subcommittee on Africa on June 15 that, “. . . the conditions which prevail in the Sahel today are the cumulative effect of several years of inadequate rainfall, capped by a particularly poor season this year.” AID had been “involved for several years,” said Brown, in programs in the area. As a result, Brown went on, “our technicians then observed areas where farmers planted six or seven times without results. We observed nomadic herdsman searching in vain for forage and water in traditional areas and being forced to move their livestock into disease infested areas where forage was available.” But why AID or other relief agencies had not acted sooner on these ominous eyewitness reports, Brown did not tell the Senators. Nowhere—in Washington, Rome, Paris, or the Sahel—were these facts assembled and analyzed to form the basis of coherent planning. As the October report reminded its readers, there was no data retrieval system, no effective coordination of policies and projects. There was no

international mechanism to be triggered into emergency action by the numerous warnings from the Sahel.

Nor was the failure to plan in advance for the crisis merely another instance of the long-standing international neglect of the Sahel. Many had recognized the enormous magnitude of the problem, the danger to lives in the short run and the threat to the long-term survival of a community of millions. But the relief bureaucracies waited, as in other disasters, on events—in part out of institutional ignorance, in part for lack of a common instrument with which to act. “. . . Full understanding of the process underway took time,” Brown testified to the Senate. The result was a relief operation in 1973 that would be marred by lack of planning and constricted by the particular bureaucratic and organizational limits of AID and the FAO, which had inherited the relief responsibility in the Sahel, as elsewhere, by default.

Explaining the failure of the African states to anticipate the crisis, one ranking U.S. official spoke what seemed a bitter epitaph as well for the larger failure of the international community. “It sneaked up on them,” he said, “over a five-year period.”

II

Reaction

November 1972-June 1973

Outwardly, United States relief to the Sahel in the crisis of 1972-1973 was impressive. Of the \$50 million contributed by October 1973, a large part went to supply over 300,000 metric tons of food grains. There was also emergency aid to the African states for livestock feed and medicine, to augment surface transport, and for a number of other relief actions. Most dramatically, there was an airlift. Coinciding with the first wide publicity given the drought in the U.S. during mid-summer 1973, the airlift symbolized an urgent and merciful American response. Beginning in May, three U.S. Air Force C-130 transports flew desperately needed food to outlying regions of Mali, Chad, and later Mauritania. To a nation long troubled by the Vietnam experience, the planes taking food to starving Africans seemed to many a welcome use of power. In the words of one of the Air Force pilots, quoted by the *Washington Star* in an editorial urging aid for the Sahel, "After Vietnam there are other people who need help, and it feels good to be helping them."

Much of the U.S. reaction to the massive famine in the Sahel, however, was less gratifying. Largely beyond public view in AID was a record of hesitation and delay. Unprepared, the AID bureaucracy lacked either necessary data or money, and sometimes both, to respond swiftly to certain pressing needs. Critical new appropriations for Sahelian relief became entangled in Congressional and bureaucratic politics. And the vagaries of relief administration in Washington inevitably had their effects on the blighted savannah in West Africa—in

special rations that were not there, in vaccines that arrived too late, in food that starving people could not eat.

The first formal AID response to the drought crisis in the fall of 1972 was the formation of an inter-agency "working group," with representatives from the Department of State, Defense and Agriculture, as well as from various offices in AID. Ironically, however, by bureaucratic protocol, the group did not then include an official from the Office of AID's Foreign Disaster Relief Coordinator. "We had nothing to do with the [November] task force," said a relief specialist. "We cannot come in until a disaster has been declared, and that wouldn't be until around May the next year." There was disagreement afterward about the origin of this working group. AID officials claimed it was set up at their initiative, the product of long-standing concern for the Sahel, and more immediately, of the October study. But State Department sources argue that despite the signs of crisis that autumn, the impetus had to come from outside AID, from Assistant Secretary of State for African Affairs, David Newsom. "Before the working group was established," one Foreign Service Officer said, "Newsom had made the policy decision that this was an emergency situation." Newsom seemed to confirm that version of bureaucratic maneuvering in public testimony on the Sahel the following June 15th before a Senate Subcommittee on Africa. "On November 2, 1972, we drew the attention of high level authorities in our own government to the seriousness of the problem that was developing," he told the Subcommittee, "and later that month inter-agency efforts began to deal with the problem."

But whatever the aegis of the November group, whatever the "high level" attention or "seriousness" of the drought, the group was to be only a first attempt by the bureaucracy to "study" a crisis by then five years in the making. Without contingency plans or even an up-to-date collection of available data on the on-rushing calamity, there would be no emergency measures ready to order in AID or in West Africa when the alarms sounded from the Sahel late in 1972. Before the study group was formed, as one senior official remembered, "we just stumbled around trying to get hold of the problem." Charged to "put the problem on paper" and to "design what our [the U.S.] role would be," the November task force was to provide, at last, contingency planning for a disaster that had already happened.

From that study, over the following months came the first systematic appreciation in Washington of the enormous dimensions of

the drought, and of the formidable obstacles to relief—possible transport problems, famine-related health dangers and decimation of livestock and seed supplies, the manifold difficulties of storing and protecting grain in transit. The November group was also the forerunner of later planning efforts within AID, and eventually within the U.N. as well, to examine the middle- and long-term needs of the Sahel. Officials generally credit the task force with generating bureaucratic interest in the crisis and beginning some degree of inter-agency coordination inside the American Government. “It enlightened some people around here who hadn’t thought about the problem,” said one AID source who observed the group’s work.

But the fact would remain, as officials unanimously acknowledged, that there had been no contingency plans or effective early warning *until* November. It took months—months when the starvation was already acute in the Sahel—from this initial survey of the tragedy to the large-scale U.S. relief efforts that finally took shape in West Africa during the summer of 1973. Though the November group pointed up the need for massive emergency shipments of grain to the stricken area—and AID later claimed that it had “committed” 156,000 metric tons of food aid for fiscal year 1973—by mid-June 1973 only some 66,000 metric tons had actually been delivered. Of that, more than 30,000 metric tons had already been programmed as part of the routine grain stabilization assistance and were thus unrelated to the accelerated crisis perceived in November. Not ordered until there was finally some specific bureaucratic attention to the drought in autumn 1972, most of these first “emergency” shipments were then tied up during the ensuing winter and spring in what an official AID memorandum termed “myriad obstacles to getting the grain moved from the fields in the United States to the recipients in Africa . . .”

Several sources indicated that by the end of 1972, food aid to the Sahel, as for other needy areas such as South Asia, was hampered because large commercial purchases by the Soviet Union had already absorbed transport capacities—and to a large degree, the available grain. As a result of the Soviet transaction, a small crop, and general instability in the U.S. market, the Agriculture Department subsequently suspended purchases of grain for international food aid during July and August 1973. AID officials stressed that the suspension did not then affect specific purchases for the Sahel. In the fall of 1972, however, the delay in procuring and shipping relief grains presented “a real problem,” as one American Ambassador in a Sahelian country

remembered the wait for food aid. "It seems that grain for humanitarian relief always takes a back seat to cash purchases," he concluded.

Food aid was not the only relief conditioned by the belated planning in AID. Over the winter of 1972-1973, there were critical needs for animal feed and medicines to stem the annihilation of livestock, for vitamins and medical supplies for the debilitated population, for transport or shelter or blankets. Assistance of this kind might well have enabled the six countries to cope with suffering and disease before the calamity reached (again in the words of AID documents) "devastating proportions" in February and March 1973. Yet it was not until that same winter that AID began to design a plan of action for such aid. Even then, according to official memoranda, it was mid-April, "after numerous discussions in-Agency (sic), and with other donors," before AID cabled the U.S. embassies in the Sahel on the use of contingency funds for non-food assistance. It was to be May, 1973, before the Agency obligated \$1.9 million in relief other than for food for the six nations. As needs were recognized and relief planned, U.S. non-food aid to the Sahel rose rapidly to more than \$4,500,000 by the end of June, with over half of it in the costs of the emergency airlifts in Chad and Mali, beginning in May.

Senior AID officials later complained that the African states in the Sahel were slow to recognize the crisis. "They didn't fully realize the gravity of the situation immediately to the extent of making official declarations of disasters," said a policy-maker. Several other observers agreed that the Sahelian governments seemingly ignored the worst effects of the drought. "Even in areas far from the cities," wrote journalist Jonathan Derrick in *Africa* magazine, "cattle cannot die by the hundred thousand, nomads cannot migrate on a vast scale to find food, and grass cannot be replaced by sandy waste over big regions without people in official positions noticing." Derrick continued, "Their failure to react promptly shows once again something widely admitted, that the bureaucracies of many African states are dangerously cut off from the mass of the people, as much as the colonial administrations were."

By all accounts, though, U.S. officials had long understood the weaknesses in the ability of the African states to deal with the drought. The October study had warned explicitly of the schism between urban-based governments and the countryside. About U.S. diplomatic approaches to inform the Africans of the magnitude of the problems after November 1972, however, AID officials were vague. Several

internal documents show there was no concerted effort to alert the Africans. "We couldn't get access to the officials who had the information," complained one high-level source. "They were simply too busy or they had no data available." At the same time, an American Ambassador recalled that at least one African Government had been aware of the problem and "had its request [for help] in by October or November while some others didn't until March or sometimes later in the spring." "I started work notifying Washington in August 1972," he added. But when asked what had happened in AID as a result of his August report, the Ambassador replied, "Probably nothing." The insular character or administrative difficulties of African regimes would not explain the failure of a more experienced and well-equipped officialdom in Washington to heed the warnings of four years or to convey them with authority and urgency to the victims. "Any bureaucracy takes some time to get moving," one U.S. ambassador observed in an ironic tone.

Yet African confusion may have accounted in some sense for a further pause within the American government even after a joint meeting of Sahel ministers on March 23-26, 1973, had formally pronounced the zone a disaster area and appealed for international help. Under U.S. Foreign Service regulations, American ambassadors abroad may respond to tragedies in their host countries by declaring them a "disaster area," thereby instantly releasing an Ambassador's relief fund of \$25,000 and establishing the country's eligibility to receive further AID contingency assistance. In the spring of 1973, amid widespread suffering in the Sahel, there seemed needless delays between the African appeal for relief and the U.S. declaration of these disasters. The U.S. Embassy in Niger declared a disaster March 27, a day after the meeting of Sahelian ministers. But Mali was not made eligible for emergency funds until April 6, Chad not until April 21, Upper Volta only on April 28. Mauritania, later discovered to be one of the states worst hit, was not declared a disaster area by U.S. officials until May 4. Senegal followed on May 8. And for Mauritania, Senegal and Niger, there was nearly a week between the formal declaration and AID's ostensibly "automatic" obligation of Ambassadorial contingency money.

Officials explained that U.S. ambassadors, usually anxious to maintain untroubled relations with their hosts, are generally reluctant to declare disasters without the approval of the regime in the country, regardless of the severity of the situation. "An ambassador can declare a

disaster no matter what the host government says," a State Department desk officer explained, "but of course no Ambassador would declare a disaster without checking with the government." Both senior and middle-level officials were at a loss, however, to account for the delays of 1-5 weeks in the declaration of disaster in 1973, or the subsequent wait of one week for some embassies to receive emergency funds. Meanwhile, back in Washington, the AID Disaster Relief Coordinator, excluded by bureaucratic practice from the November group and subsequent planning operations, finally became "eligible" himself to join in the U.S. response to one of the great human and environmental disasters of the post-war world.

If there was diplomatic hesitation among some U.S. ambassadors in the area to designate the Sahel a disaster area, there was nonetheless harsh criticism by State Department and embassy Foreign Service Officers of what was seen as inertia and red tape in AID in Washington as the missions attempted to secure relief for the famine. Several sources describe how the American embassy in Mali, perhaps the neediest of the Sahelian states, anticipated the lack of contingency planning and data retrieval in AID. Under Ambassador Robert Blake, the mission began on its own initiative early in 1972 to assemble the information that would eventually unlock disaster relief in Washington. "They really forced the decision in AID," remarked one official reading the embassy's cables. "All the substantive officers were sent off to different regions to do extensive research, and they got data on grain supplies and even such things as temperatures at air fields at different times of the day." At that, say inside observers of this bureaucratic process, there were several months of "intense" telegram exchanges between the mission in Bamako and AID, from autumn 1972 to spring 1973, before a decision was made to meet embassy requests which included an emergency airlift to ravaged areas not served by rail transport. "For every foot-dragging objection from AID," as one U.S. diplomat put it, "that embassy came up with an answer."

Its Ambassador to Mali having won this lengthy bureaucratic battle, the State Department then reportedly encouraged the other five posts in the Sahel to take advantage of the precedent. "We sent out a cable to all missions saying now's your chance, and get in your requests even if they're lacking some data," recalled a desk officer.

Such were the unseen realities, according to many officials, of the American reaction to the drought in 1972-1973 in the absence of systematic contingency planning. There was AID in Washington slowly,

insistently, eking out its information needs in the midst of a serious crisis. U.S. embassies in starving countries had to maneuver to “force” help from their own government’s relief agency. Life-and-death matters in West Africa were transformed into—and dependent upon—a bureaucratic jockeying for advantage in Washington.

The effects of the basic lack of readiness for the catastrophe were self-reinforcing. In large measure, the apparent AID reluctance to respond to embassy requests seems to have reflected the fact that in the final months of fiscal year 1973—the critical period in the worsening of the situation in the Sahel, from January to June 1973—there was little money left in AID emergency contingency funds. Just as there were no specific plans or targets for drought relief prior to the end of 1972, and no contingency provision for emergency grain purchases and transport before Soviet commercial purchases absorbed the market, there had been no particular allowance for the Sahel in AID disaster relief budgets for fiscal year 1973—nor, for that matter, even 1974. “AID did have real money problems,” sympathized one official critic, citing other disasters in 1972-1973, “Nicaragua and the Philippines and Bangladesh had drained the barrel.”

There are widely conflicting versions from official sources on how AID handled the comparative shortage of contingency funds remaining in its budget by the time the drought was belatedly recognized as a major disaster. According to one high-level officer involved in funding, there were bureaucratic negotiations late in 1972 between AID and the White House Office of Management and Budget to seek more emergency money for the Sahel. “They had a real work-out over there last year,” he recalled. Yet observers in the State Department contend that such an initiative was perfunctory, if it took place at all. Those sources say AID saw its bureaucratic position steadily eroding as a result of dwindling Congressional appropriations for foreign aid, the relative neglect of AID programs (especially in Africa) in the Nixon Administration, and the overall weakness of the foreign affairs bureaucracies with the concentration of policy-making authority in the White House under Henry Kissinger. In this setting, the Agency was reportedly hesitant to press for additional budget money, at least until the drought had gained public notoriety and Congressional sympathy. “They didn’t feel for many reasons, that they would go to the OMB level for funds,” said one official who followed AID’s decisions. “They felt they couldn’t kick and scream.” Analysts in the Office of Management and Budget confirmed that there was no AID pressure for

supplemental funds for fiscal year 1973. But as suffering deepened in the Sahel in the spring of 1973, and urgently needed American relief seemed inhibited by lack of money, officials in Washington and the U.S. embassies in the area found little consolation in AID's time-honored bureaucratic strategy of waiting on public and Congressional concern to extract new appropriations. "Never have a disaster," one State Department expert advised bitterly, "at the end of a fiscal year."

Even when a special authorization of relief money for the Sahel was formally sponsored in June, it became a political football, its amount apparently an arbitrary figure which some U.S. relief officials at once judged to be insufficient. As part of an increasingly visible Administration response to news reports and rising public concern about the drought, the new funds were originally planned, according to official sources, to appear as a White House initiative. But because the catastrophe in West Africa happened to coincide with President Nixon's veto of other Congressional money bills, including funds for disaster relief within the U.S., the assistance for the Sahel was soon viewed by the White House as a politically damaging contrast in Presidential priorities between foreign and internal spending. With its popular and Congressional support already showing signs of erosion by the Watergate scandals, the White House quietly dropped the relief initiative as yet another potential liability. AID then encouraged Senator Hubert H. Humphrey (D. Minn.) and Congressman Charles Diggs (D. Mich.), Chairmen of the Subcommittees on Africa in the Senate and the House respectively, to introduce a bill for the money. "Since the projected release [of the relief proposal] followed closely on the heels of Nixon's veto of the domestic disaster funding item," recalled one policy maker, "it was decided that discretion at that point was the better part of valor, so they gave it to Humphrey."

It would seem that AID also "gave" to Senator Humphrey the \$30 million figure, though officials acknowledged later that this amount could only have been a "rough estimate" given the rudimentary state of U.S. planning and data in mid-1973. The amount was reportedly based in part, for instance, on projections of 1973-1974 food needs in the six countries of 500,000 metric tons. But the AID document which argued for this tonnage in June 1973 was a vivid illustration of the imprecision, if not illogic, of the projection. This figure "seems defensible," read the official memorandum, "because imports at this level plus local production has (sic) apparently been sufficient to sustain human life, albeit at an unadequate (sic) level." For the 100,000 who perished in

the Sahel and the two million nomads starved into refugee camps, the level had indeed been “unadequate.” An international food survey mission to the Sahel, sponsored by the U.N., would report in November 1973 that the region needed some 660,000 metric tons of food through September 1974.

“It will get us back to point zero,” one senior AID official remarked of the \$30 million amount, “which is nothing too great.” His colleague quickly added, “I don’t think it will even do that when you consider the damage done to livestock.” In any case, the capricious politics and random character of this funding process were yet another outcome of the failures in early warning and contingency planning. Assuming AID overcame its bureaucratic inhibitions in approaching budget officials, the Agency might have gone to the Congress for a more carefully estimated supplemental relief bill *before* the Sahel became hostage to White House politics. But none of that was possible without planning. “We never put together a package,” said a high-ranking AID officer. “To put together such a package, you better be sure that you can justify it. This means data [and] the first overall development needs were being assessed only last summer [1972].”

Together, the absence of pre-crisis planning and the lack of contingency funds had immediate practical effects on the initial U.S. response to the drought in May and June 1973. When the FAO asked the United States in late May to airlift 1,000 metric tons of sorghum and millet seed from the Sudan to Chad, AID refused the request, citing both a shortage of funds and lack of information. “We do not have FY73 disaster relief funds available for this purpose,” replied the AID cable to Rome. The telegram went on to enumerate the other “major reasons” for the rejection: no information on how the seeds would be used or on logistics such as runway conditions and navigational aids, the absence of specific requests for seeds by U.S. embassies in the area as distinct from the FAO observers, and a number of “other unanswered logistic questions.”

To the AID bureaucrats receiving the seed request, the proposal for an airlift somehow seemed preposterous. On the margin of the original FAO telegram, one official scribbled to another a telling note: “Nehemiah [a senior FAO official] has got to be kidding.” Unfortunately, he was not. As the October AID study had warned, the drought had devastated the entire agricultural economy. Again, the FAO study mission was to report in November 1973 the exhaustion of seed supplies and recommend establishing “a revolving stock of seed supplies

totalling more than 36,000 tons." Later, in June, AID would contribute \$300,000 to the FAO, which went to support the airlift of seeds from Sudan to Chad by FAO-chartered aircraft. But in the spring of 1973, the United States was unprepared to respond directly to this urgent request for help in the Sahel. On June 8, 1973, five years after drought had begun to ravage the area, nine months after the FAO had sounded its early warning of disaster, an AID cable to its missions in the region requested what it called "some evidence [of] minimum programming input." As millions faced starvation, with little more than one-third of promised U.S. relief food having arrived by surface transport, the cable asked with no apparent irony, "when and where are shortages of grain projected, and why do shortages exist?"

Looking back on these episodes, some officials saw the lack of readiness as reinforcing a natural caution and inertia in the AID bureaucracy. Explaining the failure of the State Department to spur earlier action on the drought in 1972, one diplomat summed up the crucial factor, "AID had their data excuse." But other sources, including several in AID, say that the refusal of the seed airlift also reflected a long-standing bureaucratic feud between at least some sections of AID and the FAO. When the FAO appealed in May for cash donations to a Sahelian Trust Fund, for example, the AID reaction was decidedly unenthusiastic. "We had no intention of putting anything in it," commented one AID policy-maker about the FAO Fund. "We knew it was going to be bungled." According to the same source, the later \$300,000 U.S. contribution to the Fund was a bureaucratic mistake, the product of an unauthorized promise made to the FAO by a U.S. relief official visiting Rome. "We let it go through," said the source, harshly critical of the "incompetents" in other AID offices who had advocated the contribution. This was apparently the last slip of its kind. By September 1973, nearly twenty countries, a number of non-governmental organizations, and various United Nations agencies had contributed over \$13 million to the Trust Fund. But the U.S. contribution remained at the initial \$300,000, out of a total of more than \$6 million for U.S. non-food assistance to the Sahel. The figures on American drought relief also indicate that Washington could have contributed much more to the Trust Fund or to the airlift of seeds even in the face of limited contingency relief funds available to AID that spring. Even though by May, 1973 the U.S. had committed less than \$2 million in non-food aid to the Sahel, it would eventually spend \$4.6 million on such aid before the close of fiscal 1973 on June 30.

There has been no evidence thus far of what U.S. officials feared as “bungling” in the FAO Trust Fund. On the contrary, it has provided valuable help to the Sahel, and acted as a convenient mechanism for contributions from countries not previously involved in aid to the area. However, even FAO’s own officials point to discernable weaknesses in its capacity to anticipate and organize a major disaster relief operation. Although clearly aware of the poor harvest and cumulative desolation in the area in September, 1972, the vast FAO bureaucracy in Rome did not act on the gravity of the situation for months afterward. It was not until February, 1973 that the FAO established its “working group” on the drought, some three months after the U.S. began to “study” the calamity. It would be May before the FAO’s Director General requested of the U.N. Secretary General a “mobilization” of the United Nations system. The organization’s early warning system, concluded one senior FAO official, had been at best, “informal, inadequate and ineffective.”

The FAO effort seems, in fact, to mirror most of the problems evident in AID’s handling of the crisis. The stream of reports from the Sahel went largely unheeded over five years. The headquarters bureaucracy was unready with specific contingency plans or funds. The FAO confronted one of the most massive disasters in its history with what amounted to a series of improvisations. FAO officials shuttled between Rome, New York, and West Africa to pay homage to the disparate political and bureaucratic interests that leave the U.N. partially paralyzed in every such crisis. By the spring of 1973 the FAO would have, as one of its officials acknowledged, “no hard statistical data of any kind” on the actual needs of the area. “We have perhaps just an estimation of the percentage of the population affected,” said the same FAO official, “but [there was] no effort to make such an assessment beyond an informal *ad hoc* nature.” Thus, when AID insisted on precise data to support the seed airlift request in May, FAO could not supply the information that both it and AID might have gathered in the months and years as both bureaucracies watched the drought deepen. The principal difference between the FAO and AID seems to have been less in bureaucratic execution than in a general policy approach to the crisis once it was clearly recognized. When Rome finally recognized the powerful human reasons to respond to the drought—evidence of mass exodus and suffering, if not precise data on airfields and needs—the FAO chose to act forcefully on issues such as the seed airlift, while AID hesitated.

The more important point, however, is that neither of the major organizations engaged in drought relief in the Sahel since 1968 was able to forecast and stave off the worst effects of the catastrophe. Though they were in a position to coordinate their actions, to mount a concerted effort enlisting the best specialized contribution of both donors and recipients under the acceptable political umbrella of the UN, they could not—or, in any case, did not.

The results of this failure were apparent when journalists visited a refugee camp outside Timbuktu late in the summer of 1973. There they found nomad children in the advanced stages of malnutrition. No longer able to digest solid foods, the children were doomed to die without a special milk ration designed to reverse the process of edema. It was all a familiar cycle, explained a young French doctor to the reporters. Edema had struck down hungry and long-weakened children in the same way in Biafra and Bangladesh and so many other places. "But don't you have the milk by now?" a visitor asked. "No," said the doctor looking at the long row of children, "it has not arrived yet and will not be here in time for them."

But edema of this kind was not to be the worst killer in the famine. U.S. Public Health experts surveying the starvation in July and August would find that many more casualties had come, ironically, from a childhood disease that had been almost eradicated in the region a few years earlier—measles. Exhausted by hunger and their long exodus, crowded together in squalid settlements, many of the younger children of the nomads died of measles while vaccine was still being shipped.

It was in these tragedies that the failure of contingency planning by the relief bureaucracies became a human reality. There might have been a systematic gathering and analysis of data from the Sahel, and planning for the relief of the area based on experience in other disasters. Needs might have been identified in advance of the fateful winter of 1972-1973. Special milk rations might have been available in the camps as the starving nomad children trekked in. A measles immunization program might have been among the preventive steps taken in the fall, or even as the camps filled the following spring. There might have been stores of seeds and grain ready to move with the FAO early warning in September 1972. There might have been an international mechanism to alert the Sahelian governments to their plight, and to mobilize their limited resources before the disaster became overwhelming. There might have been plans to ship emergency relief

before rail cars, grain elevators and ships were tied up with the Soviet wheat purchases or relief for other disasters. And there might have been relief funds planned, avoiding the political snares into which the added American relief contribution fell in 1973. But despite the five years of warning and the millions of dollars in relief that preceded the crisis of 1972-1973, these opportunities were all lost.

“Harsh lessons can be drawn from the massive famine now facing six sub-Saharan countries,” editorialized the *Wall Street Journal* on July 10, “but the grimmest of all is that relatively routine relief measures, taken months ago, might have considerably reduced this disaster.” In retrospect the *Journal* editorial seems accurate—except, perhaps for one important point. By all official accounts, the “measures” that might have been taken—the planning and organization—were scarcely routine for the AID, FAO or African bureaucracies. The neglect, the inertia, the delays, the red tape, the institutional short-sightedness—all these bore the stamp of bureaucratic routine. It was the “routine” of the present system of international relief that fixed the conditions of the halting and sometimes tragically belated response to the drought in 1972-1973.

III

“An Unsystematic System”

July-December 1973

By mid-summer 1973, the international drought relief effort begun in the spring had become a massive and highly publicized rescue operation. Through American and European media, the world saw not only the images of suffering, the emaciated nomads and dead cattle, but also the scenes of mercy, the hills of food rising on West African docks, or the lines of refugees receiving their ration of American-donated grain. Moreover, the relief effort appeared visibly free of the political or military problems that had obstructed international help to the victims of other recent disasters resulting from civil strife in Burundi, Biafra or Bangladesh. The stricken African states were imploring the outside world for help and the donors were responding. On June 20, the White House released a letter from President Nixon to U.N. Secretary General Waldheim enumerating the impressive quality of U.S. help and pledging that “the United States stands prepared to commit further resources as needs are identified.”

In late July representatives from the Sahel, major donors and private relief agencies met in West Africa. Following that meeting, FAO officials would tell the press that “the threat of famine in sub-Saharan Africa is under control.” From that briefing the Associated Press reported in a widely printed story that “United Nations officials said it was doubtful that large numbers of people had died from starvation, although several thousand had reportedly died from diseases such as cholera and measles . . .” The officials added, the dispatch went on, “that it was impossible to say how many had died because . . .

communications are poor within the countries affected." But there would be no "massive starvation deaths." As these accounts appeared worldwide, AID and U.N. sources began to provide similar private briefings to the Congress and press in Washington.

In the Sahel, however, there was a harsher reality. Overwhelming an unprepared transport system, the piles of food were consumed by waste and wharf rats as well as hungry people. Many who did eat food sent from the U.S. were soon weakened further by violent diarrhea because their systems could not digest the coarse sorghum. Not all starving people in refugee camps, particularly the nomads, were actually given the supposedly life-saving rations. And early in August, as optimistic reports began to appear in the American press, there was preliminary scientific evidence in the U.S. Government—the first results of a systematic study of nutrition in the drought ravaged area—that fatalities in the Sahel would be high. The study showed clusters of nomad children suffering malnutrition levels more severe than those recorded in the famine in Bangladesh.

Yet there seems little outright deception in the disparity between this official optimism and conditions in West Africa. By their own accounts, U.S. and U.N. relief officials were simply not informed about what was happening as millions of dollars and thousands of tons of food poured into the Sahel in 1973. The intelligence they did receive—such as the nutrition survey—was communicated among the various elements of the relief effort only in a most haphazard manner. For a number of reasons, reports which were made to the press, and even to the President of the United States, omitted major problems obstructing the rescue operations and important data on the severity of the disaster. Much as the relief bureaucracies were unready to react to the drought before it became a catastrophe, they were also largely unprepared to monitor the effectiveness and equity of the massive relief once it began to flow.

Problems in monitoring the progress of relief began with the lack of a detailed picture of the transport capabilities of the stricken countries. That ignorance was yet another price of the failure to plan. In 1969 and 1970, three separate studies prepared for AID by outside consultants had stressed the primitive character of most of the railways and roads in the region. The capacity of the area to support any unusual traffic was simply unknown. But it was not until January 30, 1973 that AID sent a two-man team to the area to survey how the African facilities could absorb the thousands of tons of emergency grain

shipments then contemplated. Instructed "to review port and inland transportation capabilities," the team apparently visited only West African ports. Its report, filed in late February, established ton-per-month capabilities for each port, though mainly on the basis of the volume of rail traffic in January carrying the shipments inland. Nothing in the report warned of future shortages, or of potential problems when rail traffic was increased.

The report recorded, for example, 2,500 tons per month as the then manageable cargo capacity from the port of Dakar in Senegal to Kayes, a distribution point for relief in Mali. Five months later, FAO officials would estimate Mali's needs at 20,000 tons monthly, a figure subsequently confirmed by U.S. experts. Yet in August 1973, the railway to Mali would be found to carry at most 10,000 tons per month. As a result, in the summer of 1973 there was at once too little and too much grain for Mali. As shipments to Mali fell short, tons of grain piled up on the docks of Dakar. "The rats feed well at Dakar," cabled a reporter to *The Guardian* on July 24. "Some of those stocks will still be on the wharves in November," he wrote of the transport tie-up, "if the rats—the only fat animals I saw in West Africa—leave any at all." At mid-August senior AID relief officials had not seen the *Guardian* dispatch.

Another AID-sponsored transport survey of the Sahel was undertaken from July 19 to August 23, this time by a six-person team drawn from the Department of Agriculture and the U.S. Air Force as well as from AID. The report revealed the obvious deficit in shipments from Dakar to Mali, and recommended emergency truck transport from the Ivory Coast. It also reported that U.S. C-130 aircraft flying in Mali had been grounded due to mechanical problems. This second transport survey warned of the prospect of fuel shortages plaguing the airlift as well. "It is understood that measures are being taken to increase the fuel availability," the team reported. A month later, Thomas Johnson of the *New York Times* reported from Mali that the American planes had been grounded again, by fuel shortages.

Exactly what was shipped was to be as important as how much and by what means. And here too there were few signs of planning and only an accidental monitoring. In its report, the January-February transport survey team had sounded an almost accidental warning. "The team noticed in examining cargo at Dakar, Senegal," they wrote, "that a considerable amount of foreign material was visible through the polypropylene bags. Recognizing that Number 2 sorghum is basically

animal feed it is suggested that an effort be made to reduce the percentage of foreign materials as this cargo is programmed for human consumption."

There is no evidence of what reaction, if any, this observation stirred in AID. Months afterward, many officials seemed genuinely surprised by an August 18 *Washington Post* report from Timbuktu that nomads were unable to digest American-donated sorghum and "diarrhea is rampant . . ." The sorghum problem seems to have been some combination of two factors. Although sorghum has often been part of the diet for some sedentary farmers in the region, the coarseness of this grain made it inedible for humans. Moreover, the pastoral people were accustomed to a high protein diet of meat and dairy products. But again, as AID waited until the crisis had reached staggering proportions to take stock of the erratic transport capacity in the Sahel, so too no one in the relief bureaucracy apparently bothered to consider the dietary habits of the people whom the millions of tons of hastily purchased grain were to nurture—let alone whether any human being could stomach sorghum American farmers fed their animals. It was left to the first transport survey team to happen upon this grotesque mistake. Even then, the problem apparently remained unredressed for months.

The quality of relief rations reportedly mattered little, however, to many of the starving nomads awaiting the food in refugee camps or on the outskirts of villages. Late in July, and some sources say earlier, AID began to receive random reports from journalists and private relief workers that there was blatant discrimination in the distribution of relief supplies. "The pastoralists are getting short-changed," said one U.S. official summarizing an August 1st cable from an American embassy in the Sahel. "There are disputes between them and the farmers, and the farmers are getting the grain."

The disputes were rooted, as many academic and official experts knew, in the historic suspicion and enmity between the sedentary agricultural peoples of the Sahel and the fiercely proud, independent nomadic tribes. The two races and cultures had often clashed before the colonial period. Even after independence, the nomads remained largely beyond the administrative reach of the modern African regimes whose political base was in the villages and cities. When drought drove the nomads into sedentary areas, it left them at the mercy of people, themselves suffering, who regarded the pastoral tribes at best as troublesome aliens, at worst as enemies.

All this was understood by AID and State Department officials. "We knew from the French and our own experience that there was a major north-south, nomad versus sedentary problem," said one American official. "No love was lost," remarked a senior AID officer. Yet as the distribution of food became the responsibility of local or provincial African officials, some in areas of the deepest historical rivalry between farmers and pastoralists, there would be no provision in the international relief effort even to observe—let alone ensure—equitable handling of the emergency rations. No impartial monitors, either African or international, were in the camps or villages. Only late in the summer of 1973 did the reports of bias filter back to AID in Washington. By autumn, the U.S. Public Health nutrition survey would document a shocking contrast between the nutritional state of sedentary victims of the drought and the deep starvation of the nomads. For a time, the difference might be explained by the relatively poorer condition of many pastoralists as they trekked to settlements. But the nutritional deficiency of the nomads continued, sometimes in the same camps where sedentary peoples were in much better condition on ostensibly identical rations.

"The nomads are being wiped out," concluded one AID policy-maker by October. But many U.S. and FAO officials were clearly reluctant to confront the issue of discrimination out of concern for relations with the African regimes in the Sahel. "I can't give you the information I have," said one State Department analyst, "because it would have disastrous effects on our relations with these governments." The same AID officials who were anxious that American embassies in the Sahel provide precise details on airlift requests somehow were uninterested in pinning down perhaps fatal discrimination against the pastoralists. "I honestly don't know [about discrimination]," said one senior AID relief policy-maker in mid-August, though other sources confirm that several such reports had by then crossed his desk. "I'm sure that it's being dealt with by someone . . . we've left it to our Ambassadors . . . they know the local political situation."

As relief supplies gathered in West Africa and the contributions mounted over \$100 million from more than twenty donors, there was no coordinated effort from any quarter to identify and cope with problems such as the bias against pastoralists. Of the AID monitoring attempts, one policy-maker quickly acknowledged, "It's an unsystematic system . . . we make use of whoever the hell is on the ground." A Foreign Service Officer following the relief operation commented

simply, "The monitoring is inadequate and incomplete." Officials indicated that monitoring responsibilities lay with the African government, yet cautioned no bureaucracy could reasonably be expected to perform, in effect, an objective assessment of its own efforts or political decisions. AID apparently relied heavily on reports of journalists, missionaries or other observers from the area, anyone who had visited affected areas or refugee camps.

U.N. officials recount that the FAO efforts to monitor relief were similarly vague and random. "Our information is highly subjective," said one FAO official. "We have no hard statistical data of any kind," added an FAO official responsible for coordination of the organization's program with other governments. "There was no estimate, or perhaps just an estimate, of the percentage of the population affected, but [there was] no effort to make such an assessment beyond an informal *ad hoc* nature." FAO sources said they too were dependent for information about relief on random reports of journalists, pilots, "or anyone on the scene." Asked if the FAO had considered the potential or existing problems of feeding grain to nomads in Mali accustomed to milk and beef, a senior Organization officer answered only, "No". The FAO was studying, the official said, the "findings" of an American television crew which had recently visited refugee camps in Mali and Niger.

The bureaucratic results of this official myopia on the relief effort were hidden from public view—the lack of any systematic basis for planning further relief, the unrecognized waste and injustices, the accounting for lives, food and money that would never be possible. But the information gap became visible as officials in Washington or New York began to speak publicly on the basis of such scanty official intelligence on the drought. On August 1, for example, U.N. Under-Secretary General Bradford Morse would tell a group of U.S. Congressional aides, in the presence of responsible AID officials, that, as one listener remembered, "the threat of famine is under control." Stories echoing that statement followed within days in both the *New York Times* and *Washington Post*. But almost immediately afterward, there came a counter-statement from the League of Red Cross Societies in Geneva (LICROSS), citing 12 million "severely affected" drought victims with no end of the crisis in sight. It seems clear both statements were made in good faith, each from an effort to convey to the public and concerned legislatures an accurate picture of reality in the Sahel. But it seems equally clear, according to a wide number of official and

private relief sources, that neither statement was based on reliable data. If “mass” starvation (no more than 100,000 deaths?) had in fact been under control on August 1, neither the FAO nor AID had a system to yield that judgement with certainty. And both should have known—as at least many of their officials did know—that they lacked such knowledge.

To journalist Carl Rowan visiting what he called “the border of hell” in Timbuktu, the UN-LICROSS contradiction seemed, in any case, irrelevant. Rowan wrote from Mali on August 15:

I cannot play the numbers game. But I know what I am seeing: flies feasting on the sore-pocked face of a child pot-bellied and deformed by hunger; children crying incessantly; their mothers wailing because their children are too enfeebled to stand in line for the sickly green concoction of pea soup and jam that is their emergency feeding that I suspect has been staged for the cameras . . .

In fact, neither the U.N. nor Rowan nor the public had to “play the numbers game.” As officials spoke their claims and Rowan wrote his bitter rejoinder, scientific data was accumulating on the extent of malnutrition in the Sahel, the areas of most severe need, a reliable computation of the death rate in the drought, and evidence of the incidence of drought-related diseases. Another casualty of the disarray of the relief effort, however, that information would go largely unnoticed for the next four months.

The Nutritional Survey

There are conflicting bureaucratic versions of how the nutritional survey originated. Various AID offices claimed that it began at their request, one of the results of the autumn study group. Much evidence suggests, though, that the initiative belonged to the Public Health Service itself. In February 1973, as the first press reports began to appear on yet another bad harvest in the Sahel, American doctors at the Center for Disease Control in Atlanta drafted a formal recommendation that the U.S. sponsor a survey of existing and potential malnutrition in the area, particularly the susceptibility of the population to disease. Their proposal was a natural outgrowth of an ongoing project at CDC on the epidemiology of famine, a study of the spread and control of starvation based on both historical research into great recorded disasters—the blockade of Leningrad, the Irish potato famine, the starvation in the Western Netherlands in 1945—and firsthand observation in recent catastrophes in cases such as Biafra and Bangladesh. Many of the CDC physicians and technicians were also involved in the U.S. smallpox and measles eradication programs in West Africa in the mid- and late-sixties, bringing to the drought singular experience in the area as well as in the general subject of famine.

Yet, by all accounts, this extraordinary resource was brought to bear on the tragedy of 1972-1973 almost by chance. No early warning had mobilized the experience in CDC, summoned its recommendations, or automatically shared its expertise with the governments of the Sahel about to feel the full force of the disaster. The Public Health doctors had not been included in AID's November study group. Nor had they received regular official reports from AID or the FAO on the Sahel. Sources remember that the CDC experts in Atlanta gleaned most of their information on the current crisis from returning colleagues and "usually the *New York Times*." But by February 1973 even these fragmentary signs were clear enough.

The doctors proposed a survey of samples of the population in four of the six Sahelian states—Mali, Mauritania, Niger and Upper Volta—based on an authoritative medical research technique using comparative measurements of the proportion of weight to height. Employed in Bangladesh, the weight-height survey is regarded as providing a reliable index of malnutrition among a given population. Those falling below a designated borderline, 80 per cent of median weight for height, were found to be badly undernourished, or below

what CDC called the "acute malnutrition threshold." The median standard took into account relative differences in the nutrition and stature of various populations due to traditional diets, and thus measured malnutrition *relative* to the customary health of a given group, rather than as an arbitrary standard. In March 1973, a memorandum urging such a survey in the Sahel duly wound its way from Atlanta, through the CDC's parent Washington bureaucracy in the Department of Health, Education and Welfare toward AID. "We had our own bureaucratic protocol to observe," said one of the participants in the survey. "But by the time the memo got through, the crisis was on us."

Whatever the origins of the CDC survey, it too was belated. The first U.S. doctors arrived in West Africa only in late June and early July, with the first summary report issued July 20. Over the next eight weeks, in the nine reports appended to this report, the survey clinically recorded a portrait of the calamity in the Sahel. This gathering evidence, duly sent to AID, was sometimes in sharp contrast to the official public optimism of the same period.

On July 30, the survey reported measles cases in Mauritania during the first quarter of 1973 as three-to-fourteen times greater than previous quarters. One in every ten stricken children was dying. On August 6, the survey reported areas of Upper Volta where malnutrition was more severe than that measured in 1972 in Bangladesh. On August 13, the doctors found nomadic camps in Mali where 70% of the children were below the "acute malnutrition threshold," as compared to 11.6% in the historic famine in Bangladesh. Sedentary villages had 47% below the threshold. Throughout the Gao Cercle, a large affected area in Mali, the survey found the people to be on a "starvation diet" of less than 400 calories daily. In Mauritania, the same report documented acute malnutrition rates of 18%, 25%, and 22% in various villages and camps.

On August 20, the survey reported that "food supplies are nearly depleted in Mauritania," "food distribution is erratic" in Niger, and from Upper Volta that "food distribution vehicles are no longer able to reach" three villages whose children were suffering high rates of malnutrition. In one of those villages, said the report, "no food distribution has taken place since June, and the villagers' diet has consisted primarily of leaves and roots."

By August 27, the Public Health experts reported from Mali that "very few young children have been immunized" against measles,

despite rising incidence and deaths. And from Mauritania, as in other countries, the survey found that, "In all areas, a striking contrast in nutritional status between nomadic camps and sedentary populations has been observed, even when both groups live in the same cities." The figures from Mauritanian villages and camps were telling. For one area, three per cent of sedentary farmers were below the threshold, thirty per cent of the nomads were acutely malnourished. In another sector, 11% of village children were below the borderline, as against 17% of the pastoralist children. For still another, there was 10% malnutrition among farmers' children, 52% among the children of nomads. Again, the report warned of poor food supply: "In all of the areas surveyed it was found that while the Mauritanian government distribution system is relatively effective, its effectiveness is severely hampered by a lack of adequate quantities of food." This while British reporters found grain fattening rats on the docks in Dakar, Senegal.

On August 31, the survey reported on the children Carl Rowan had described in Timbuktu. In one nomad camp of 10,000, nearly 75% of the children surveyed fell below the threshold, almost seven times worse than the malnutrition recorded in Bangladesh. More hopefully, the report indicated that death rates in the camp, earlier estimated at 182-365 per 1,000, were judged to have been reduced to 10-16 per 1,000, or below the normal annual crude death rate for Mali.

On September 10, the survey reported once again the "provision of food extremely difficult" in Mauritania, with areas still suffering high rates of malnutrition. By September 14, in concluding the survey, the U.S. doctors returned to five villages in Mali's Gao Cercle they had visited during July, but still measured some 40% of the children below the malnutrition threshold. The Public Health teams then returned to Atlanta to correlate and analyze their data for a final report on the nutritional state of the four countries.

In the Sahel, the survey had some immediate effect. The governments of Upper Volta and Mauritania urgently diverted relief shipments to feed areas in desperate need. "Almost all the [African] Ministers of Health made changes in feeding and transportation," recalled one of the experts. For the Africans, of course, this was the first authoritative information they had received on the actual human impact of the drought on specific areas and elements of their population. In the vast multi-million dollar relief effort, with literally hundreds of foreign "specialists" in the area for five years, it would be the only planned, coherent appraisal of starvation, food distribution and the threat of disease.

In Washington, however, the survey seemed less appreciated, if noticed at all. Some AID experts apparently understood the ominous implications of some of the findings. "That data can predict the nutritional state for the overall nomad population," said one analyst of the high malnutrition rates recorded from the refugee camps. For a bureaucracy admittedly dependent on the random reports of journalists for its intelligence on the drought, the CDC survey might have been eagerly received, as the basis for current policy as well as middle- and long-term planning. It was not. Though the regular reports filed through Atlanta were sent to AID's Foreign Disaster Relief Coordinator, many AID officials, including ironically enough the offices of Health and Nutrition, had not even heard of the survey by late August. Responsible officials in AID's African Bureau seemed ignorant or indifferent regarding the survey findings.

Not surprisingly in this context, there was no systematic effort to distribute the reports beyond AID. By September, the responsible official for African Affairs on the National Security Council staff in the White House had never heard of the survey. As late as November 1973, five months after it was begun, officials working intensively on the drought at the U.N. in New York were unaware of the reports. "I haven't seen it, what is it?" asked one U.N. official, whose main source of data on the Sahel had been U.S. and British press clippings.

For the FAO, supposedly a central "coordinating" institution for drought relief, the story was similar. The FAO Washington liaison office was told of the existence of the survey and its potential importance by the authors of this report in August. Asked early in October what had been done with the data, an FAO official replied, "I think I called them and got on their mailing list . . . I really don't know whether it went to Rome—or stayed here . . . It was fairly pertinent information, but I really don't know." In late November, the FAO would call the Carnegie Endowment to ask the meaning of the final CDC report. "I've got this document on my desk and it seems to be relevant data," said the official, "but what is it, and who sent it?"

The failure in communication was at all levels. Though CDC knew above all the importance of the data in human terms, it apparently made no special bureaucratic effort to ensure proper distribution. "We hope they [the findings] have some impact," said one Public Health official, "but we can't guarantee it." AID had no mechanism to analyze and act on the reports as they came in, much less see that the international relief effort—the U.N. in New York, FAO in Rome and West Africa, other donors, or even the Africans themselves—were

systematically informed. Many who did receive the reports, say a number of sources, apparently lacked the knowledge or time or inclination to grasp their meaning. For the functioning of the international relief effort, however, the precise reasons for the communications failure seem less important than the fact that it happened so completely.

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The day after CDC's fifth report from the Sahel—with evidence in hand of extreme malnutrition and dwindling food supply in many areas, of unmistakable discrimination against nomads in relief distribution, of famine more acute in some regions than in Bangladesh—AID released to the press a formal report on the drought sent to President Nixon from relief coordinator Maurice Williams. According to AID officials, there was no further classified section of the memorandum. The version made public—which is appended to this study—was the complete report given to the President. That memorandum embodied much of the confusion and official self-deception that had grown out of the basic failures to plan and monitor the Sahelian relief effort. Whether the product of ignorance or oversight, the report showed the relief bureaucracy unable to compose a candid, accurate picture of the crisis even for its own Chief Executive.

The memorandum began with the dramatic assertion that “mass famine—which threatened millions some weeks ago—has been averted.” That claim was based on a calculation that the “625,000 tons of food already delivered or *on the way*” (emphasis added) “is adequate to meet basic calorie needs and avoid widespread starvation throughout the next sixty days before the harvest.” AID officials admitted later, however, that their calculations of relief distribution as and against calorie needs had been (not surprisingly, given their internal information) “very rough.” “They’re not very proud of it,” said a senior AID policy-maker of the estimates made by the drought desk.

The AID calculations underlying the claim to the President have not been made public, but it seems clear they were based on an assumption that drought victims were receiving a maximum relief allowance of 10 kilograms of grain per person each month. Yet the CDC team—the only systematic survey of the distribution system then or later—had nowhere found relief consistently at 10 kilograms, and in most locations it was at best 5 kilograms per person monthly.

Moreover, even assuming the maximum delivery—and it could only have been an AID assumption—the basic calorie yield from the sorghum (presuming one could digest “animal feed”) and millet would be less than the internationally-recognized “basic calorie needs” of small children as well as adults.

The CDC survey, for example, would record a sedentary village of 400 people in Niger receiving some 4700 kilograms of grain during a 31-day period. (“Nomads in the same area,” observed the team, “received one bowl of powdered milk.”) But that 4700 kilograms, assuming equitable distribution among the sedentary victims, would provide less than one-half the calorie needs of a male adult, and only two-thirds of a female adult. In Mali’s Gao Cercle, the teams found camps with a 400 calorie-a-day ration, in Mauritania settlements receiving about 560 calories daily—compared to “basic calorie needs” of 1,250 for children, 2,800 for male adults and 2,000 for female adults. Whatever its origin, whatever the “rough” arithmetic, AID’s calculations of meeting needs in the Sahel scarcely reflected the only hard statistical data available on the subject.

The memo did go on to say that there were “pockets of severe malnutrition” (apparently a reference to the areas surveyed by CDC) and observed “the four years of drought that preceded present emergency relief efforts had a cumulative weakening effect.” There was no explanation, of course, of why that “cumulative” process had not been dealt with more vigorously before it had become the “present emergency.”

Of the bureaucratic rivalries and deadly African political problems that shrouded the relief effort, the President and American public were allowed no glimpse. The FAO, whom AID suspected of “bungling” and believed to be inefficient in planning or monitoring, was described in the memo “as doing a fine job.” So too were the Africans, “responsible for the final distribution of food . . . doing a remarkable job under difficult circumstances.” There was no word in the report of the gathering evidence of discrimination against the nomads, of the cables that “couldn’t be shown,” or of the harsh contrasts in CDC reports between children in the same camps assigned to live or die by the accident of birth. “Our response has been timely and effective,” concluded the memo, “and has been in the great humanitarian tradition of America to help people sustain their lives in the face of catastrophic disasters beyond their control.”

The memorandum for the President referred to the ongoing CDC

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survey almost in passing. There were U.S. epidemiologists in the Sahel, it said, "to guide special medical and food relief efforts" and to identify "pockets of acute nutritional and medical distress for special attention." But the impression was that the teams were only one more "special" effort among many, with no general significance for the drought or relief policy. Nearly three months later, in November 1973, after some six weeks of reportedly heated bureaucratic efforts by AID to expunge certain sections, the Public Health Service produced its final report on the nutritional survey. Far from the incidental activity described by the President, the survey represented, in its own words, "the most objective data received to date on the nutritional status of populations living in the drought affected zone in West Africa." Also appended to this study, the CDC summary re-emphasized and enlarged upon the findings of the nine periodic reports. It was a very different view of reality than AID's self-congratulatory memorandum to the White House.

Summary data confirmed again the disparity between nomads and sedentary farmers. Of 3,500 children measured, "children from nomad clusters ranged on the average ten to seventeen per cent below the threshold while those from sedentary or southern groups were approximately three to seven per cent below." These figures were, said the report, "conservative, since they do not take into account the large number of children whose weight for height values fall very close to the malnutrition threshold, but are nonetheless above it."

The survey found that a major killer in the drought had been measles. And again, the nomads had suffered enormously. In Niger, the survey found "deaths attributed by villagers to measles and/or famine accounted for 73% of the total among sampled nomads as opposed to 32% of the total among sampled sedentary peoples." Most of the victims, of course, had been children. "A well planned measles immunization campaign among these groups," concluded the U.S. doctors, "could have reduced measles morbidity and mortality." The report went on:

Nomad populations, camped near urban centers, could be vaccinated more conveniently than ever before. However, past experience has demonstrated the importance of maintaining low levels of susceptibles through the continued immunization of newborns. A contributing factor in the current measles epidemic is the large reservoir of susceptible

children which accumulated following a decrease in emphasis on measles immunization after the mass vaccination campaigns recently conducted in West Africa.

It was this stinging indictment of AID's lack of planning, albeit delivered in almost oblique bureaucratic rhetoric, that had delayed the AID "clearance" of the CDC summary for several weeks. The measles epidemic had been all too clear, even in public documents released in mid-summer. A State Department press release in July had stated: "Malnutrition is responsible for increasing the death rate from measles in Mali and Niger." A UNICEF memorandum dated July 21 reported that "measles has reappeared in epidemic form in the affected areas," and indicated that a request for vaccine was "under consideration" in AID. And the Agency, as the report to the President duly noted, had "promptly sent 370,000 doses of vaccine to the region." But the inescapable point of the CDC findings was that the critical period had indeed been much earlier, in the winter and spring before the epidemics began among famished children. The most telling word in the CDC memo was "planned."

For weeks, AID was "adamant," as one participant put it, that the CDC passage on measles be deleted from the final report. But the Public Health experts were apparently equally forceful. "We will not make any accommodations in the substance of the report in order to make certain individuals in AID more comfortable," said a CDC source. "That's an ethical and professional position from which we can't and will not deviate." Late in November, the summary was completed—with the conclusion that the measles deaths might have been avoided.

The CDC summary report contained other striking findings as well. The epidemiologists estimated "the maximum number of deaths due to famine this year" at 101,000 for four of the six countries. It was much less than many had feared, and only a fraction of the "millions" mentioned in early sensational press accounts of the tragedy. Yet in proportional terms, for the two million nomads and the 22 million of the entire region, it was clearly a human disaster of cruel magnitude.

Country by country, the CDC final data was a measure of the depth of the catastrophe beyond the death rate. In Mauritania, "famine can be considered as adversely affecting the majority of this nation's people," with more than a three-fold increase in measles for 1973 over 1971. "Not enough food is available for distribution by the government," the CDC found in Mauritania, a fact omitted from AID reports

on the country. Most ominously for the future, the teams found by interviewing nomads that 66 per cent “would remain in or near the cities even if they had animals again.” The drought had not only ravaged the land, but had also wrought a social revolution, creating a new rootless mass in urban areas with which the overwhelmed regimes could hardly deal, if at all.

For Niger, measles had gone from 2,886 cases in 1971 to over 29,000 in 1972 and over 35,000 in 1973. The death rate, averaging 23 per 1,000 for 1965-1971, had skyrocketed in 1972 to 54 per 1,000 for sedentary farmers, and a total death rate nearly double the previous average—44 per 1,000. “Distribution of food,” reported CDC from Niger, was “erratic.” Then the by now familiar observation:

An example of one sedentary village receiving adequate calorie supplies for one month and an adjacent nomad encampment receiving only one bowl of powdered milk per person points out the need for a specialized distribution system that deals directly with nomad encampments.

In other words, the international relief effort would have to confront the problem. “Traditional enmities between nomadic and sedentary populations,” said the CDC summary, “*make it unrealistic to assume that sedentarists will feed nomads from a food allotment to a village.*” (emphasis added)

For Mali and Upper Volta, as elsewhere, the survey found measles at the old pre-immunization levels. In Mali, cases had more than doubled in 1973 over 1970, with deaths in 1972 and 1973 more than ten times greater than in 1971. In Upper Volta, measles cases tripled between 1972 and 1973; deaths were more than five times greater this year than last.

As with the earlier periodic reports from June through September, the CDC summary findings were routinely distributed from Atlanta to AID in Washington, but with no particular system from that point onward. Copies were eventually given to the FAO (at the request of the authors), to African diplomats in Washington, and reportedly to governments in the Sahel. By early December 1973, however, more than a year after the drought became a recognized crisis, several officials in AID had not seen the CDC data. White House officials were still unaware of its existence.

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"It seems strange," said the *Wall Street Journal* reflecting on the failures of the relief effort, "that a situation like this could develop in a world which has the largest bureaucracy in history devoted to international good deeds." The answer lay not alone in mechanical failures of performance, or in the impersonal malfunction of the international relief effort. As the participants in U.S. and U.N. relief activities recalled events, and as documents became available, more and more visible was the capricious influence of bureaucracy—the rivalries and clashes of individuals and organizations that can shape policy or action quite apart from the substance of issues. There seemed little readiness to recognize common mistakes or to cooperate more closely in the future.

To AID, as one official characterized them scornfully, the Public Health doctors in the Sahel were "yellow berets." It had been "like blasting them out of bedrock," he said, "to get them to complete the measles/smallpox programs and leave West Africa." What the doctors found, the singular nature of their contribution, apparently mattered less to some in AID than the fact that CDC was thereby trespassing on AID's bureaucratic domain. To the CDC experts, on the other hand, the AID officers were simply "programmers," with little real concern for the people of the Sahel.

There was similar disdain in AID for the U.N. and the FAO in particular. "We are terribly concerned," said an AID briefing memo on June 14, "that the U.N. will turn this process into a bureaucratic monster." As for the FAO, one responsible U.S. official summed up its contribution tersely: "They were making a lot of noise, and they wanted to do everything by airlift." Bureaucratic bickering was no less concealed within the U.S. Government where the African Bureau in AID is said to have jockeyed for power with McClure and the Office of the Foreign Disaster Relief Coordinator. The State Department's Bureau of African Affairs reportedly lost its bureaucratic struggle with AID for earlier and more urgent action in the crisis. Even where bureaucratic battles were fought over policy rather than perogatives, the results were no more helpful to the relief effort.

In November, officials say, the telltale signs of bureaucratic success and authority began to appear in the West African Office of AID, the locus of new public concern and—most important in an

institution where power is measured by money to dispense—potential new appropriations. There would be carpets on the floors, new desks, more staff. “It’s time we started paying attention to amenities,” said an official.

It seems unlikely, however, that the flaws in AID relief efforts—whatever their character—were singular to the United States. The British Government had received all the relevant information on the developing disaster, including the FAO’s early warning data and appeals over the winter and spring. But it was months before London contributed 300,000 pounds (sterling) to the Sahel. There were reports in August that German and Belgian aircraft had been withdrawn by their governments from vitally needed airlifts for a NATO military exercise. The French, so long the dominant outside power in the region, once so closely aligned to its peoples, seemingly played a hesitant role in relief. By late August, Paris had contributed only \$7 million of the world total of over \$76 million in food aid to the stricken countries. In any case, U.S. officials thought the French would participate in relief only on their own terms, in an arrangement “that gives full cognizance to French interests.” An AID briefing memo warned in June: “They (Paris) will not permit themselves to be ‘coordinated’ by the U.N.” Later in the summer of 1973 the relative indifference of the French Government brought criticism in the French press, and eventually also from opposition ranks in the National Assembly.

U.S. Congressional interest in the crisis was led by the two Chairmen of the Subcommittees on African Affairs, Senator Humphrey and Congressman Charles Diggs (D. Mich.) and by Senator Edward M. Kennedy (D. Mass.) who presided over the Senate Subcommittee on Refugees. As recounted earlier, there were Congressional hearings on the disaster in June and July, and both Humphrey and Diggs subsequently introduced bills for special aid to the Sahel. After a series of Congressional maneuvers, in which disaster relief became involved in other controversies surrounding the Foreign Aid Bill, assistance for the Sahel finally emerged from a Senate-House conference at \$25 million, which was then to await final Senate passage.

Beyond the initial hearings in June, however, neither the Senate nor House would continue close oversight of the relief operations in AID. Deputy Assistant Administrator Brown had assured both Senators Humphrey and Kennedy in June and July that relief was proceeding satisfactorily, that African regimes were doing an “excellent” job of distribution, and that the U.S. had responded well, including a

“speeded” delivery of measles vaccine, “the demand for which has become more urgent.” Brown avoided a Kennedy question about the low U.S. contribution to the Sahel Trust Fund in mistaking the U.S. non-food aid as \$5 million at a time when it was scarcely over \$1 million. In any event, Brown assured the Senator, “we had worked closely with the FAO.” Ten days earlier in hearings before the Subcommittee on African Affairs there had been a few probing questions from Senator Humphrey, but no revealing answers. “He was critical of AID’s efforts in certain places,” said a Senate staff consultant who watched the Humphrey hearings. But AID saw the episode differently. “Together with State we have participated in several Congressional hearings,” said an AID internal memorandum on June 27. “The Humphrey hearing in particular was very favorable to AID,” the memo concluded.

After those hearings, the Sahel largely disappeared as a Congressional issue. In December, neither Senate nor House staff members on the African Affairs Subcommittees had heard of the CDC nutritional survey. Congressman Diggs and Delegate Fauntroy did visit the Sahel, however, in official trips late in 1973.

Having largely ignored the drought for four years, the American media’s coverage of the tragedy in 1973 was uneven, cresting with television reports, news stories and editorials in August, and essentially ending in the autumn. Both official and private sources agree that by far the outstanding journalism on the crisis came from David Ottaway of the *Washington Post*, whose dispatches from the Sahel in August and September were both vivid and searching. Much to the consternation of AID’s officialdom, Ottaway reported in August the diarrhea from American sorghum and later at least mentioned, if sometimes deep in his stories, other major problems in the relief effort. “The suspected death of hundreds and probably thousands of nomads in the West African drought can no longer be doubted,” wrote Ottaway on August 18, three days before AID’s memo to President Nixon. “They have been dying for months and are still dying today.” Ottaway also pointed out the shortcomings of African bureaucracies (“lackadaisical in its cooperation,” of one state; “sensitive about its sovereignty,” of another). “Chad, Mali and Upper Volta,” he reported on September 3, “have been somewhat indifferent to the plight of the nomads . . .” And it was Ottaway who first touched on the alarming findings of the CDC survey. On September 3, he reported data from Niger and Upper Volta showing 10 per cent malnutrition among sedentary children “compared

to 25 per cent and sometimes as high as 70 per cent of children among the nomads.”

✓ Few others matched Ottaway's attention to detail. Harry Reasoner of ABC News reported the suffering of the Sahel to a nation-wide television audience in a moving documentary at mid-summer. But no reporter investigated the administration of relief in Washington or Rome, which explained much of what Ottaway and Reasoner found in the Sahel. In late August, Carl Rowan and Washington television reporter J. C. Hayward visited the Sahel for a documentary on the tragedy. Their report was intended to dramatize the suffering and spur public response in the United States. If its filming of dying children achieved that effect, however, it did not go beyond the surface of the problems by then reported by Ottaway. Rowan's questioning of an official in Niger about distribution problems ended with a flat denial. “One shot of an unmanned office or a hard look at a distribution depot would have gone far toward clarifying, if not settling the issue,” said a television critic in the *Washington Post*.

Rowan's newspaper columns from West Africa were briefly critical of the relief effort. On August 17, in a *Washington Star-News* story from Niger, he reported African “bitterness” at the meager foreign aid to the Sahel prior to the drought, and that present levels of relief—claimed adequate by AID four days later—would “barely stave off mass famine and widespread epidemics.” The State Department had “goofed,” Rowan wrote, in not replying promptly to a letter from Niger's President Diiori, but the situation had been corrected.

About the profound and far-reaching failures of planning and monitoring in the relief operation, there would be no sustained journalism. Some of the most relevant questions and observations came in a largely unnoticed August 11 article in the *New York New Amsterdam News* by Vernon E. Jordan, Jr. The article said in part:

The first warning signs went up more than three years ago, when drought hit the region. It has continued and is likely to go on for some years yet. Last fall, word was spread by the UN Food and Agricultural Organization that crop failures in the area were due.

So the world knew about it, but little was done until tribesmen started streaming into towns and villages pleading for food. Where were the members of the vast army of international experts then?

Why didn't our State Department start things moving sooner? Was information about the impending disaster filed in neat folders while people died?

Now relief supplies are coming in, too little and too late. The UN and individual countries, including our own, are sending food, but it is one thing to get them to the ports and airfields of the region and another to get them into the hands of the people off in the hinterlands.

Lack of roads and local transportation has been a stumbling block and the improvised nature of the operation results in waste and confusion.

There were no answers to Jordan's questions in subsequent news coverage, and least of all in AID's briefings of the press. Most newspapers accepted without checking the Williams' memorandum to the President, and duly reported, in effect, the end of the crisis. By mid-autumn, the subject was at most an occasional filler in American papers. AID provided a steady stream of hand-outs to the press from June to October, mainly statistics on the size of the U.S. contribution. There was no explanation of the transport problems, the bias against the nomads, the reason for the mounting deaths due to measles, the CDC findings, or the quality of the sorghum shipments.

Once, on October 24, 1973, an AID release broached the issue of planning in recounting an interview of Relief Coordinator Williams by the American University FM radio station in Washington. "Asked why long-range programs had not been formulated previously by these six countries," the release said, "Williams replied that although there had been some drought in some parts of the region every year, people had been able to cope with the problem. Farmers stored grain for several years in advance and drew upon these reserves when needed." This time, Williams said, "there was no way for them to deal with a disaster so massive in scale and intensity." It was an answer belied by the entire AID documentary record of the last five years in the Sahel, from the collapse of the Grain Stabilization Program's storage efforts to the grim data, year by year, of millions in famine and dying cattle herds. There had been "no way" to deal with the disaster because a vast bureaucracy had largely ignored it until it was too late. Yet of *that* tragedy, a life and death matter not only in the Sahel, but in future AID rescue efforts, U.S. officials told the public nothing.

Inside the AID bureaucracy, however, none of this was seen as

amiss "... The media had been kept fully apprised of AID's efforts in the drought," said an internal memorandum to relief officers in June. "In large measure, AID has received very favorable press."

A year after AID's November group had first examined the drought, the crisis had brought planning suddenly into bureaucratic vogue. There was a group at work within AID (albeit with uncertain funds) to plan medium- and long-term projects. At the U.N. in New York was a staff of planners under Under-Secretary Morse reportedly addressing some of the same problems.

Not even this belated planning effort, however, would be free of some bureaucratic undertow. AID remained concerned, as a June 14 briefing memorandum had told senior policy-makers, that the U.N. effort be limited to "organizing studies of long-term development needs," and seeing to an "exchange of information . . . on what is being done"—the latter effort, as the memo puts it, to be "more sketchily staffed." There should be, after all, no "bureaucratic monsters."

The problems facing these planning groups were enormous. Most immediately, there was the question of how much assistance the Sahel would need simply to stay alive through another year of drought and crop failure. The \$25 million U.S. contribution emerging from Congressional bargaining was only half of what Washington had contributed in 1972-1973. It would make possible, as relief officials had warned, barely a return to "point zero." At year's end the contribution of other European donors was uncertain.

Beyond daily survival were the questions of how to begin to arrest the fatal decline of the region. Had development aid hastened the calamity by sinking wells that exhausted the water table in areas adjacent to the desert? Were projects planned as the October study charged and as many CDC experts thought, without an appreciation of the overall ecological impact? There were no ready responses to this in planning bureaucracies that had only begun to assess the problem.

Over the summer and fall of 1973, two professors from American University, Norman MacLeod and Darrell Randall, made what seemed an extraordinary discovery. Working from satellite photographs of the sub-Saharan region, the two scientists found an area of land which had retained its vegetation and moisture amid the encroaching desert. On examination in Niger, the area turned out to be a French-run cattle and sheep ranch, with its grass growing behind the protection of barbed wire fencing to prevent aimless grazing by nomadic herds. At once, there seemed an answer to the tragedy of the Sahel in simple range

management. "Millions of dollars should be put into barbed wire and enclosures," Randall told a reporter. But that straightforward solution would clash, as AID's October study indicated, with the traditional freedom of the nomads. Even if such a massive social change could be effected with the pastoralists now in no condition to resist, there remained formidable problems of "managing" a range stretching more than 2,000 miles across territory previously beyond the political authority of Sahelian regimes, much less their meager development budgets.

And even if there existed a practical and affordable solution to the invasion of the desert, the planners still have to reckon with the bureaucratic inertia of donors and recipients. To some Africans, the solution lies in more wells, to others it is a massive "Marshall Plan" for huge dam and irrigation projects, which many Western experts oppose vigorously.

"Despite the urgency of the crisis," wrote Ottaway from Bamako, "there remained the danger that each African state will pursue its own particular priority project and that regional development efforts will splinter even as foreign nations are gearing up to make a sizeable joint investment . . ." There were also doubts that the international community would ever make the large, sustained investment necessary to move the Sahel from emergency to self-reliance. "Some of the donors are more comfortable with a recurring welfare situation," said one ranking AID officer who had just canvassed European officials. "They feel the costs of a recurring welfare situation are better than the substantial investments needed for program planning."

Looming over all the plans and schemes was a problem for which there was no swift answer—the social and economic dispossession of as many as two million nomads. The CDC survey found two-thirds of the nomads refusing to return to the range even with herds restored. Yet there appeared no place for them in the economy or culture of the sedentary settlements, even if the countries of the Sahel could somehow be restored to their pre-crisis poverty, which seems now a major improvement. Many observers warned that the historic cost of the drought, regardless of the process of recovery, may have been the creation of a vast new "Palestinian" problem in West Africa.

Finally, as if these perils were not enough, the Sahel became a potential hostage to the volatile politics of oil in the wake of the 1973 Middle East war. One of the innocent casualties of the energy shortage among the wealthy nations, warned Senator Humphrey and others,

would be international food aid. As Western economies became depressed, they would lose the capacity to produce grain surpluses of the kind sent to drought-stricken nations. The oil embargo, Humphrey predicted to the U.S. Senate on November 21, "will lash back upon millions of the poor in Africa and Asia . . ." It was against this background that the Sahel would enter its sixth consecutive year of drought in 1974.

Relief Coordinator Williams met several times with African officials in the autumn of 1973, and sources say he did so with unusual effectiveness. "Everybody has been terribly surprised at our success," said one source of Williams' efforts to prod the African governments. "We even have the French coddling up to us." But other sources say that it required little diplomacy by autumn 1973 to persuade anyone of the gravity of the situation. If public attention had waned and the bureaucracies had turned to planning, the crisis in the Sahel was still immediate. An FAO crop forecast for the fall was alarmingly pessimistic, according to those familiar with it. With roads impassable and new crops failing in Mauritania, there was finally a response to the CDC warnings since July of inadequate food distribution. An "emergency" airlift was scheduled to begin in October.

Williams visited the Sahel September 8-21, and returned, according to several sources, "very shaken" by the situation. "It's about the worst disaster I've seen," he told an associate. In December the United States announced another grant of 150,000 tons of grain to the Sahel, bringing to \$80 million the U.S. share in drought relief.

There would be another memorandum to the President on September 27 reporting the need for further food shipments, but reportedly saying no more about specific problems than the August 21 memo. That memo was never released. "It was the usual stuff," said an AID press officer about the September 27 memo. "No one seemed very interested anyway."

IV

Toward A System of International Mercy

Taken singly, none of the failures in the international relief effort in the Sahel seemed at the time irreparable. None alone seemed decisive. Together, however, they formed a pattern of neglect and inertia that made the rescue operation far less effective than it might have been. An administrative and bureaucratic disaster was added to the natural calamity—inevitably at a higher cost in human lives and suffering.

Like the impact of the drought, the effects of the relief failures in AID and the FAO were cumulative. Because there was no contingency planning, there was no ready information on airfields, and no prompt response to a request for airlifts. Without airlifts, food supplies further dwindled—straining surface transport, affecting shipments elsewhere, aggravating shortages in which discrimination against nomads became more likely and more acute. Without effective monitoring of the distribution of relief, without an early assessment of nutrition and food needs in certain areas, the bureaucracy had little basis for planning an airlift, or for making specific changes to augment surface transport, or for providing special rations and vaccines. The discrimination against the nomads was also self-reinforcing. Once it had happened, it became politically difficult at every level—local village chiefs, provincial authorities, central governments, international meetings—to confront the issue. Bias, waste and inefficiency discredited every level of the relief effort. None would admit responsibility. And once the United States or United Nations officials had publicly decreed success it seems

to have become impossible for them to admit that their claims were premature, or exaggerated, or more truthfully, simply without hard factual basis.

Most of all, the process of malnutrition itself was insidious. Time lost by bureaucratic vagaries in Washington or Rome or Bamako became an irredeemable loss in the fading vitality of children and adults. Indigestible sorghum appeared in AID documents as life-saving relief; but in the refugee camps of the Sahel it was cramps and diarrhea, and a further drain on strength and hope. From a certain threshold of weakness, as the CDC doctors documented, there was no turning back from disease or terminal starvation.

The failures of 1972-1973 can be traced to more than a decade of foreign aid policies which had ignored the destitute countries of the Sahel. For the U.S., France and other donors, international assistance in Africa was largely the product of political calculations not unlike the earlier colonial policies of the European powers. Nations and regions were given priority not for what they needed in humanitarian terms, but for what they could yield in tangible advantage to the giver. As U.S. aid to Africa diminished in the 1960s, Washington clung to its original "investments," by then fortified by powerful bureaucratic interest. In 1971, as the UN released its shocking statistics on the poorest nations, there was new attention by the World Bank and other lending institutions to countries so blatantly by-passed by the so-called "decade of development." AID publicly pledged special remedial attention to the poorest, but this belated effort came with foreign aid cut to its lowest in the U.S. Congress. There was no realistic prospect that Washington could right in the 1970s the imbalance of the choices compelled a decade earlier by Congressional cuts and codified in the Korry Report. "It would have cost money to help put the Sahel on its feet before the drought," said a former official, "but no more, and maybe a lot less, than we'll have to put in now just to keep them from going down the drain for good."

The most conspicuous failure to the relief efforts from 1968 through 1973 was the failure to gather, retrieve and use information. At every stage of the disaster, every piece of information missing added up to yet a larger void. The absence of information paralyzed planning. But it was not only the lack of data. There was the data, as the AID October study complained, "lying in the files," knowledge and time wasted because a bureaucracy ostensibly living by facts and figures could not organize its institutional memory. Even when the intelligence

came in, it was treated with sometimes astonishing casualness. Yes, admitted the AID officials, the CDC data was extraordinary. The FAO officials thought it "looked" important. But what does some other bureaucracy's study have to do with what we are doing?

The information failure flowed from the further failure of coordination. Responsibility for warning, for communication, for planning, for monitoring, for transport belonged to everyone—and no one. The United States and the FAO acquired their major roles in drought relief almost willy nilly by their continuing presence in the region since 1968. That process of drift left the Sahel uniquely dependent on AID and FAO, with neither organization formally recognizing or acting on the responsibility circumstances had imposed, for better or worse. The point is not that such a process was fair or orderly, but that both the Washington and Rome bureaucracies *knew* very well their importance to the relief effort. They accepted authority without responsibility. Someone else would have to answer for the discrimination against the nomads, for the transport blockages, for the late vaccines.

In the autumn of 1973, it is true, there were publicized U.S. efforts to encourage a cooperative planning venture for future projects among Africans and donors under the aegis of the U.N. But AID officials and their documents made clear in private that this was essentially an exercise in political patronization. Let the UN pass along information. Let the Africans believe they were "consulted." Washington, and certainly Paris, would make their own decisions, as always, by the goals and priorities of their bureaucracies. "Everybody is trying to do his own little thing," said Carl Rowan after his visit to the area. At the beginning of 1974 the Sahel remained literally at the mercy of governments and organizations to whom its 22 million people were of marginal concern.

Within the U.S. Government, coordination was scarcely better. Though the President appointed a "Coordinator" late in the crisis, his other duties—as Acting AID Administrator, as director of other relief efforts—left little time for the Sahel. However vigorous Williams' efforts in any case—and by many accounts his dedication is clear—there was no systematic coordination of the CDC survey, no critical examination of the basis for the August 21 memorandum to the President. The drought was left to a bureaucracy which obviously had failed to anticipate it over four years, had reacted with bureaucratic lethargy and public defensiveness when the crisis struck, and which had spurned (and

privately ridiculed) the cooperation of CDC, AID's own Foreign Disaster Relief Coordinator, and the U.N. Effective coordination in AID would have begun with a clear recognition of those failures. And it would not have issued, as in the late fall of 1973, in new rewards and status for that same bureaucracy. But then responsibility for relief policy did not stop with AID. The bureaucracy was left to conduct the relief operations by a leadership in the State Department and White House which apparently had no time or interest in ensuring the faithful execution of President Nixon's pledge to ease suffering in the disaster.

Behind the organizational flaws were the most serious and complex issues of policy for an international relief operation. There was an unresolved dilemma between the demands of urgency and speed in the delivery of relief and the need for some monitoring and accountability. Would not systematic monitoring merely add to red tape, slowing relief shipments still more? Was not the first obligation of AID and other donors to rush food to the docks of West Africa, accepting waste, rats, corruption, or even unchecked bias in distribution as the price of saving millions? Or would planning and coordination have made plausible both urgent shipments and international monitoring of the relief, much as the World Health Organization ships and supervises the use of vaccines or medicines to stem epidemics in nearly every corner of the world? Those questions were never posed in AID testimony to the Congress, press hand-outs, in speeches at international conferences, or internal memoranda. To have inscribed such issues on the agenda would have been to begin to admit the magnitude of the failure in the Sahel.

There were also the political dilemmas that haunt international relief efforts. The disaster in the Sahel seemed remarkably free of political complications. No blockade or civil war or clash of great power interests shackled relief. Relief was not a partisan policy issue in the United States or in any other donor country, save perhaps France where the opposition deplored the regime's inattention to the tragedy. In the U.S., relief for the Sahel enlisted united support from the Black community as few other foreign policy issues had. The Sahelian states were pleading for help. Yet there were political issues beneath this surface. What responsibility did the Africans have to distribute relief supplies equitably? What international presence, if any, did massive outside relief obligate the Africans to accept in order to assure the international community that the aid was used properly? Was it possible, in the midst of crisis, for the African states to suspend for a

time some of their sovereignty to help save their own people? Or would the unpleasant political subjects, as for AID policy-makers, have to be “someone else’s” problem? Again, these questions were nowhere on the agenda of AID or the international gatherings on the Sahel.

At root, each of the inadequacies and mistakes in the rescue operation was a failure of will within the relief bureaucracies. The unspoken truth in AID and the FAO was that no one had raised the issue of the Sahel before the drought became a catastrophe. Officials watching the vivid signs of collapse hewed to the bureaucratic line of survival—to continue present, approved, cleared policy. It was not altogether too late for officials to compensate for this inertia when the crisis was at last recognized in 1972-1973. That meant a readiness to face past failures, and to cut through red tape in the spring of 1973, to *act* rather than pause. But even then, the bureaucracy’s instinct was to continue what it had been doing, to justify inaction, to ignore unpalatable facts.

* * * * *

The tragedy in the Sahel revealed again what many officials and non-governmental relief experts have long known from other disasters—that international relief is too important and too complex to leave so largely to an AID or FAO—organizations for which disaster aid is obviously neither a major function nor a special competence. The organizational and functional attributes of an effective system of international relief are clear.

—an *information system* combining a watch on areas vulnerable to disaster, an early warning mechanism reaching both donors and victims, data retrieval and analysis of current intelligence, a communications system—such as that of the World Weather Watch—capable of rapidly conveying this information as well as the early warning among involved parties, and not least, a public information function which provides a flow of full and accurate reports on the disaster and the relief efforts to the media and national legislatures.

—closely linked to the information system, a *planning and operations* function responsible for the application of latest science and technology for disaster relief or prevention, the prompt mobilization and shipment of relief supplies, and sustained coordination with the recipients to ensure adequate transport, minimal waste, and effective and equitable distribution of relief.

—independent of operations, yet an integral factor in policy and further planning, a *monitoring system*, which prepares for the relief effort with full access to the information system, is on the scene as relief flows, and faithfully reports any abuse or malfunctioning in relief.

—often as important as any technical function, a *political advisory system* which alerts every element of the relief effort, from planning to monitoring, of political or social problems that may hinder or prevent altogether certain measures necessary to the relief effort.

It is a catalog of what was missing in the Sahel, and of what has been lacking in some measure in every great disaster of the post-war world. Perhaps what distinguishes most an organization integrating these functions is the promise that relief of death and suffering would be its sole mission and responsibility. To the array of national and bureaucratic interests and clients that crowd upon any disaster would be added an institution whose constituents were the victims themselves, whose primary purpose was mercy, whose undivided loyalty would be to the integrity of that mission.

Such an organization could fix for the first time too the burden of responsibility in international relief—a burden now borne by a few though the obligation rests with every nation. Ultimately, the failure in the Sahel belongs to the entire international community, rich and poor, which has neglected to organize itself to deal with a problem which now needlessly claims thousands of lives each year. The most important attribute of a new relief system, then, is that it be truly international—staffed and funded with representative contributions from every region.

Of all the tasks on the international agenda, it is true, none invites more cynicism than disaster relief. And on the evidence of the last decade alone, the disillusion seems justified. Often enmeshed in civil wars, great power politics, or simply local corruption, relief has seemed the one expendable interest of nations. But even that apparently inherent inhumanity in world politics has been altered under the impact of mass communications. Whatever the callousness of governments, their populations, particularly in Europe and America, now see the suffering of the Sahel or Bangladesh or Biafra more vividly than ever before through television and newspapers—and with the seeing there has grown a rising public intolerance with governmental indifference. That correlation of knowing and feeling among an international public by no means ensures the success of a new approach to disaster relief, but both U.S. and U.N. officials believe that it has made such an approach at least more plausible than many have thought.

No international bureaucracy will be immune to the problems of bureaucracy simply for being international, or new, or for having the benefit of past experience in AID or the FAO. The creation of a new system of international relief begs a score of formidable questions—under whose aegis? with what sustained funding? with what political power to deal with the opposition of nations or whole regions to humanitarian relief? Where does national sovereignty (and indifference to suffering) stop, and international humanitarianism begin? All these and many more.

The tragedy in the Sahel offers no facile guide through these dilemmas. It does demand a beginning to address the problem in all its complexity. The initiative toward a new system of international relief clearly lies with the governments and international organizations (including the private relief agencies which will work with it) whose political support will shelter it and whose money will sustain it. But there is also a role for non-governmental support. The premise on which all else in a new relief system comes to rest is the existence of an international group of disaster relief experts—men and women from throughout the world trained to deal with the special problems of relief from the epidemiology of famine to the logistics of an emergency food airlift to the infinitely delicate political problems of negotiating relief in the midst of civil war. Without this resource, all the courage and generosity of governments will still be ensnared by the bureaucratic vagaries that plagued the relief of the Sahel.

This study concludes with the recommendation that non-governmental organizations and foundations in the United States and Europe, in close coordination with governments and private relief agencies, begin to explore the establishment of an international center for the training of such experts in disaster relief.

It would be unrealistic to assume that any initiative to change the present amorphous administration of international relief will be swift or easy. The horror of the Sahel may be repeated more than once before governments choose to recognize the problem and act. The creation of a new international institution deliberately designed to avoid the foibles of those, in effect, who create it will demand all the genius and good will the world community can muster. There are precedents for success—the World Health Organization and its fight against epidemics across the obstacles of sovereignty and politics may be the most relevant. There are all too many and obvious precedents for failure.

Only the alternative to a new beginning seems clear. Without a

bold fresh approach to disaster relief, innocent children seem doomed to go on dying around the world because bureaucrats fail to plan, or because officials remain ignorant, or because no one cares. And many will die though the means to save them are at hand.

Epilogue

Early in 1974, as this book was being printed, there began again, after months of silence by the press and governments, the all too predictable reports of continuing disaster in the Sahel. In late January, Director General Boerma of the FAO told the New York Times that the drought "is worse this year than ever before, while pledges of aid have fallen far short of needs." On February 11, David Ottaway reported in the Washington Post the warning of African relief officials that "without fast emergency relief 200,000 people may die of starvation in remote corners of the Sahel . . ." The loss of cattle in 1972-1973, said the FAO, had been more than 3.5 million head worth \$400 million, or a quarter of the total cattle of the region. UN officials estimated the grain shortage in the Sahel at 1.2 million tons, over twice what U.S. planners had assumed the previous summer. By February, wrote Ottaway, food stocks had been exhausted in Chad, Mali, Niger and Mauritania, and conditions "generally are described as grim." The drought was spreading. The Post reported that it had reached crisis proportions also in the northern regions of Nigeria and Cameroon.

U.S. relief contributions by the beginning of 1974 approached \$100 million, and on January 23, AID announced another 100,000 metric tons of sorghum for the Sahel, this time presumably an edible variety. But when senior AID officials appeared before Congress in February to seek a badly needed supplemental \$50 million for the Sahel, there would be no candid admission of the bureaucratic failures that had so aggravated the crisis. Toward major rehabilitation projects for the area, reported Ottaway, AID was taking a "wait and see attitude." In February 1974, as the Sahel was plunged into its seventh consecutive year of disaster, AID was waiting on a "study" of the region's "development options." The project would not be completed for two years.

For its part, the U.S. Congress voted early in 1974 to reject a contribution to the development loan fund of the World Bank designed specifically to help impoverished regions like the Sahel. Throughout the wealthy countries, said officials, the distractions of domestic economic problems brought a similar turning away from international disasters.

But in the Sahel, there was simply no more time for hesitation or neglect. The 22 million people of the region seemed about to drift apart from the rest of the international community, much as Dag Hammarskjold had described in Markings the growing separation of the living and the condemned:

*Between you and him is distance,
Uncertainty—
Care
He will see you withdrawing,
Further and further,
Hear your voices fading,
Fainter and fainter.*

Documents

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REVIEW OF DEVELOPMENT POLICIES AND PROGRAMS IN AFRICA
AS DIRECTED BY THE PRESIDENT

Edward M. Korry

Ambassador to Ethiopia

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Recommendation A: The United States should continue to concentrate its major economic assistance in those key African countries where the United States has major economic development or political and security interests.

This section is designed to deal, in a general and summary way, with the structure of our present assistance effort on the continent.

In the proposed FY 1967 programs of AID and PL 480 (Titles I, II and III*), \$345 million is spread among 33 countries and some regional activities. Of this, \$221 million is AID and \$124 million is PL 480 (See Appendix a.)

There is at present a decided concentration of our economic assistance, with 75% in eight countries: Congo (K), Ethiopia, Guinea, Liberia, Morocco, Nigeria, Sudan and Tunisia. With the exception of Liberia and Nigeria, these countries are not only the major recipients of AID assistance but also of PL 480.

Thereafter, the correlation between the amount of assistance and the "importance of the countries, becomes very hazy. The combined AID and PL 480 programs of 16 countries come to more than \$1 million each. Of these, only 4, Tanzania, Kenya, Rwanda and Sierra Leone have over \$1 million each of both AID and PL 480. The ultimate distribution of \$18 million of Development Loans will, of

*Title IV programs totaling \$30 million are excluded because of their quasi-commercial terms.

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course, modify this pattern considerably; there are projects under consideration in 20 countries in addition to the 4 for which DL financing is already projected.)

Assuming the new Food for Freedom Act enters into force, substantially amending the present PL 480 -- the House version does just this, although the Senate version appears still to retain many of the less attractive features of the present law -- it will become necessary to integrate PL 480 and AID assistance much more carefully. Title I, dollar repayable after 1970, will have to be treated as the same type of resource as AID loans (just as scarce, too, in the sense that the availability of a major commodity like wheat is expected to be reduced by about 25% in 1967). Title II and III commodities will also have to be programmed more carefully as alternatives to AID assistance. This should lead to more rational decisions regarding total assistance levels for each country, and less likelihood of the uncorrelated pattern between AID and PL 480 assistance to the less important countries.

As is stated elsewhere in this report, the United States has committed itself to assisting, in a major way, the economic development of Nigeria and Tunisia. Although the decision to make the United States commitment was based in large part on long-run political factors, our aid to these countries properly focuses on long-term development. The discovery of oil in Nigeria should allow us to modify the form and reduce the dollar volume of our

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aid to that country beginning in 1969. Our program in Tunisia could be substantially changed by the discovery of oil and by the nature of any association arrangements worked out between the EEC and the Maghreb. For the next year or so, however, no changes are called for in either program.

Our relatively large programs in Ethiopia and Liberia have a less pronounced, but still clear, economic rationale. Neither country has a former metropole as a source of assistance. In both, and particularly in Liberia, the United States has long played an important role. And in both, particularly in Ethiopia, we have security interests which require support through economic assistance.

In the Congo (K) we are engaged in a rehabilitation effort, in concert with the Belgians, aimed at providing the minimum resources needed to hold the country together until its government and people can organize themselves to put to use the potential natural wealth which the Congo holds. In Ghana our efforts, together with the IMF and other countries, are directed to short-term stabilization; Ghana, now burdened with the massive debts inherited from the Nkrumah regime, will be in a position to make rapid economic progress without U.S. bilateral assistance if the short-term debt problem can be resolved.

The rationale for our large programs in Morocco and the Sudan is incomplete. Morocco became accustomed to large

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quantities of U.S. assistance given in connection with the former U.S. bases there. This, combined with French-Moroccan frictions which have led to reductions in French aid, has tended to keep us locked in, although Morocco does have long-term development potential. In the Sudan, political instability has reduced the effectiveness of our assistance. However, the IBRD has established a consultative group which should be able to respond to the Sudan's needs when and if political conditions make it possible for its undoubted economic development potential to be realized.

Looking toward the future, it is reasonable to expect that some of these eight major recipients of economic assistance will not retain their present rank. There are other countries, however, which may join this group of important aid recipients. At present, a likely possibility is East Africa, including Kenya, Tanzania and Uganda together with the assistance being given to their joint organization EACSO, they now have a total AID-PL 480 program of about \$16 million -- higher than three of the major recipients.

We also wish to encourage the restructuring of the East African Federation. Kenya and Uganda have a good long-term potential for agricultural and industrial development, and Tanzania shares a potential for tourism with both.

Of the remaining African nations, we have excluded from this discussion four countries that are members of

the OAU: the United Arab Republic, Algeria, Congo (Brazzaville) and Libya. The UAR receives U.S. assistance but is not, for the purpose of this report, considered an African state. The U.S. program there is administered by the Bureau for Near East and South Asia of AID. Algeria, a special case in both economic and political terms, has extraordinary potential, but the direction of its evolution is unpredictable at this point. We have no diplomatic mission in Congo (B) and give no assistance to that country. Our aid to Libya has been terminated because of its sharply rising oil revenues; with its foreign exchange holdings rising, Libya is rapidly becoming a potential supplier of capital for the Maghreb. The rest (other than Madagascar) are also accidents of colonial history and cut across tribal groups and economic regions. They continue to rely for external aid primarily on their former colonial powers (France, United Kingdom, Belgium, Italy). On the average, U.S. assistance represents less than one-tenth that supplied by the ex-metropole.

*This copy has been typographically reproduced from the original for purposes of clarity. It is, however, an exact copy of the original document.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
Smallpox Eradication Program
Atlanta, Georgia 30333

July 20, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #1

This is the first summary of activities and findings of the Nutrition Surveillance team members currently assigned in Niger, Upper Volta, Mauritania, and Mali. It is planned that a summary report based upon information received from team members will be compiled weekly.

The American Embassy, Dakar, anticipates a Senegalese decision during the week of July 23 concerning participation in the nutrition surveillance activity.

Niger - Dr. Herron arrived June 25. Initial contacts have been made with Niger Government and Peace Corps regarding the provision of personnel and transportation.

Upper Volta - Mr. Leonard arrived July 2. Initial contacts have been made with the Statistical Service and Ministry of Interior concerning the gathering of current data describing the movement of people. Cercle Commandants are in the process of gathering these data for their respective cercles and Mr. Leonard will attempt to obtain them either from the Ministry of Interior or from the Commandants themselves.

Preliminary data obtained by the American Embassy from the Commission Nationale d'Intervention pour la Lutte Centre Les Effets de la Secheresse en Haute Volta suggest that 80% of the population of the 3 northern most cercles (Dori, Ofibo, Oualam) have moved south. In addition, approximately 10% of the population of an additional 9 north central cercles is said to have migrated southward. The total number of persons involved in these admittedly unverified movements are about 300,000 or roughly 6% of the total population of Upper Volta. No hard data are yet available showing the actual increase in populations in the south. Furthermore, a knowledge of the extent to which these migrations differ from normally expected population movements would be helpful in assessing their significance.

Initial contacts have been made to determine whether or not ORD (sic) continues to record (as it has done in the past) prices on grain, millet, sorghum, rice, etc. in 50 different Upper Voltan markets. A general outline of the recent history of grain prices in Upper Volta is as follows: Last October, cereals were purchased by commercial vendors for 600-800 CFA per 100 kg. sack. These were resold in the market place for 1800-2000 CFA, but

as demand increased and/or supply decreased, the price rose to 5500 CFA. At this point, the Government intervened, and using the Army to regulate sales, the price declined to 2750 CFA per sack, its current price.

Cattle are currently selling at 500 CFA per head. Rice is currently selling at 8-10,000 CFA per 100 Kg. sack compared to its previous price of 5500 CFA.

The Army is apparently selling grains, which are dropped by plane, at a nominal price in order to conserve the supply.

The O.C.C.G.E. is interested in the nutritional survey and has indicated a willingness to provide support as opportunities appear. Specifically, Dr. Breman has been invited to Upper Volta, Niger, and Mali during the coming weeks for consultative visits.

Surveillance activities began in the north on July 15 with a Voltaic counterpart accompanying the team.

Mauritania - Dr. Greene arrived July 14.

Mali - Mr. LaPointe arrived July 13.

ADDRESSEES:

SEP (10)
All CDC Program Directors
Dr. Sencer
Dr. Conrad
Mr. Watson
Miss Virginia Worsley (OIH-DHEW)
Miss Frederick (AID/W)
Mr. McClure (Disaster Relief, AID/W)
Dr. Scrimshaw (Dept of Nutrition, MIT)
Dr. Blumenthal
Field Assignees (Nutrition Survey)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
 Public Health Service
 Center for Disease Control
 Smallpox Eradication Program
 Atlanta, Georgia 30333

July 30, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #2

Senegal - Senegal has decided not to accept a CDC assignee because of the arrival of a WHO health team consisting of an epidemiologist, sanitation engineer, and a nutrition expert.

Mauritania -

1. Disease Surveillance

a. Measles

<u>Year</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
1968	6030	3963	525	342
1969	1216	2891	337	115
1970	431	1646	250	62
1971	1504	1770	882	920
1972	2300 (Avg.)	2300 (Avg.)	2300 (Avg.)	2300 (Avg.)
1973	7600			

The increase in reported measles cases follows to some extent efforts to improve the surveillance system; however, the most striking increase in cases has more nearly paralleled the increase in severity of the drought and famine which has resulted in a lowered host resistance as well as increased crowding and exposure of susceptibles (nomads) to urban reservoirs of infection.

Measles mortality is estimated at 10 percent. Supplementary vaccine, to permit vaccination up to 6 years of age, as well as additional Ped-O-Jet parts has been requested.

b. Cholera

Thirty cases of cholera (5 deaths) have been confirmed at Rosso, on the southern frontier of Mauritania. In addition, 5 suspect cases were notified from Kaedi and 3 from Boghe. The affected area of Rosso is the same area where displaced persons are congregating from the interior. This is the first cholera reported from Mauritania since late 1971. Water supply trucks are in use and antibiotic prophylaxis is being distributed to known contacts of source wells which have been closed. A cholera vaccination campaign is in progress in river communities and in Nouakchott.

c. Yellow Fever, Smallpox, Typhoid, Meningitis - None reported.

2. Food distribution is described as good because the bulk of displaced populations has centered around accessible urban areas. There remain, however, isolated nomadic camps cut off from supply efforts. UNICEF has supplied Nouakchott hospital with intravenous solutions, vitamin and protein supplements needed for the treatment of acute malnutrition.
3. Nutritional Status - Although hospital admissions for kwashiorkor in Nouakchott are approximately 10 per month compared to zero a year ago, most malnutrition seen is more characteristic of marasmus. No pellagra, rickets, or scurvy are reported; however, unconfirmed reports of beri beri in outlying areas have been received. Dr. Greene proposes to begin sampling in three different areas; those that have been severely, moderately, and minimally affected by drought. Samples drawn from these three areas will be compared to note significant differences attributable to drought conditions.

Upper Volta

1. Disease Surveillance

a. Cholera

<u>Infected Areas</u>	<u>Cases</u> <u>(Confirmed + Suspect)</u>	<u>No. Deaths</u>
Ouagadougou, Djibo, Dori	584	160

The first confirmed cases were observed simultaneously in Ouagadougou and Dori on 6/11/73. Treatment and vaccination teams began work immediately and a cholera committee was established to coordinate control efforts. WHO advisors suggest that the possibility of spread to the entire country is likely.

b. Measles

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>Jan.-May 1973</u>
Cases	10,204	19,174	21,251	39,669
Deaths	602	881	670	2,281
Death Rate	5.9%	4.6%	3.1%	5.7%

Measles cases are increasing significantly; however, the measles death rate for reported cases has not dramatically increased over that of previous years.

c. Cerebral Spinal Meningitis

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>Jan.-May 1973</u>
Cases	19,960	6,067	2,886	1,989
Deaths	1,525	565	434	283
Death Rate	7.6%	9.3%	15%	14%

2. Food Prices

<u>Commodity</u>	<u>Ouagadougou (Central)</u>	<u>Pouytenga (Central)</u>	<u>Bobo-Dioulasso (South)</u>
Sheep	2,500 cfa		
Bull		22,500 cfa	
Rice (100 kg)	9,000 cfa	9,000 cfa	6,500 cfa
Millet (100 kg)	8,000 cfa	4,000 cfa	4,800 cfa
Small Millet (100 kg)			2,400 cfa
Corn			2,400 cfa

The sale of rice is currently rationed in Bobo-Dioulasso. Rainfall has occurred only in the Po and Boni areas (south). In the two centrally located villages of Kokologho and Zaghtouli, the first planting of millet has not survived. The second planting in this area is only 4" - 6" high, compared to a normal height of 3 feet by this time of year. No crops have yet been planted in the Djibo (northern) area.

Cattle experts differ on the probable extent of loss to herds, with estimates of loss reaching from 15-25% to virtual loss of

the export market next year which contributes 55% of Upper Volta's total GNP.

Niger - No disease epidemics being reported at current time. Mobile vaccination teams delivering BCG, smallpox, and measles vaccines have completed a special campaign among Nomadic groups at food and water distribution centers in the Agadez area. The Ministry of Health has assigned three Peace Corps Volunteers to the surveillance project. Training began July 23 and the initial survey is anticipated to occur during the first 3 weeks of August.

Mali - No report received.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
Smallpox Eradication Program
Atlanta, Georgia 30333

August 6, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #3

Underweight in developing countries is principally a result of malnutrition. Actual weight compared to expected weight for age is therefore considered to be an appropriate measure of the presence of malnutrition. In developing countries, however, age frequently is either unavailable or unreliably determined.

Height has been found to correlate well with age in well-nourished populations. Thus, when age is unavailable, height may be substituted for age as the 'fixed' reference. It is recognized that in certain suboptimal nutritional settings, height may be stunted somewhat from chronic malnutrition; therefore, estimates of acute malnutrition based upon a deviation from the expected relationship between weight and height must be considered as minimum.

The most commonly accepted standards for height and weight are referred to as the Stuart-Meredeth standards. These are age specific standards; however, using data derived from the Stuart-Meredeth population, weight for height 'standards' have been calculated. These are the standards according to which we will characterize the West African children being measured.

Because not all children who fall below the standard, (i.e., the median weight for various heights derived from the Stuart-Meredeth data) are necessarily malnourished, 80 percent of that standard has been selected as a point below which any child can definitely be considered to be critically malnourished. This value represents approximately two standard deviations from the Stuart-Meredeth median, and is a value which could be expected to be shared by three percent of a 'normal' population. Thus, in this and subsequent summaries, our "standard" (a level below which definite malnutrition can be presumed to exist) is 80 percent of the Stuart-Meredeth median weight for height. This standard will be referred to henceforward as the malnutrition threshold.

Data from West Africa will be obtained through a sample survey conducted in areas designated as more and less affected by draught conditions. Some data have been received and we will release limited and preliminary analyses of these data as it continues to be received. Readers are cautioned, however, that the data are incomplete and any inferences must necessarily be tentative. When all data have been received from a particular country, a complete analysis of all children surveyed together with appropriate graphs and maps will be released.

Mauritania

Rains have begun in Nema, Aioun, Kaedi, Selibaby, and Akjoujt, however, amounts of rainfall are below average for this time of year.

1. Food Prices

	Normal	Prerains	Current
Cow (Nouakchott)	50,000 cfa	3,000 cfa	15,000 cfa

Cattle experts estimate cattle mortality at 20-40 percent. Many cattle have moved south, most likely into Mali.

2. Nutrition Status

Survey work began this week. Areas to be visited are Nouakchott, Boutilimit, Kaedi, Boghe, Aleg, Atar, Chinguetti, Nema, Aioun, Timbedra, Kiffa, Rosso, and Maderdra.

3. Disease Surveillance

a. Cholera

<u>Infected Areas</u>	<u>Cases to Date</u>	<u>Deaths</u>
Rosso	42 (confirmed)	
Kaedi	1 (confirmed)	
Nouakchott	1 (confirmed)	
Aleg	10 (suspect)	
Total	54	13

b. Measles

No new data

Upper Volta

Rain has arrived in Upper Volta rendering impassable some of the roads in the extreme north. Crop cultivation has begun. Twenty-two villages have been visited in Djibo, Ouahigouya, and Titao cercles and some preliminary data have been received.

1. Food

Villagers state that sorghum, corn, corn meal, and powdered milk have been distributed during May, June, and July. Supply is variable, however, as some villages received all of the above quantities while others received only one or two. In addition to the above foodstuffs, villagers acknowledge the consumption of leaves, wild fruit where available, FAO planting seeds, and some cottonseed designated for animal fodder.

Food is distributed to villages accessible by vehicle. As road conditions deteriorate, inhabitants are required to come to main road distribution points, collect their allotments, and carry them back to their villages.

2. Disease Surveillance

Cholera in Djibo cercle is confined to one village (Petegoli) with 24 cases (7 deaths). Petegoli experienced cholera in 1970. Two other villages involved in 1970 outbreak are to date free of clinical cases.

3. Nutritional Status

Preliminary data received indicates that, in an area designated as less affected by draught, approximately 4 percent of children measured were below the malnutrition threshold. In an area designated as more affected by draught conditions, approximately 15 percent of children measured fell below the malnutrition threshold. This must be considered serious. A normal population would be expected to have 3 percent of its membership below this threshold. In May, 1972, 11.6 percent of children from Bangladesh fell below this same threshold.

Edema was noted in only one child of 508 surveyed.

Niger

Suspect cholera reported in Tera Region in west.

Mali

No report received.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
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Atlanta, Georgia 30333

August 13, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #4

Survey activities are now underway in Mali, Mauritania, Niger, and Upper Volta, despite significant transportation problems as a consequence of rains approaching their anticipated maximum levels. Initial data indicate considerable variation in the extent of malnutrition, with some areas experiencing critically severe deficiencies.

Mali

1. Nutritional Status

Work has begun in Gao Cercle, and will continue for 2 weeks. In a nomadic camp 70 percent of sampled children were below the "malnutrition threshold" (80% of median weight for height) and 40 percent showed signs of edema. Sedentary villagers had 47 percent below the threshold, and 4 percent edema. The population of the nomad camp is approximately 1,200. Denominator figures are not available for sedentary villages, however, nor is the extent to which these early data are typical of the entire Cercle known. As indicated in Summary #3, however, surveys done in Bangladesh in 1972 indicated 11.5 percent of children below the same threshold.

2. Food Supplies

Less than 100 grams of rice or millet are available daily per inhabitant in both the nomadic camp and the sedentary villages of Gao Cercle. This probably contains approximately 400 calories and thus represents a starvation diet. In villages near the Niger, water-lilies are being used as a dietary supplement.

Until recently, the slaughter and consumption of dying cattle provided a limited source of protein. This source will soon be exhausted, and future supplies will be dependent on imported and transported protein.

3. Population Migration

Heavy migration is reported from Mauritania into contiguous areas of Mali. Increasing emigration from Cao Cercle into Niger, Dahomey, and as far as Nigeria is being reported as well.

4. Disease Surveillance

Unconfirmed reports have been received of 29 cases of cholera in Niore du Sahel near the Mauritanian border. Official WHO reports (World Health Organization Weekly Epidemiological Record, July 27, 1973) show only two cases of cholera in Mali in 1972. No cases have been officially reported in 1973.

Mauritania

1. Nutritional Status

Extensive and generally effective food distribution is being carried out by the Government. Thirteen clusters have been surveyed in camps near Nouakchott and in Boutilimit, and Rikz, all in the Sixth Region. A total of 450 children were included in these clusters.

a. Nouakchott

- (1) 9.1 percent of children among long-term inhabitants are below the threshold.
- (2) 18.1 percent of children among nomadic immigrants are below the threshold.
- (3) No kwashiorkor or edema, and few cases of marasmus or avitaminoses were observed.

b. Boutilimit

- (1) Twenty-five percent of the children in the most severely affected of five villages were below the threshold.
- (2) Although there was little kwashiorkor or edema, over 250 cases of scurvy and beri-beri and 100 cases of Vitamin A deficiency were treated in the last 6 months by one physician.

c. Rikz

- (1) Twenty-two percent of the children in the most severely affected of three villages were below the threshold.

- (2) No kwashiorkor or edema were observed but frequent avitaminoses was present.

2. Food Supplies

Refugees in all three areas uniformly report the death of their entire herds.

Food distribution has been effective in much of Nouakchott and Boutilimit, but erratic in Rikz. In Nouakchott 10 kilograms of cereal per person/month are being distributed. Refugees of Boutilimit and Rikz are receiving 4 kilograms of cereal and 1 kilogram of powdered milk per person/month.

3. Population Migration

Many immigrants to Nouakchott have travelled as much as 330-450 miles, whereas those arriving at Boutilimit and Rikz have come only 25 to 70 miles.

4. Disease Surveillance

a. Measles

A sharp decline in reported incidence occurred during June and July. This is consistent with the seasonal pattern for measles observed throughout West-Central Africa, with high incidence in the dry season during February-May exhausting the susceptible population.

b. Cholera

An unofficial total of 62 cases with 13 deaths have been reported as of August 4, and incidence seems to be declining as a result of rapid, comprehensive, and effective intervention by the Mauritanian Government. Infected wells have been identified, contacts have received prophylactic treatment, and mass vaccination programs have been carried out. One-hundred forty-eight cases of cholera were officially reported in the WHO Weekly Epidemiologic Record for 1972. No cases have been officially reported in 1973.

c. Miscellaneous

In Boutilimit, approximately 100 cases of typhoid fever and 400 cases of hepatitis have been observed in the last 6 months.

Niger

1. Nutritional Status

Work has just begun and three villages have been surveyed thus far. The most severely affected of these, a nomad village on the Mali border, had 25 percent of children below the threshold.

2. Disease Surveillance

Niger continues to report no unusual incidence of disease since the spring measles epidemics.

Upper Volta

1. Nutritional Status

Twenty-seven of 30 clusters in the areas around Ouahigouya and Dori have now been surveyed. Results from the first 22 of these were reported in Summary #3, and the remainder are not yet available. Attempts to reach three almost totally inaccessible clusters near Gorom-Gorom are underway at the present time.

Following completion of the Northern clusters, a survey will be conducted around Po, Southern Upper Volta near the Ghana border, an area which is thought to be minimally affected.

2. Food Supplies

The Upper Voltan Government, in particular the Army, has developed extensive and generally successful food distribution plans and methods. To transport food to Gorom-Gorom from Dori in the North East of the country, for example, it must be carried first by truck, then by pontoon boat, then by a second truck, then onto another boat, and finally onto a third truck which makes the final run. Grain, powdered milk, and CSM (corn-soya-milk) are being distributed in this manner.

In some areas around Ouahigouya farmers and agricultural technicians are expecting poor crops because of either inadequate or spasmodic rainfall. It is feared that the millet has not developed sufficiently to withstand the traditionally heavy August rainfall. In the Kaya area 45 miles north of Ouagadougou, however, the millet has grown sufficiently so that an adequate harvest is expected.

The Ouagadougou market is presently well stocked with a variety of grains and vegetables, some at significantly elevated prices.

The following method is being used successfully to prepare sorghum for airplane free fall. A 50 kilogram plastic sack of sorghum is placed in a 100 kilogram jute bag. The jute bag is wired shut and inverted into a second jute bag. This bag is then inverted into a third jute bag which is also wired. The three jute bags apparently absorb the shock of the drop from planes flying at minimum levels.

3. Disease Surveillance

No new information available.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
Smallpox Eradication Program
Atlanta, Georgia 30333

August 20, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #5

Mali

1. Nutritional Status

No new information.

2. Disease Surveillance

Investigation of twenty-six suspected cases in Niore Du Sahel revealed that they were not cholera. Two deaths among these cases were due to dysentery.

Mauritania

1. Nutritional Status

Attached are graphs of the results of the first thirteen clusters surveyed. Overall, 61 of 438 children (12.9%) were below the threshold (80% of median weight for height). As expected the new refugee group was in the worse shape with 17.3% below the threshold and an additional 15.4% of very young children dangerously close to the threshold. During the next four weeks villages in the Senegal River Region, the Far East, and the North will be surveyed.

Plans are being made to do a follow-up survey in October, prior to the grain harvest, in order to identify changes in nutritional status.

2. Food Supplies

The Mauritania government has been generally effective in distributing food. The distribution system, however, may soon be unable to operate since available food supplies are nearly depleted. Either new sources or new allotments from present sources will have to be obtained if the present precarious nutritional status is to be maintained.

3. Population Migration

Mali has confirmed the immigration of large numbers of Mauritians into Western Mali.

4. Disease Surveillance

a. Cholera

In Rosso Region (South of Nouakchott, on Senegal border) 76 cases with 13 deaths have been unofficially reported through August 8.

Investigation of suspect cases in Aleg (Southwest of Nouakchott) have not confirmed the presence of cholera. Immunization and chemo prophylaxis are being given in the area.

A new outbreak (41 cases with 8 deaths as of August 11) has been confirmed in Moudjeria (Central Region, 250 miles east of Nouakchott). Three vaccination teams have been moved to the area, and morbidity is declining.

All the above reports of cholera are unofficial.

Niger

1. Nutritional Status

Eight clusters have been surveyed thus far in Niamey, Dosso, and Maradi Departments. Results are as follows:

	No. of Children	No. Below Threshold	% Below Threshold	Total Pop. Surveyed	No. with Edema	% with Edema
Sedentary	223	5	2.2	368	8	2.2
Nomadic	40	7	17.5	125	4	3.2
Malian						
Immigrants	28	5	17.9	62	1	1.6
Total	291	17	5.8	555	13	2.3

The following areas, to be surveyed later, are considered to be highly affected by famine: northern parts of the arrondissements of Tera, Tillaberi, Ouallam and Douthi, all of the arrondissements of Tahoua, Tchín-Tabaraden, Dakoro, Tessaouah, Mayahi, Matameye, and Tarout, all of Agadez Department and the northern part of Diffa Department.

2. Food Supplies

Millet is selling for between 4,000 and 6,000 CFA per 100 kilogram sack, an increase of up to 150 percent over last year. Rice, when available, has increased 230% in price since last year.

Food distribution is erratic. The Sedentary village of Dakoro (population 400) has received 4,700 kilograms of grain. This is sufficient for approximately 31 days if the minimum daily requirement is 1,200 calories. Nomads in the same area received one bowl of powdered milk.

3. Population Migration

The number of Malian immigrants into Niger is increasing, particularly in Niamey Department. Lazare camp, near the city of Niamey, has increased from 800 to 3,000 in the last month. Ayarou camp now has 1,400 Malians where it had none before, and the number of Nigerin migrants has increased from 4,000 to 8,000. In the Tillaberi area where Malian herdsmen were seen last fall entire families are now arriving. Many if not most Malian immigrants are reportedly coming from around Bourem and Timboctou.

4. Disease Surveillance

1. Smallpox vaccination scar surveys in the eight clusters seen thus far show 70 percent vaccinated in the sedentary population and 50% among nomads.

2. Official MOH measles morbidity figures are as follows:

1969	22,050
1970	1,750
1971	5,275
1972	29,050
1973 (1st 6 months)	25,583

3. 408 unofficial cases of meningococcal disease have been reported thus far in 1973.
4. No cholera, yellow fever, or smallpox have been reported.

Upper Volta

1. Nutritional Status

Three clusters in Ouadalan Cercle have now been surveyed. All three villages are nearly inaccessible, and food distribution vehicles are no longer able to reach them. While "threshold" results have not yet been received, the following information on marasmus has been reported:

Village	Population	No. of Children Examined	% with Marasmus
Kollele	424	91	9
Adabe	739	72	18
Fadar-Fadar	353	51	16

In Adabe, villagers reported ten additional children died recently with marasmus like symptoms. In Fadar-Fadar, 39 additional children are reported to have died of starvation in the last three months.

2. Food Supplies

The alternatives for supplying of food to villages such as those recently surveyed are precision air-drops or pack animals. Consideration is presently being given as to which of these methods will be adopted.

Livestock deaths have been between 30 and 50% overall in Ouadalan Cercle. Farmers were reluctant to drive their cattle south for fear of ticks and tsetse flies, and by the time they were forced to go south the cattle were critically under nourished. One herdsman in Fadar-Fadar began driving his 500 cattle to Fada Ngourma 175 miles south, six months ago, and all but four died before he arrived. The livestock tax of \$1.00 per head was not collected in Ouadalan this year because the value of the cattle was often below that amount.

In much of Ouadalan no millet crop whatsoever is expected this year because of late planting.

Particular information from two of the three surveyed villages has been received:

- a. Kollele: Corn and sugar were distributed in June, and two small sorghum distributions took place in July. All seed given by FAO was consumed rather than planted. Few cattle, one camel, and some goats are left, although none are giving milk.
- b. Adabe: No food distribution has taken place since June, and the villagers diet has consisted primarily of leaves and roots.

3. Population Migration

Some of the population which migrated south earlier has now returned to Ouadalan Cercle. Whereas eighty percent had left the area one third to one half of that number returned when the rains began.

Milian immigrants, in particular members of the Bellah tribe, have been seen in both Ouadalan and Dori Cercles.

4. Disease Surveillance

Investigation of two suspect cases of cholera in Fadar-Fadar confirmed the presence of El Tor Ogawa strain on August 10. An additional 40 suspect cases, including 19 deaths, have been reported. One case of cholera was officially reported to the World Health Organization during 1972 (World Health Organization Weekly Epidemiological Record, July 27, 1973). Thus far in 1973, 305 cases have been officially reported, including 80 deaths.

3.

Nonakchoott(.), Boutilimit(o),
VILLAGE

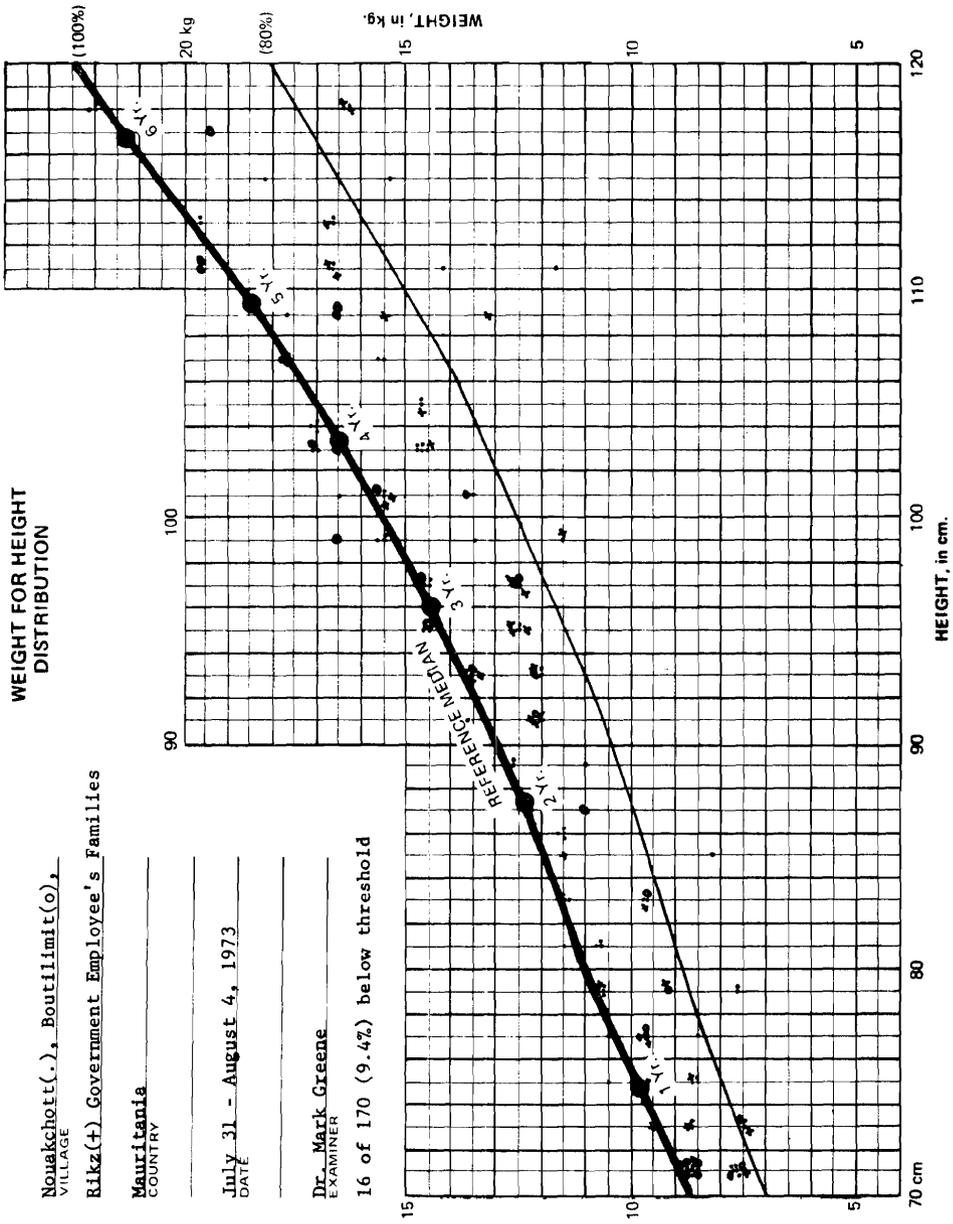
Rikz(+) Government Employee's Families

Mauritania
COUNTRY

July 31 - August 4, 1973
DATE

Dr. Mark Greene
EXAMINER

16 of 170 (9.4%) below threshold



3.

Boutilimit (.), Rikz (+)

VILLAGE

Nomads

Mauritania

COUNTRY

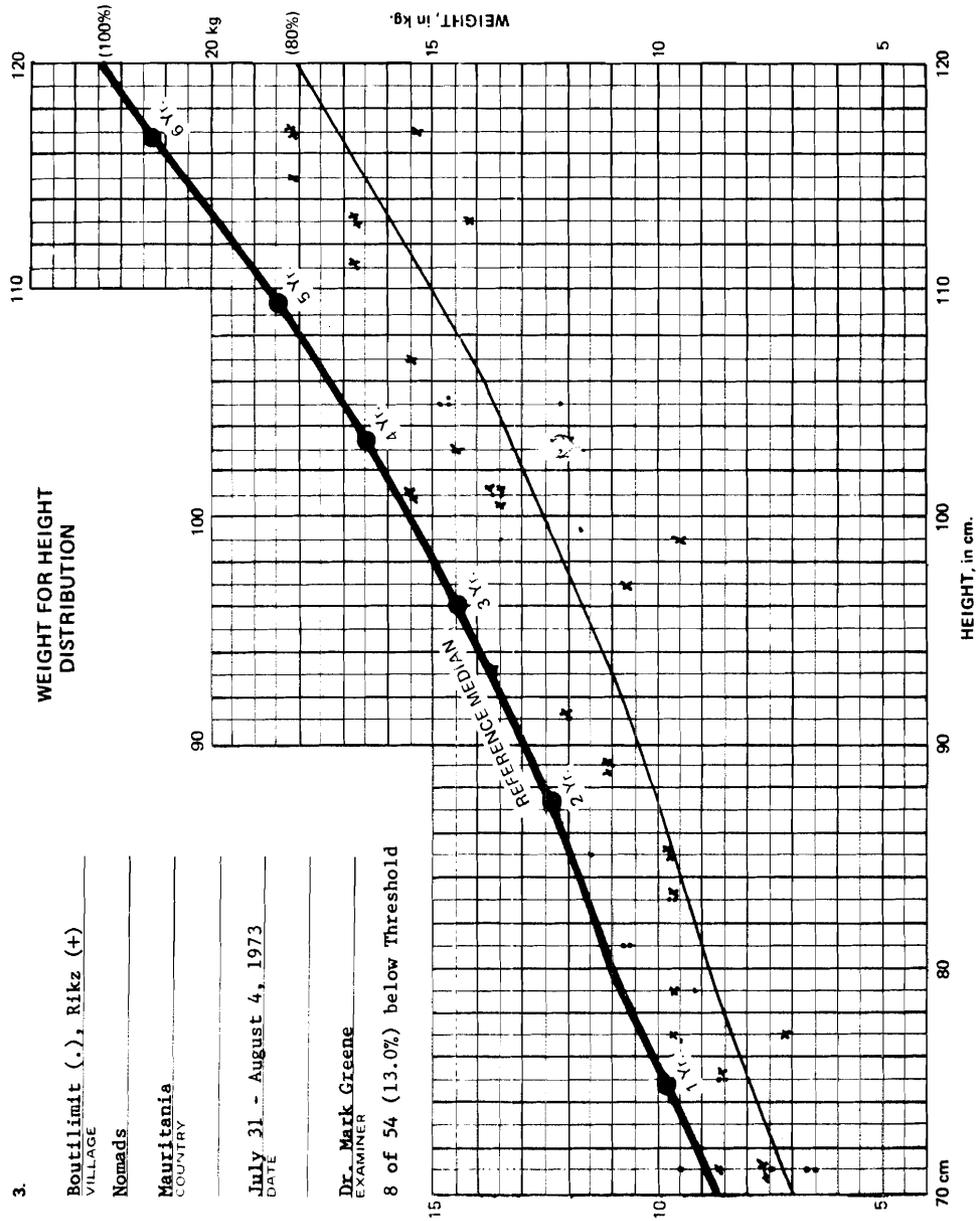
July 31 - August 4, 1973

DATE

Dr. Mark Greene

EXAMINER

8 of 54 (13.0%) below Threshold



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
Smallpox Eradication Program
Atlanta, Georgia 30333

August 27, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #6

The attached maps indicate the areas known to have been surveyed as of August 17, 1973.

Mali

1. Nutritional Status

15 villages in the cercles of Nara and Nianoi near the Mauritania border have been surveyed. Lack of available gasoline forced the surveyors to restrict their work to more accessible villages. Overall, 4.6 percent of children seen were below the threshold. Since the lack of gasoline affected food distribution vehicles as well, the status in other villages is likely to be considerably worse.

2. Food Supplies

In the areas surveyed, cattle are selling for \$45 to \$55 per head, sheep for \$11, and goats for \$8. Livestock loss is estimated at 25 percent.

Millet is selling at \$.04 per pound, rice for \$.08. Recently 28 to 30 tons of grain per day have been flown in from Dakar. Villagers have been purchasing millet on the open market at three times the official price.

Most villagers have planted millet three times, the first two plantings having failed. The success of the third and final planting will depend on the quantity and duration of the current rains. Little planting of peanuts, corn or beans took place since the seeds were used as food.

3. Disease Surveillance

Smallpox and measles immunizations are not taking place, and very few young children have been immunized.

Mauritania

1. Nutritional Status

Thus far 26 clusters have been surveyed. Twelve more, in Northern and Eastern Mauritania will be surveyed soon. In all areas, a striking contrast in nutritional status between nomadic camps and sedentary populations has been observed, even when both groups live in the same cities.

The following areas have been surveyed since Summary #5:

- a. Boghe (on Senegal River, approximately 125 miles from the coast). In the village of Toulde three percent of sedentary villagers and 30 percent of camped nomads were below the threshold (80% of weight for height). The prevalence of marasmus or vitamin deficiency diseases, however, was consistently low. In one group of nomads which had managed to keep its camels no children were below the threshold.
- b. Aleg (approximately 33 miles northeast of Boghe). In the village itself 11 percent of children were found to be below the threshold, as compared with 17 percent of children in outlying camps. In the city 2.87% were marasmatic, as compared with 17.1 percent in the outlying camps.
- c. Rosso (on the Senegal River on the Dakar-Nouakchott road). Among sedentary Wolof tribesmen ten percent of the children were acutely malnourished (below the threshold). In a tribe of Peulh shepherds, however, 52 percent were acutely malnourished.

- d. Mederdra (approximately 30 miles northeast of Rosso). In the three clusters surveyed, 14 percent of children were below the threshold. For logistical reasons those camps reported to be the most severely affected could not be reached. Approximately eight percent of children showed signs of marasmus or avitaminoses.

2. Food Supplies

In all of the areas surveyed it was found that while the Mauritanian government distribution system is relatively effective, its effectiveness is severely hampered by a lack of adequate quantities of food. In Aleg and Mederdra, for example, the amount of food being provided per month is sufficient for only 15-21 days even if the minimum maintenance level of 1,200 calories per day is accepted as adequate.

3. Population Migration

Along the Rosso-Nouakchott road, hundreds of new nomadic camps have been established. Nutritional and health conditions are similar to those found in Boutilimit and Rikz, that is among the most inadequate in the country.

4. Disease Surveillance

- a. Cholera. A total of 88 cases and 14 deaths have been unofficially reported from Rosso as of August 14. No new cases have been reported from Moudjeria.
- b. Measles. Incidence is reported to be declining, as expected, with the onset of the rains.
- c. Other. Whooping cough epidemics were reported in Boghe and Aleg. Aleg also reported an outbreak of hepatitis.
- d. Supplies. Medical personnel are being severely restricted by lack of adequate medications.

Niger

No new information received.

Upper Volta

1. Nutritional Status

Survey work has now been completed and the results are as follows:

- a. Ouahigouya Cercle - Population 234,997
Eleven villages, population 24,406
211 children examined, 3 (1.4%) below threshold.
- b. Titao Cercle - Population 64,961
Three villages, population 7,494
101 children examined 6 (5.9%) below threshold.
- c. Djibo Cercle - Population 90,366
Six villages, population 7,488
229 children examined, 29 (12.7%) below threshold.
- d. Dori Cercle - Population 119,290
Five villages, population 5,237
241 children examined, 26 (10.8%) below threshold.
- e. Ouadalan Cercle - Population 45,000
Three villages, population 1,793
214 children examined, 34 (15.9%) below threshold

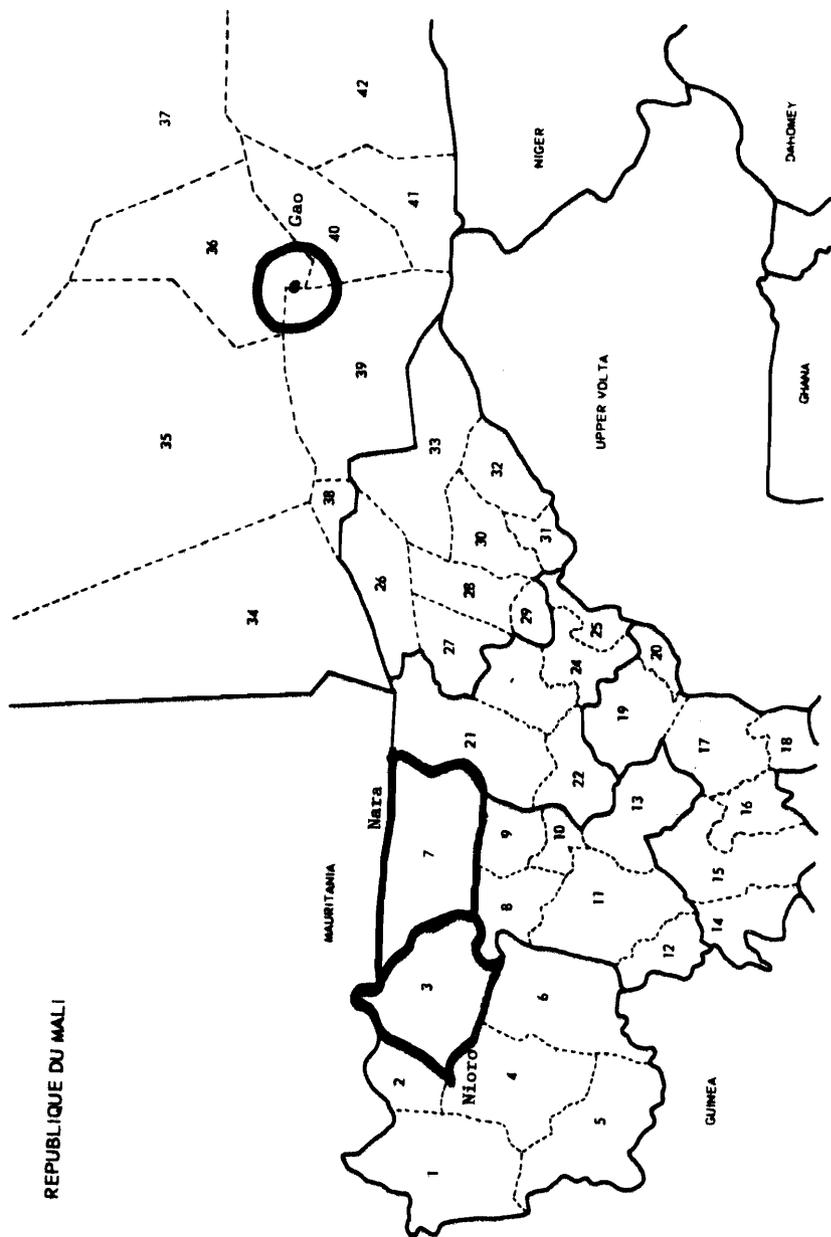
In addition 414 children in a presumably well nourished population in Po (Southern Upper Volta) were seen. While they were not weighed, only three showed signs of marasmus, edema, or kwashiorkor.

The Ministry of Health has decided to repeat the survey beginning in late September, immediately prior to the harvest.

2. Food Supplies

On the basis of the nutritional status survey work done, the Upper Volta government has modified the food air-drop system to include villages in Ouadalan Cercle. Initial food supplies have now been made available to 12 villages in the areas identified by the survey as severely undernourished.

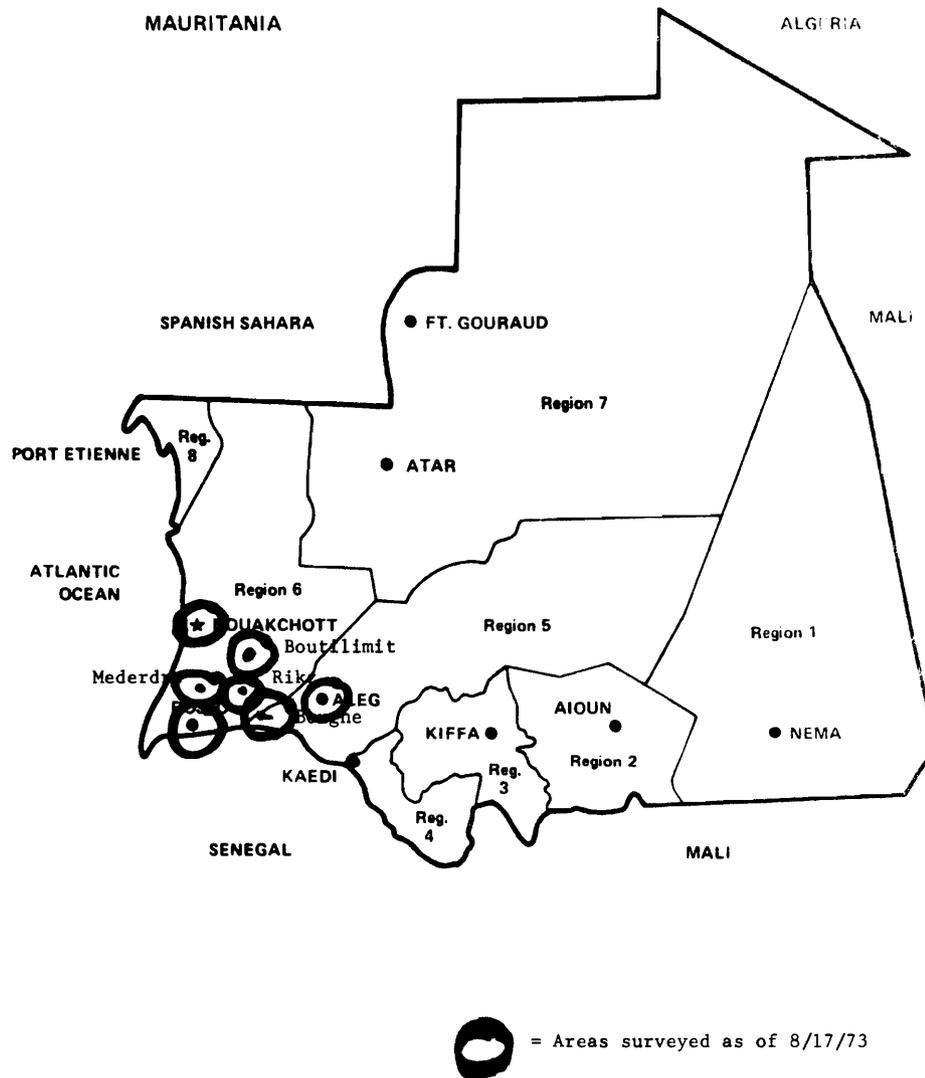
In flying over this area only one herd of cattle and few camels were observed. Many of the traditionally grassland or cultivated areas are barren.

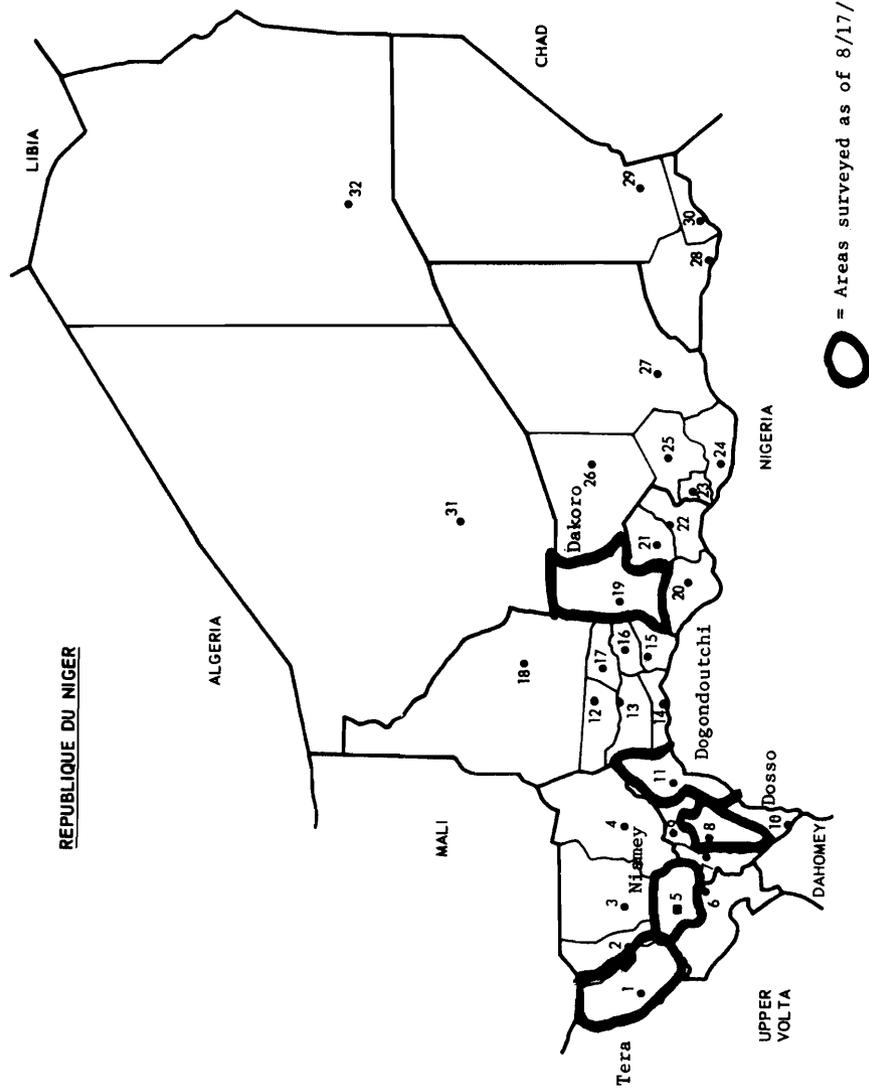


 = Areas surveyed as of 8/17/73

LEGEND

REGION	CERCLE
KAYES	1. Kayes
	2. Yelimane
	3. Nioro
	4. Bafoulable
	5. Kenieba
	6. Kita
BAMAHO	7. Nara
	8. Kolokani
	9. Banamba
	10. Koulikoro
	11. Bamako
	12. Kangaba
	13. Dioula
SIKASSO	14. Yanfolilla
	15. Bougouni
	16. Kolon-Dieba
	17. Sikasso
	18. Kadiolo
	19. Koutiala
	20. Yorosso
SEGOU	21. Niono
	22. Segou
	23. Macina
	24. San
	25. Tominian
MOPTI	26. Niafounke
	27. Tenenkou
	28. Mopti
	29. Djenne
	30. Bandiagara
	31. Bankass
	32. Koro
	33. Douentza
GAO	34. Goundam
	35. Timbuctoo
	36. Bourem
	37. Kidal
	38. Dire
	39. Gourma-Rharous
	40. Gao
	41. Ansongo
	42. Menaka





LEGENDDEPARTEMENTS

NIAMEY

DOSSO

TAHOUA

MARADI

ZINDER

DIFFA

AGADEZ

ARRONDISSEMENTS

1. Tera
2. Tillaberi
3. Ouallam
4. Filingue
5. Niamey
6. Say

7. Birni N'Gaoure
8. Dosso
9. Loge
10. Gaya
11. Dogondoutchi

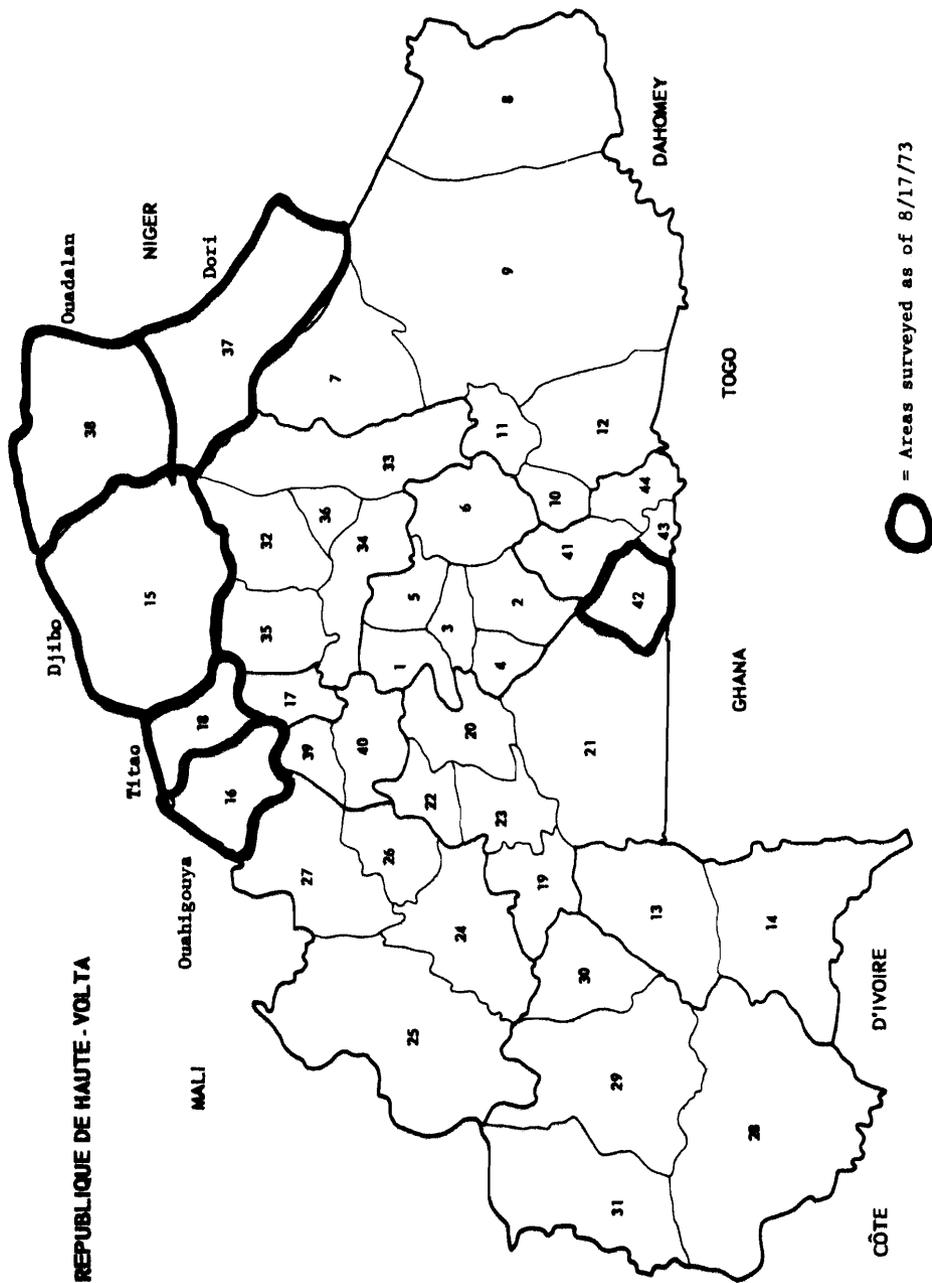
12. Tahoua
13. Illéla
14. Birni N'Konni
15. Madaoua
16. Bouza
17. Keita
18. Tchiri Tabaraden

19. Dakoro
20. Maradi
21. Mayahi
22. Tessaoua

23. Metameye
24. Magaria
25. Myrria
26. Tanout
27. Gouré

28. Maïné-Soroa
29. N'Guigmi
30. Diffa

31. Agadez
32. Bilma



LEGEND

<u>SECTEUR</u>	<u>CERCLE</u>
I	1. Bousse 2. Kombissiri 3. Ouagadougou 4. Sapone 5. Ziniare 6. Zorgo
II	7. Bogande 8. Diapaga 9. Fada N'Gourma 10. Garango 11. Koupela 12. Tenkodogo
III	13. Djebougou 14. Gagna
IV	15. Djibo 16. Ouahigouya 17. Siguenege 18. Titao
V	19. Baromo 20. Koudougou 21. Loko 22. Niakha 23. Tenkodogo
VI	24. Dedougou 25. Mouna 26. Toma 27. Tougan
VII	28. Banfora 29. Bobo Dioulasso 30. Houde 31. Orodar
VIII	32. Barsologho 33. Boulea 34. Kaya 35. Kongoussi 36. Pissila
IX	37. Dori 38. Ouadalan
X	39. Gourcy 40. Yako
XI	41. Manga 42. Po 43. Tiebele 44. Zabre



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
 PUBLIC HEALTH SERVICE
 CENTER FOR DISEASE CONTROL
 ATLANTA, GEORGIA 30333
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SMALLPOX ERADICATION PROGRAM

August 31, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #7

Mauritania

1. Nutritional Status

Survey work has been completed in the northern Region 7. The following areas were visited:

(a) Chinguetti

Eighty-one children surveyed resulted in 7.4% being categorized below the malnutrition threshold; 2.5% displayed symptoms of marasmus. No avitaminosis was detected.

(b) Atar

1.9% of fifty-three children surveyed were below the malnutrition threshold. No Marasmus or Avitaminosis were detected.

In explanation of the relatively favorable status of the population surveyed in this Region, it should be noted that the pastoral and more mobile element of the usual population of this area has migrated south in search of pasturage for its animals. The more sedentary groups remaining have supported themselves through a moderately successful date cultivation and by consumption of government distributed foodstuffs.

2. Food Supplies

(a) Grain distribution in the Atar and Chinguetti areas is measured at 10 kg. of wheat and 1 kg. of milk per person per month. This quantity would appear to meet recommended minimum daily protein and calory allowances.

(b) A reserve stock of multivitamins will be distributed to nomads. Individual vitamin preparations (vitamins A, B₁ and C) will be distributed to patients seen in dispensaries and by mobile vaccination teams. If sufficient supplies of vitamins can be obtained, the government will begin large scale distribution in conjunction with food distribution programs. This vitamin distribution would be targeted to those regions where the most severe need has been documented (i.e., the 5th and 6th Regions to date).

(c) Based upon an inadequate fat and lipid content of current relief supplied cereals and milk, the Mauritanian Government has requested butter oil as a supplement. It is anticipated that this commodity will be distributed at least initially, to certain higher risk segments of the total population in a manner similar to that suggested for vitamin distribution.

(d) Information on marasmus rates among children plus an inability in many areas to distribute adequate quantities of grain on a per capita basis suggest that frequently insufficient amounts of protein are distributed to meet the nutritional requirements of the population. Officials have recommended that consideration be given to the provision of a protein supplement.

3. Disease Surveillance

A total of 91 cases of cholera with 15 deaths has been unofficially reported from Rosso as of August 25. Fifty-four cases including 7 deaths have been unofficially reported from Moudjeria.

Mali

The following information describes survey results from one nomad camp of approximately 10,000 persons in Timbuctu.

1. Nutritional Status

74.6% of children surveyed were below the malnutrition threshold. Thirty-nine percent of the children had edema, which in these circumstances may be interpreted as being indicative of a protein deficiency.

2. Death Rates

When this camp was initially formed, deaths were reportedly estimated at 182 to 365 per 1000 inhabitants. Current deaths are estimated at 10 to 16 per 1000 inhabitants. The U. N. Demographic Yearbook for 1971 quotes an average (1965-1970)

annual crude death rate for Mali at 26.6 per 1000 inhabitants.*

3. Food Distribution

Camp officials state that each nomad receives 1500 grams of millet weekly. One-half litre of non-fat dry milk, supplemented with CSM, is distributed daily to each child. The millet share would satisfy approximately 1/2 of the recommended daily caloric intake and 2/3 of the recommended daily protein intake of a healthy individual.

Niger

No new information.

Upper Volta

Survey completed.

*Death rates extropolated to represent annual rates.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
Smallpox Eradication Program
Atlanta, Georgia 30333

September 10, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #8

The attached maps indicate the areas known to have been surveyed as of August 31, 1973.

Mauritania

1. Nutritional Status

Nine clusters in the eastern part of the country (Regions One, Two, and Three) have now been surveyed, and the nation wide survey has thus been completed.

- a. Nema (Region One). Acute malnutrition (80% of weight-for-height) varied from 14.8 to 28.0 percent with the most serious problems being found in urban areas among nomads who had lost all of their cattle and thus could not return to the rural areas. With the onset of the rains those nomads who still have cattle have left the urban areas to resume their normal travel and living patterns.

The great distance of this area from Nouakchott (approximately 1,000 miles), and the lack of adequate roads have made provision of food extremely difficult.

Although no kwashiorkor or edema and few cases of avitaminoses were observed the high malnutrition levels found indicate the Region One is in a critical position at the present time. The Mauritanian government hopes to relieve the situation by means of a food air-lift.

- b. Aioun-el-Atrouss (Region Two). In the one cluster surveyed, 23.2 percent of children were below the threshold, and 10.4 percent were marasmic. The most recent food distribution was in early July and consisted of 5-7 kilograms of grain and one kilogram of powdered milk per person/month. This is below the minimum caloric requirement.
- c. Kiffa (Region Three, approximately half way between Nouakchott and Nema). Malnutrition rates varied from 20 percent in one section of Kiffa itself to 0 percent in a nomadic camp which had been the site of an intensive relief effort. Marasmus rates also varied from 0 to 10 percent. Little avitaminoses was seen.

2. Food Supplies

In other regions of Mauritania the problem has been the availability of food rather than the distribution system itself. In more isolated areas such as Nema and Aioun-el-Atrouss both food and distribution difficulties have been found.

Local officials in both Regions One and Two were skeptical concerning prospects for this year's grain harvest.

3. Disease Surveillance

Measles epidemics in these regions ended in April and May. For the country as a whole 4,248 measles cases were reported during the second quarter. During July only 380 cases were reported, and during the first 7 months of 1973 a total of 11,850 notifications were received.

Malaria and diarrhea are the most serious disease problems at present. In Kiffa a viral hepatitis epidemic is currently occurring, with 110 cases per month being seen since May.

No cholera cases have been reported since August 22, 1973. The current official summary is as follows:

- a. Rosso, 91 cases, 22 deaths
- b. Moudjeria, 54 cases, 7 deaths
- c. Nouakchott, 4 cases, 0 deaths.

Niger

The nationwide survey has been completed and includes 22 clusters in five of the six regions of the country.

A. Nutritional Status

<u>Group</u>	<u>No. Examined</u>	<u>No. Below Threshold</u>	<u>% Acute Malnutrition</u>
North Nomadic (seven clusters)	145	20	13.8
South Nomadic (four clusters)	85	7	8.2
North Sedentary (five clusters)	106	3	2.8
South Sedentary (five clusters)	102	5	4.9
Other (Mali Refugees) (one cluster)	20	5	25.0
Nomadic Total	230	27	11.7
Sedentary Total	208	8	3.8
Total	458	40	8.7

B. Disease Surveillance

1. Smallpox Vaccination Scar Survey.

GROUP	AGE												Total		
	0-4		5-14		15-44		45+								
	No. Exam-ined	% With Scar													
Nomadic (11 clusters)	141	34	24.1	260	124	47.7	290	170	58.6	80	41	51.2	771	369	47.9
Sedentary (10 clusters)	170	72	42.4	173	125	72.3	263	213	81.0	58	34	58.6	664	444	66.9
Other (Mali Refugees) (2 clusters)	24	1	4.2	32	12	37.5	41	31	75.6	6	3	50.0	103	47	45.6
Total	335	107	31.9	465	261	56.1	594	414	70.0	144	78	54.2	1538	860	55.9

An assessment of the Niger Smallpox Eradication/Measles Control Program done in January of 1969 showed 76.7% of the population with a vaccination scar.

2. Measles and Famine Deaths

a. Mortality rates in the past year.

Group	Est. Population	No. of Measles and/or Famine Deaths	Percent Mortality
Nomadic North (7 clusters)	1,167	82	7.0
Nomadic South (4 clusters)	530	1	0.2
Sedentary North (5 clusters)	852	12	1.4
Sedentary South (4 clusters)	459	2	0.4
Other (Mali Refugees) (2 clusters)	157	8	5.1
Total	3,165	105	3.3

b. Age distribution of measles/famine deaths.

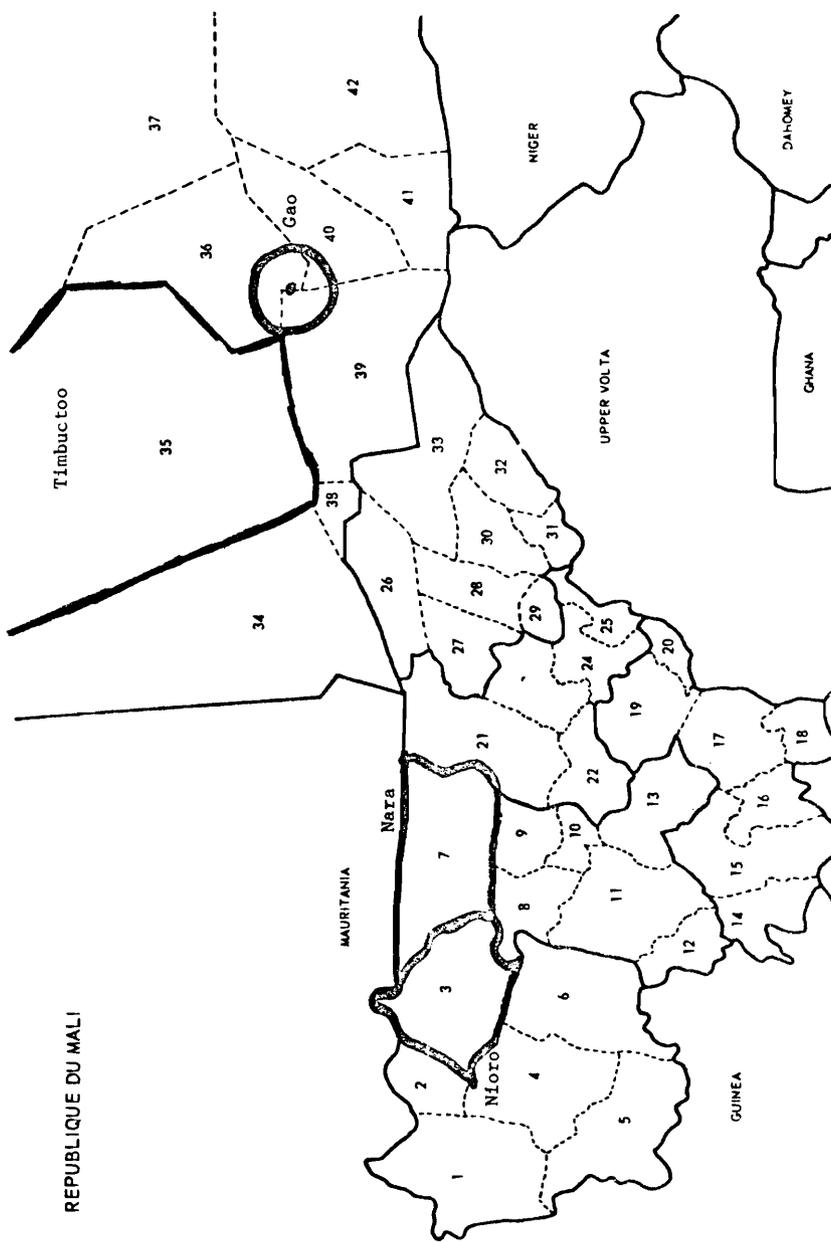
Age Group	No. in Sample Population	% of Sample Population	No. of Deaths	% of Deaths
0-4	163	20.5	18	33.3
5-14	263	33.0	28	51.9
15-44	290	36.4	8	14.8
45+	80	10.1	0	0
Total	796	100.0	54	100.0

Mali

No new information.

Upper Volta

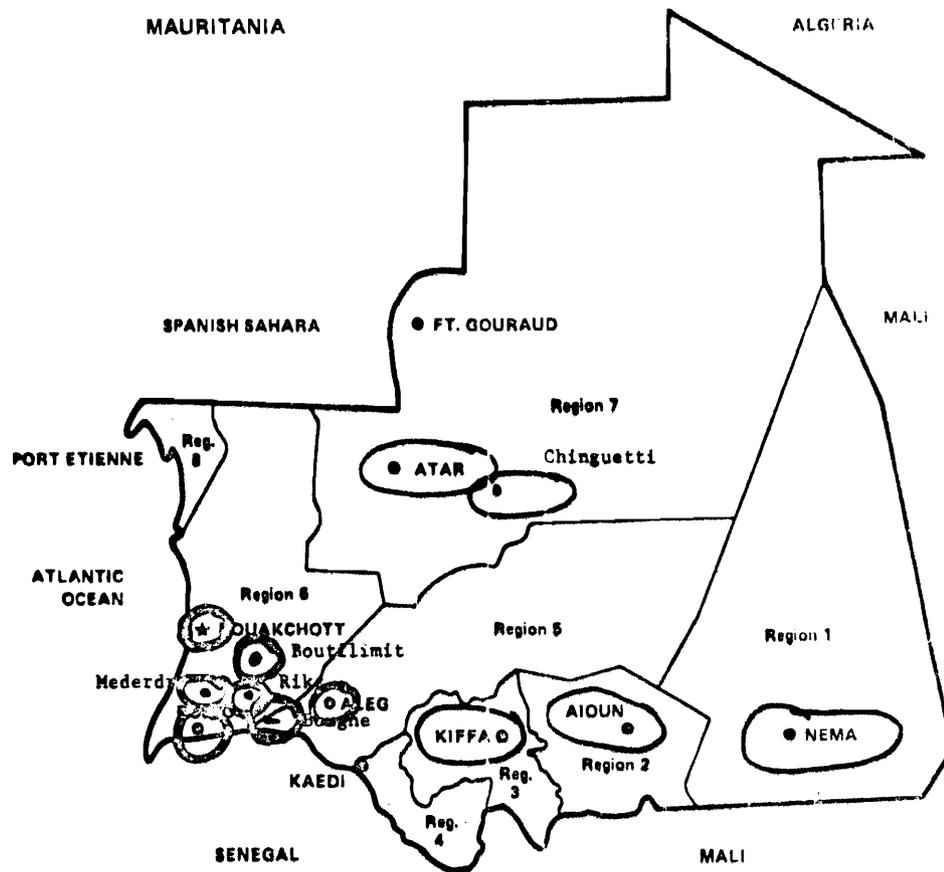
Survey completed.



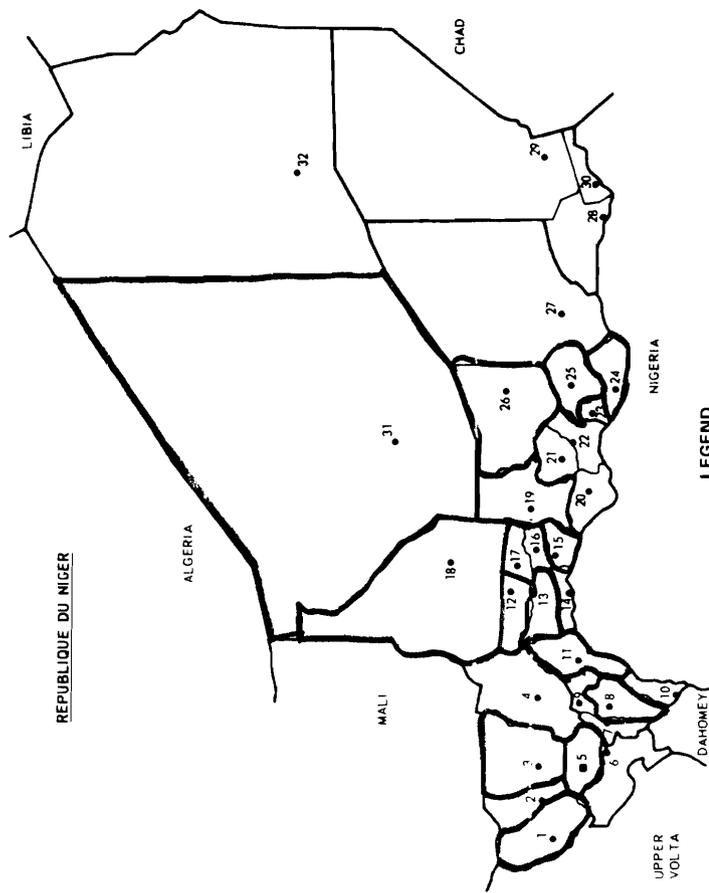
 Areas surveyed as of 8/31/73

LEGEND

REGION	CERCLE
KAYES	1. Kayes
	2. Yelimane
	3. Nioro
	4. Bafoulable
	5. Kenieba
	6. Kita
BAMAKO	7. Nara
	8. Kolokani
	9. Banamba
	10. Koulikoro
	11. Bamako
	12. Kangaba
	13. Dioila
SIKASSO	14. Yanfolilla
	15. Bougouni
	16. Kolon-Dieba
	17. Sikasso
	18. Kadiolo
	19. Koutiala
	20. Yorosso
SEGOU	21. Niono
	22. Segou
	23. Macina
	24. San
	25. Tominian
MOPTI	26. Niafounke
	27. Tenenkou
	28. Mopti
	29. Djenne
	30. Bandiagara
	31. Bankass
	32. Koro
	33. Douentza
GAO	34. Goundam
	35. Timbuctoo
	36. Bourem
	37. Kidal
	38. Dire
	39. Gourma-Rharous
	40. Gao
	41. Ansongo
	42. Menaka

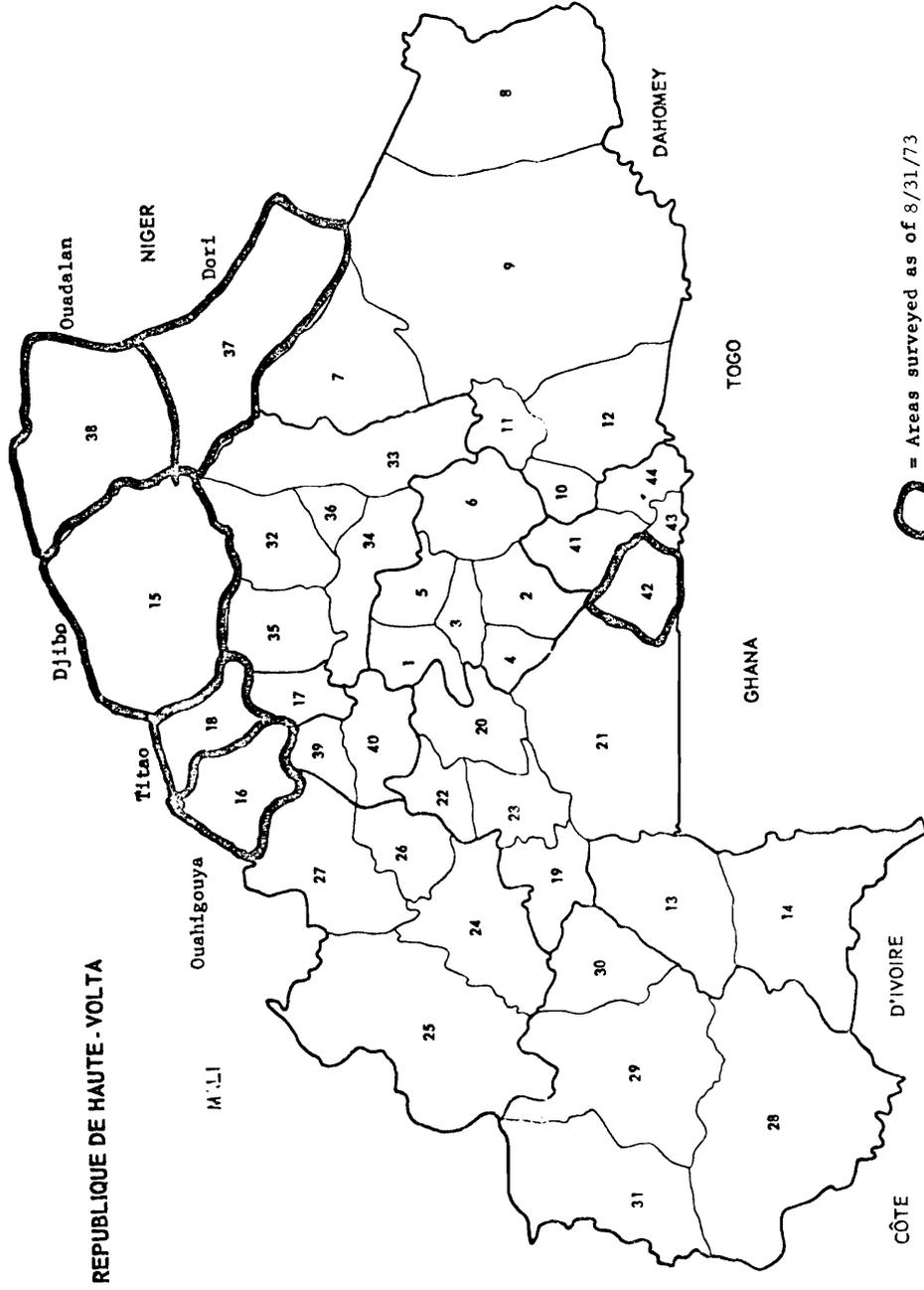


= Areas surveyed as of 8/31/73



LEGEND

<u>DEPARTEMENTS</u>	<u>ARRONDISSEMENTS</u>	<u>DEPARTEMENTS</u>	<u>ARRONDISSEMENTS</u>	<u>DEPARTEMENTS</u>	<u>ARRONDISSEMENTS</u>
<u>NIAMEY</u>	1. Tera 2. Tillabéri 3. Ouallam 4. Filingue 5. Niamey 6. Say	<u>TAHOUA</u>	12. Tahoua 13. Illéla 14. Birni N'Komi 15. Madaoua 16. Bouza 17. Keita 18. Tchiri Tabaraden	<u>ZINDER</u>	23. Matameye 24. Magaria 25. Myrria 26. Tanout 27. Gouré
<u>DOSSO</u>	7. Birni N'Gaoure 8. Dosso 9. Loga 10. Gaya 11. Dogondoutchi	<u>MARADI</u>	19. Dakoro 20. Maradi 21. Mayahi 22. Tessaouia	<u>DIFFA</u>	28. Maïné-Soroa 29. N'Guigmi 30. Diffa
		<u>AGADEZ</u>			31. Agadez 32. Bilma



LEGEND

<u>SECTEUR</u>	<u>CERCLE</u>
I	1. Bousse 2. Kombissiri 3. Ouagadougou 4. Sapone 5. Ziniare 6. Zogo
II	7. Bogande 8. Diapaga 9. Fada N'Gourma 10. Garango 11. Koupela 12. Tenkodogo
III	13. Diébougou 14. Gacua
IV	15. Djibo 16. Ouahigouya 17. Séguenega 18. Nitao
V	19. Ekromu 20. Kédougou 21. L 22. Kouliko 23. Témbo
VI	24. Dedougou 25. Niouna 26. Yoma 27. Tougan
VII	28. Banfora 29. Bobo Dioulasso 30. Hounde 31. Orodar
VIII	32. Barsologho 33. Boulea 34. Kaya 35. Kongoussi 36. Pissila
IX	37. Dori 38. Ouadalan
X	39. Gourcy 40. Yako
XI	41. Manga 42. Po 43. Tiebele 44. Zabre



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
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ATLANTA, GEORGIA 30333
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SMALLPOX ERADICATION PROGRAM

September 14, 1973

NUTRITIONAL SURVEILLANCE IN WEST AFRICA

SUMMARY #9

Mali

1. Nutritional Status

Five sedentary villages in Gao cercle which were surveyed during July, were revisited during September and found to contain about the same proportion (40%) of children below the malnutrition threshold.

2. Disease Surveillance

Measles cases for Mali are reported as follows:

<u>Year</u>	<u>Cases</u>	<u>Deaths</u>	<u>Case Fatality Rate</u>
1968	26,262	838	3.2%
1969	43,512	1,927	4.4%
1970	9,071	267	2.9%
1971	16,594	70	.4%
1972	37,861	1,692	4.5%
1973	25,554*	997*	3.9%

*Estimate based on January - May data.

Initial survey work in Mali, Mauritania, Upper Volta, and Niger has been completed. A summary report of this activity will be issued soon.

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON

OFFICE OF
THE ADMINISTRATOR

August 19, 1973

REPORT FOR THE PRESIDENT

SUBJECT: Emergency Disaster Relief for Sahel Africa

You directed me to coordinate the United States emergency relief effort for the drought-stricken countries of Sahel Africa, and to plan our part in a rehabilitation program. You further directed that we cooperate closely with United Nations agencies and other governments so that the work of relief and rehabilitation can go forward as effectively as possible.

This is a report of progress to date in relieving the devastating effects of the worst drought of this century affecting, directly and indirectly, 25 million people in Senegal, Mauritania, Upper Volta, Mali, Niger and Chad.

The Current Food Situation

The U.S. Government is taking a leading part, with the international donor community, in a massive effort to help alleviate the suffering of the peoples in the drought area. Of the \$135 million international relief effort underway, mostly in food, the United States is providing the largest single share -- with about \$42 million in U.S. emergency relief assistance committed to date.

As a result of this outside help, and actions of the stricken nations themselves, mass famine -- which threatened millions some weeks ago -- has been averted. The 625,000 tons of food already delivered and on the way, plus the emergency relief apparatus that has been set up, is adequate to meet basic calorie needs and avoid widespread starvation through the next 60 days before the harvest.

There are pockets of severe malnutrition, particularly affecting mothers and children, which require special attention. The four years of drought that preceded present

emergency relief efforts had a cumulative weakening affect. People do not recover quickly from years of privation, however hardened they may be to the rigors of a harsh nomadic life.

The Critical Sixty Days Ahead

Overall supplies of food reaching the area are adequate to basic human needs but transport and distribution to the remote areas of the Sahel will be a major problem during the critical 60 days ahead. Stocks are thin and some food deliveries have been delayed. Rains have started in parts of the Sahel, rendering roads unusable and isolating some villages. Towns like remote and historic Timbuktu rely on water transportation, but the drought has lowered the level of the Niger River to a point where barges can no longer make the passage with essential relief supplies. The U.S. Air Force with three C-130s is airlifting as much as 180,000 pounds of food daily from Bamako to Timbuktu and other cities in Mali. This airlift -- which began in May and will continue during September -- is made possible by the dedication of U.S. Air Force crews who surmount difficult obstacles of weather and equipment maintenance.

Reports of special need from any of the Sahel areas are acted on promptly and all feasible means are being used to move food to where it is needed. Other countries contributing airlift capabilities include Belgium, Canada, France, Germany, USSR, and the United Kingdom. The UN Food and Agricultural Organization is doing a fine job of field coordination for special relief efforts.

While spot movement of food by air is dramatic, most of the 625,000 tons of food grain from all donors -- of which the U.S. is providing 256,000 tons or about 40 percent -- is moving overland through all west African ports. Major bulk shipments are handled at Dakar, Abidjan and Tema. Hundreds of workers are bagging grain and loading it on freight cars and trucks. Almost 400,000 tons of relief food moved through these ports in recent months. U.S. officers are helping local officials in logistic planning and devising short cuts to speed-up the long and slow transport by over-burdened train or truck facilities to interior distribution points, and for further onward movement to remote areas by truck, the backs of animals and humans, or aircraft. Concern that food get to hungry people is paramount. The Sahel Governments responsible for the final distribution of food are doing a remarkable job under difficult circumstances. African coastal states are cooperating fully in lending transport facilities; Nigeria additionally has contributed almost \$4 million to its stricken neighbors.

Because an accurate assessment of on-going transport needs and capabilities is key to sustaining effective relief in this critical period, I sent a six-man U.S. transport team to the Sahel to review on the spot special problems and needs and formulate recommendations for corrective action. The French, German, British, and Canadians have told us they are looking forward to the results of this important assessment.

Special Nutritional and Medical Assistance

We are concerned with nutritional and health needs occasioned by the drought. Vulnerability to disease is a major problem for thousands of families and the threat of widespread epidemic cannot be ruled out. Outbreaks of measles were identified and AID promptly sent 370,000 doses of vaccine to the region. There is urgent need for medical surveillance and for supplemental foods for more nutritionally balanced diets. We are looking to U.S. medical offers from HEW's Center for Disease Control (CDC) to establish surveillance systems and to guide special medical and food relief efforts. Four CDC epidemiologists are heading this work in Mauritania, Upper Volta, Mali and Niger. They are leading special teams of Peace Corps volunteers and local Health Ministry officers. A similar effort in Senegal is led by a WHO officer. These surveillance units are identifying pockets of acute nutritional and medical distress for special attention.

Assessing Future Emergency Needs

Even if there are good rains in the coming weeks and improved crop prospects, the peoples of Sahel Africa will need further major relief and rehabilitation help. In an attempt to assess these needs, FAO Director-General Boerma and I have agreed on a combined field assessment next months of the crop outlook and prospective food and seed needs for 1974. We anticipate that emergency food relief will be needed for the next 12-15 months even under the best of circumstances.

Planning for Rehabilitation and Recovery

Major attention appropriately has been on the immediate emergency needs of the peoples of Sahel Africa. At the same time, we are taking steps to strengthen planning for the region's recovery. There are problems of sinking wells, building reservoirs and irrigation systems to restore the livelihood of the survivors. Herds must be replaced for nomads whose lives depend on livestock. Food storage facilities, communications and other basic infrastructure also are needed.

We are discussing recovery plans with officials of the drought afflicted countries, UN agencies and other donors. I have established a special task force to draw on U.S. skills, both private and public, to support African recovery planning and to design programs for U.S. assistance. This task force will work closely with U.N. planning efforts.

We, of course, look to the African countries to establish recovery guidelines and priorities. In a meeting on July 23 with Minister Dakoure of Upper Volta, -- who is the African Coordinator for Recovery of the Sahel countries, -- we agreed on (a) the absolute importance of African initiatives for rehabilitation, (b) the need to redirect on-going development activities and plans in recognition of changing priorities and (c) the importance of ready and understanding additional responses from donor countries and agencies. Minister Dakoure invited me to meet next month with the Chiefs of State and Ministers of the Sahel countries when they meet in Ougadougou to coordinate their plans for recovery.

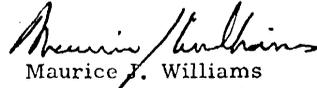
American and Voluntary Agency Contributions

U.S. public concern over the Sahel disaster has increased in recent weeks. One result has been an amendment in the Foreign Assistance Act in both the House and Senate, calling for authorization of \$30 million for rehabilitation in the Sahel Africa. This would be in addition to the \$41,828,000 already committed by the U.S. Government for food, medicines, airlift and other transport. In addition, U.S. voluntary agencies are playing an important role in supporting emergency programs in the Sahel. They have launched public appeals for contributions.

Many Black or predominately Black groups are stepping up their activities in support of drought relief efforts. These include PUSH (People United to Save Humanity) AFRICARE, the National Office for Black Catholics, Congress of African People, National Welfare Rights Organization and African Heritage Studies Association.

Catholic Relief Services, Church World Service, Medical Assistance Programs, Inc., and American Friends Service Committee are directly engaged in relief activities in Senegal, Upper Volta, Niger and Mali. The American Freedom from Hunger Foundation is collecting for the UN (FAO) Sahel Zone Trust Fund. These voluntary agency activities are expanding and others, including CARE and the World Relief Commission, are preparing to join in the emergency effort.

We can take pride in the generous American response to the dire need of the peoples of Sahel Africa. Our response has been timely and effective and has been in the great humanitarian tradition of America to help people sustain their lives in the face of catastrophic disasters beyond their control.



Maurice J. Williams
President's Special Coordinator for
Emergency Relief to Sub-Sahara Africa

* This document has been typographically reproduced from the original for purposes of clarity. It is, however, an exact copy of the original.

ATTACHMENT A

SAHEL DROUGHT ASSISTANCE
Total International Contributions

i. Major Food Contributions

United States	256,000 tons cereals	\$37,000,000 ^{1/}
European Economic Community	111,000 tons cereals	11,100,000 ^{2/}
France	70,000 tons cereals	7,000,000 ^{2/}
Canada	26,000 tons cereals	2,600,000 ^{2/}
Germany	32,000 tons cereals	3,200,000 ^{2/}
China	50,000 tons cereals	5,000,000 ^{2/}
Russia	10,000 tons cereals	1,000,000 ^{2/}
Other Concessional Imports	70,000 tons cereals	7,000,000 ^{2/}
Estimated Value of Miscellaneous Contributions of speciality foods by various bilateral and international donors-dried milk, CSM, etc.		2,500,000
Total Food Contributions		<u>\$76,400,000</u>

^{1/} Value of food plus ocean freight plus inland transport.^{2/} Estimated Market Value.**II. Major Cash Contributions for Disaster Relief Purposes**

European Economic Community	\$22,000,000
Nigeria	3,750,000
Zaire	110,000
United Nations (Sahel Zone Trust Fund)	8,290,000
United States	4,400,000 ^{*/}
Total Cash Contributions	<u>\$38,550,000</u>

^{*/} Excludes \$300,000 U.S. Contribution to Sahel Trust Fund.**III. Various Contributions in Kind**

Belgium - Airlift and financing of ground transport
 Canada - Airlift and well drilling programs
 France - Airlift and support of country budgets
 Federal Republic of Germany - Airlift and ground transport
 Spain - Airlift and ground transport
 United Kingdom - Airlift
 USSR - Airlift
 Other - South Korea, Taiwan, USSR and several other countries
 have made grants up to \$50,000 each to Upper Volta

Estimated Total Contributions in Kind	<u>\$20,000,000</u>
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TOTAL	<u><u>\$134,950,000</u></u>
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ATTACHMENT B

SAHEL DROUGHT ASSISTANCE
United States Government Assistance

I. Food Assistance (256,000 metric tons)

	<u>Metric Tons</u>	<u>Value</u>
Chad	8,000	\$ 1,027,000
Mali	55,000	8,095,000
Mauritania	33,000	4,187,000
Niger	61,000	9,866,000
Senegal	45,000	4,748,000
Upper Volta	35,000	5,742,000
Regional	19,000	3,466,000
	Total food	37,131,000

II. Non-food Assistance^{*/}

Chad	195,000	
Mali	2,494,000	
Mauritania	300,500	
Niger	580,000	
Senegal	244,491	
Upper Volta	318,000	
Regional	127,664	
UN Contribution	300,000	
Reserve	137,345	
	Total non-food	4,697,000
	TOTAL	\$41,828,000

^{*/} Major categories of which are: airlift (\$2,629,000), livestock feed and medicine (\$1,005,491), surface transport (\$275,000) and Ambassadors' Special Fund (\$161,500).

NUTRITIONAL SURVEILLANCE IN WEST AFRICA*

INTRODUCTION

This report presents the most objective data received to date on the nutritional status of populations living in the drought affected zone in West Africa. Although maximum estimates can be made from these data, information gathered for this report was not intended to define the total magnitude of undernutrition in this area, but rather to serve as a benchmark indicator of the degree of undernutrition. Subjects considered to be at highest risk were deliberately chosen in order to provide the most sensitive index of changing conditions. This benchmark will serve as a basis for comparison of data from subsequent surveys and should be of fundamental use in evaluating the effectiveness of nutritional relief efforts.

Indicators thought to be important in understanding the epidemiology of malnutrition and its effects in West Africa are growth of children, presence or absence of edema, morbidity and mortality, and population migrations.

GROWTH MEASUREMENT

Severe drought and resultant crop failures in West Africa have resulted in nutritional inadequacy for many persons in that region. The results of the inadequacy can be appropriately documented by observing its effects upon growth of children. Young children, because they are growing rapidly and are particularly prone to infectious diseases, are at considerably greater risk than adults of nutritional deprivation. In addition, during times of food scarcity in certain cultures, they may receive less than their proportionate share of food. For these reasons, body measurements of children are considered a most sensitive index of famine, and constitute a central core of these surveys.

Height and weight are the two most useful parameters of physical growth, and, with sufficient care and adequate instruments, can be measured accurately on many children in a short time. Height and weight measurements have been expressed in many forms, each having certain advantages and disadvantages. Observed height and weight are commonly compared with expected age-specific values. (Height for age is observed height in relation to expected height of a reference child of the same age. Similarly, weight for age is observed weight in relation to expected weight of a reference child of the same age.) However, to identify more clearly the effects of acute undernutrition (wasting of body mass) that may be superimposed upon a population suffering from chronic undernutrition (stunting of body length), and to minimize

*Mauritania
Niger
Mali
Upper Volta
July-August, 1973

genetic differences, it is more useful to employ weight for height (observed weight in relation to expected weight of a reference child of the same height).

Chronic undernutrition results in linear growth retardation with usually a proportionate failure to gain weight. Acute undernutrition results in loss of weight which is disproportionate to height. Weight for height has been found to be relatively independent of age, sex, and race, and thus remains quite constant under most conditions except acute undernutrition. It is thus the most useful anthropometric index in disasters in which food scarcity is prominent. An additional advantage for this study of weight for height is that exact ages of children can rarely be ascertained in rural West Africa.

The weight for height reference values used here are the age-specific median values for weight and height of the Stuart-Meredith standards, which to the present time are the most commonly employed. The appropriateness of such values, derived from studies several decades ago on a small number of children in Boston and Iowa City, has often been questioned. However, for reasons previously mentioned, plus the repeated observation that well-nourished West African children do actually follow closely these standards of weight and height, their use in this study is considered valid.^{1,2}

Eighty percent of the median Stuart-Meredith weight for height has been designated in this study as the borderline below which a child can clearly be considered to be undernourished. This represents approximately two standard deviations from the mean of the Stuart-Meredith values, and is a value of about the 3rd percentile of those distributions. In this study this level will be referred to as the "acute malnutrition threshold."

Survey data from 3500 children emphasize the fact that undernutrition in the four country area is to be found more among nomads than sedentary persons, and more in the north than in the south. Children from nomad clusters ranged on the average ten to seventeen percent below the threshold while those from sedentary or southern groups were approximately three to seven percent below. The existence of pockets of extreme undernutrition is supported by data from all countries but particularly from Mali where up to 80% of children from one nomad cluster were acutely undernourished.

The above statements on the nutritional status of children must be considered as conservative, since they do not take into account the large number of children whose weight for height values fall very close to the malnutrition threshold, but are nonetheless above it.

The presence of edema is a well known characteristic of kwashiorkor, a clinical syndrome resulting from a deficiency of protein in relation to the protein-calorie intake. The term Protein-Calorie Malnutrition is

currently accepted as describing the total spectrum of severe undernutrition, which includes both kwashiorkor and marasmus, a total wasting of body tissue. The degree to which the problem in an area is one of marasmus or kwashiorkor depends on many factors including environmental factors, the prevalence of infectious diseases and the relative amounts and types of protein and carbohydrate in the diet. In all cases food of good protein quality is necessary as part of the relief effort. However, the type of food to be provided and the advisability of utilizing special high protein foodstuffs may be determined in a general way by having information available as to the presence or absence of edema, that is, the presence or absence of kwashiorkor. Significant edema rates were noted only among northern nomad groups in Mali.

Avitaminosis was identified in localized areas in Mauritania, the only country in which an appropriate screening by clinical examination was conducted.

DISEASE SURVEILLANCE

Measles, always a problem in West Africa, appears to have significantly increased. National statistics indicate that this year more measles is being reported in three of the countries than during any year of the last six, eleven, and fifteen years respectively. Field investigators report that this increase is probably due, at least in part, to increased crowding in urban and camp areas due to arrivals of nomads. In Niger, deaths attributed by villagers to measles and/or famine accounted for 73% of the total among sampled nomads as opposed to 32% of the total among sampled sedentary peoples. In addition, the age distribution of measles among nomads in Niger is unusually skewed to the upper ages, indicating that these persons are being exposed to measles for the first time in many years. A well planned measles immunization campaign among these groups could have reduced measles morbidity and mortality. Nomad populations, camped near urban centers, could be vaccinated more conveniently than ever before. However, past experience has demonstrated the importance of maintaining low levels of susceptibles through the continued immunization of newborns. A contributing factor in the current measles epidemic is the large reservoir of susceptible children which accumulated following a decrease in emphasis in measles immunization after the mass vaccination campaigns recently conducted in West Africa.

All countries suffer from most of the tropical diseases, including malaria, diarrhea, meningitis, tuberculosis, etc. In those countries in which data were available, none of these diseases appear to have significantly increased in incidence during the past year. Cholera has been officially reported by all countries except Mali.

MORTALITY RATES

It was found that when dealing with small groups of persons in rural areas influenced by sometimes complex and extensive migratory patterns, reliable mortality data were almost impossible to obtain. Suggestions from data obtained indicate that northern and nomadic populations are suffering more than their southern and sedentary compatriots. Some data from Niger suggest elevated death rates among nomads, with over seventy percent of the deaths attributed to measles and/or famine. Previously cited references to higher undernutrition rates and increased measles morbidity among nomads tend to support the inference of increased mortality in this group. The synergistic relationship between measles and undernutrition is well known. High measles case fatality rates are often precipitated by undernutrition.

In view of some of the astronomically high estimates of deaths due to famine in this area being published by certain media, it is of interest to calculate a limit of mortality due to famine for the survey countries based upon the most extreme data obtained. Using the highest death rate found in a group of northern nomad clusters in Niger (7%) and the usual death rate for West Africa (2.4%), the maximum number of deaths due to famine this year is calculated at 101,000. See Appendix.

POPULATION MIGRATION

Population migrations, both internal and external, are annual occurrences in all four of these countries. Generally these population movements are of two sorts: (a) a continual rural to urban flux that consists primarily of young males in search of work. It is common for large urban centers to grow at an annual rate approaching 10%; with seasonal fluctuations of 20%; (b) seasonal movement involving semi-nomadic persons who follow relatively fixed and traditional routes in search of water and pasturage for their animals. The general direction of these population movements is outlined in an attached map. This year, these migrations have been altered in several ways:

- (a) Persons are migrating to areas not part of their itineraries in previous years. Nomads have come to urban areas and other migrants have been seen in areas further south of their normal patterns.
- (b) Additional numbers of persons are migrating. Entire families have been seen moving over routes normally followed only by male herders and their animals.
- (c) Persons are migrating for different reasons. Previously nomads moved to find pasturage for their animals; many are now moving in search of government distributed food for themselves.

- (d) Normal seasonal migration to urban or southward areas is not being balanced by the usually predictable return of these people to their places of origin. Many nomads indicate they will remain near urban areas.

The non-sedentary population of these countries is estimated as follows:

Mauritania	980,000
Mali	200,000
Niger	650,000
Upper Volta	350,000
	<u>2,180,000</u>

Estimates of this sort are extremely crude, as the usual sources of data are old censuses based on population samples. They do not take into account the process of sedentarization that has been occurring among the nomads over a period of time. They do, however, give a better indication of the universe to which belong the total number of persons most severely at risk to the effects of the drought than do total population figures of the nations in the drought area.

CONCLUSION - RECOMMENDATIONS

"Seasonal hunger" is a fact of life in West Africa. There is every reason to believe, however, that the currently described situation of undernutrition is not of the same order as that recognized during "normal" years. Baseline information (albeit obtained during the period of traditional hunger) has been gathered which focuses attention on certain population subgroups which are bearing the brunt of the current famine. The importance of follow-up surveys for the purpose of maintaining surveillance over the status of these groups cannot be over emphasized.

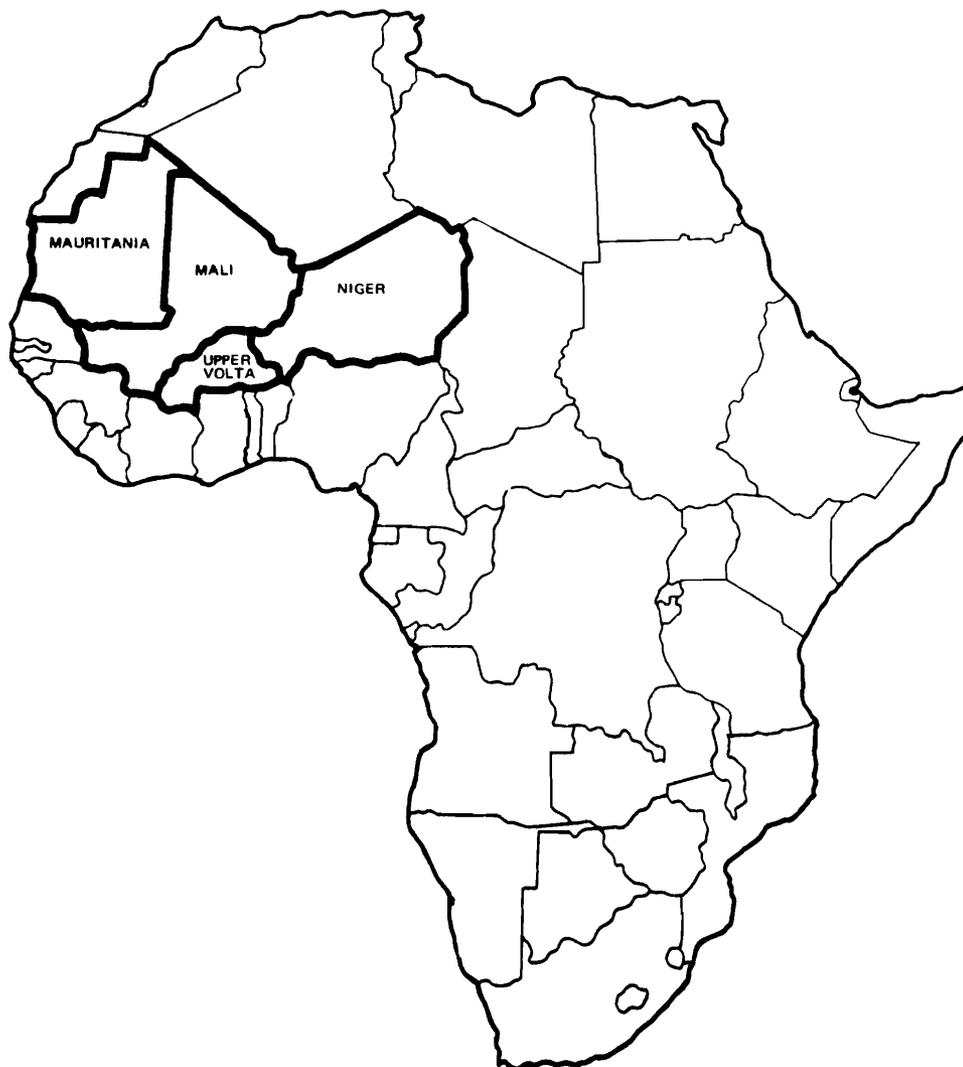
Results of the initial survey strongly suggest the need, in at least the short run, for a specifically directed relief effort aimed at the identification and location of persons in need; i.e., a selective feeding program.

It is recommended (1) that a repeat survey be conducted on a quarterly basis beginning preferably in October-November, and (2) that a program of locating pockets of famine be initiated in order to adequately direct nutritional aid to persons in need. In all countries except Mauritania, this means establishing a program to adequately nourish a relatively small proportion of the total population.

REFERENCES

- ¹ Nigeria Nutrition Survey, Nutrition Section, Office of International Research, NIH, Bethesda, 1967.
- ² Wellman, John, The Gbaja Family Health Nurse Project, Lagos, Nigeria, 1967-1970, DPH Thesis, Johns Hopkins University, June, 1971.

WEST AFRICA NUTRITION SURVEILLANCE AREA



WEST AFRICA NUTRITION SURVEILLANCE AREA
POPULATION MOVEMENTS – DRY SEASON 1973



MAURITANIA

In Nouakchott, a list of accessible population centers was enumerated to form the basis for selection of survey sites. Each population center was visited and a second list of surrounding population groupings which were reachable given constraints of time and transport was assembled. This list usually included all known population groupings within a sixty to eighty kilometer distance and counted persons thought to be relatively unaffected by drought conditions as well as those thought to be highly at risk. All but two regions of the country were visited in surveying 40 clusters for a total of 1195 children. Almost half of the clusters are from sedentary groups.

A. Nutritional Status

Region Area	Nomad				Sedentary*				Total	
	Number Clusters	Number Children	Percent <Threshold	Number Clusters	Number Children	Percent <Threshold	Number Clusters	Number Children	Percent <Threshold	Number Children
I Nema	4	102	22	-	-	-	4	102	22	22
II Aioun	1	36	25	-	-	-	1	36	25	25
III Kiffa	4	108	13	-	-	-	4	108	13	13
V Boghe	4	101	12	1	33	3	5	134	10	10
V Aleg	2	70	14	-	-	-	2	70	14	14
Total Region V	6	171	13	1	33	3	7	204	11	11
VI Nouakchott	3	151	17	2	74	5	5	225	13	13
VI Boutillimit	4	105	18	1	29	0	5	134	15	15
VI Rkiz	2	56	18	1	35	14	3	91	16	16
VI Rosso	1	21	52	2	55	11	3	76	22	22
VI Mederdra	1	35	14	2	50	10	3	85	12	12
Total Region VI**	8	217	21	6	169	9	14	386	16	16
VII Chinguetti	-	-	-	3	81	9	3	81	9	9
VII Atar	-	-	-	2	53	4	2	53	4	4
Total Region VII	-	-	-	5	134	6	5	134	6	6
Grand Total	26	785	17	14	410	7	40	1195	14	14

*Includes children of government workers. **Excludes Nouakchott.

No cases of edema were seen.

Height-weight data from Mauritania indicate that the nomadic populations are relatively more at risk than are sedentary groups. The nomadic population of Mauritania constitutes the majority of the total population. Thus, unlike other countries surveyed, the famine can be considered as adversely affecting the majority of this nation's people.

When children of government workers were surveyed, the percentage of children falling below the undernutrition threshold was no different than that of other rural sedentary children.

Region VII appears relatively less affected by undernutrition perhaps because most nomads had left the area to go south. The remaining persons profited from a reasonably productive date harvest in the area. In addition, government rationing provided the most food per capita to this Region and the Nouakchott area.

Approximately two-thirds of the clinically apparent vitamin deficiencies were scurvy*, approximately one-sixth were beri beri**, and approximately one-sixth were cases of beri beri with scurvy. Occasional cases of rickets and vitamin A deficiency were noted. Most vitamin deficiency was noted in the First, Fifth, and Sixth Regions. In addition to clinical observations, anecdotal information pointed to the existence of pockets of vitamin deficiency. Boutilimit and Boumdit (near Kiffa) were singled out by their respective medecin chefs as experiencing 250 and 400 cases respectively of one sort or another of clinical vitamin deficiency.

* Marked gingival hypertrophy, gingival bleeding, or petechiae.

**Characteristic muscle weakness or paralysis of recent onset.

B. Disease Surveillance

1. Measles

<u>Year</u>	<u>Cases</u>
1968	10,860
1969	3,450
1970	2,389
1971	4,890
1972	8,997
1973	14,338*

*Estimate based on first 2 quarters.

Case fatality rates estimated at 10 percent.

2. Cholera (as of August 22, 1973)

<u>Area</u>	<u>Cases</u>	<u>Deaths</u>
Rosso	91	22
Moudjeria	54	7
Nouakchott	4	0

3. Viral Hepatitis

Kiffa - 10 cases/month since May 1973

Boutilimit - 400 cases since February, 1973.

4. Other

Whooping Cough - Boghe, Aleg

Malaria and diarrhea - Most "serious" disease problems with beginning of rains.

C. Mortality

The average annual death rate in Mauritania from 1965-1971 was 23/1000.

Death Rates (Per 1000) During the Past Year

Region	Area	Nomads		Sedentary		Total	
		Number Clusters	Rate	Number Clusters	Rate	Number Clusters	Rate
I	Nema	4	21	-	-	4	21
II	Aioun	1	8	-	-	1	8
III	Kiffa	4	11	-	-	4	11
V	Boghe	4	69	1	57	5	66
V	Aleg	2	12	-	-	2	12
Total	V	6	44	1	57	7	46
VI	Nouakchott	3	13	2	0	5	9
VI	Boutilimit	4	65	1	12	5	54
VI	Rkiz	2	19	1	45	3	25
VI	Rosso	1	12	2	24	3	21
VI	Mederdra	1	25	2	35	3	31
Total	VI*	8	41	6	27	14	35
VII	Chinguetti	-	-	3	15	3	15
VII	Atar	-	-	2	0	2	0
Total	VII	-	-	5	7	5	7
Country Total		26	26	14	21	40	25

*Excludes Nouakchott

Overall death rates do not appear to be elevated. There are indications of specific areas where death rates may be considerably elevated; however, the small numbers involved do not permit a definite statement to be made.

D. Population Migration

Large scale migration was reported toward cities in the southern quarter of the country. Persons from all over the country have come to Nouakchott. Pastoralists from the 5th and 6th regions have gone to the southern portions of Regions 2, 3, and 4. Nearly all nomads from Region 7 have gone to southern regions.

An unknown number of Maures and Peuls have gone to Mali, Senegal, and Niger. It is estimated that 80 percent of Mauritania's total population can be considered non-sedentary.

Results of an interesting survey conducted among a group of displaced nomads indicated that 66 percent of those interviewed stated they would remain in or near the cities even if they had animals again. If a person indicated he would be willing to return to the nomadic life if his herds could be replenished, he was asked how many animals he would require. Almost uniform responses were 20 cows or 40 goats or 10 camels. This may be an indicator of what the government is faced with in terms of dealing with the nomads when drought ends.

E. Food Distribution

Reports indicate that food is delivered as rapidly as it is received, but that not enough food is available for distribution by the government.

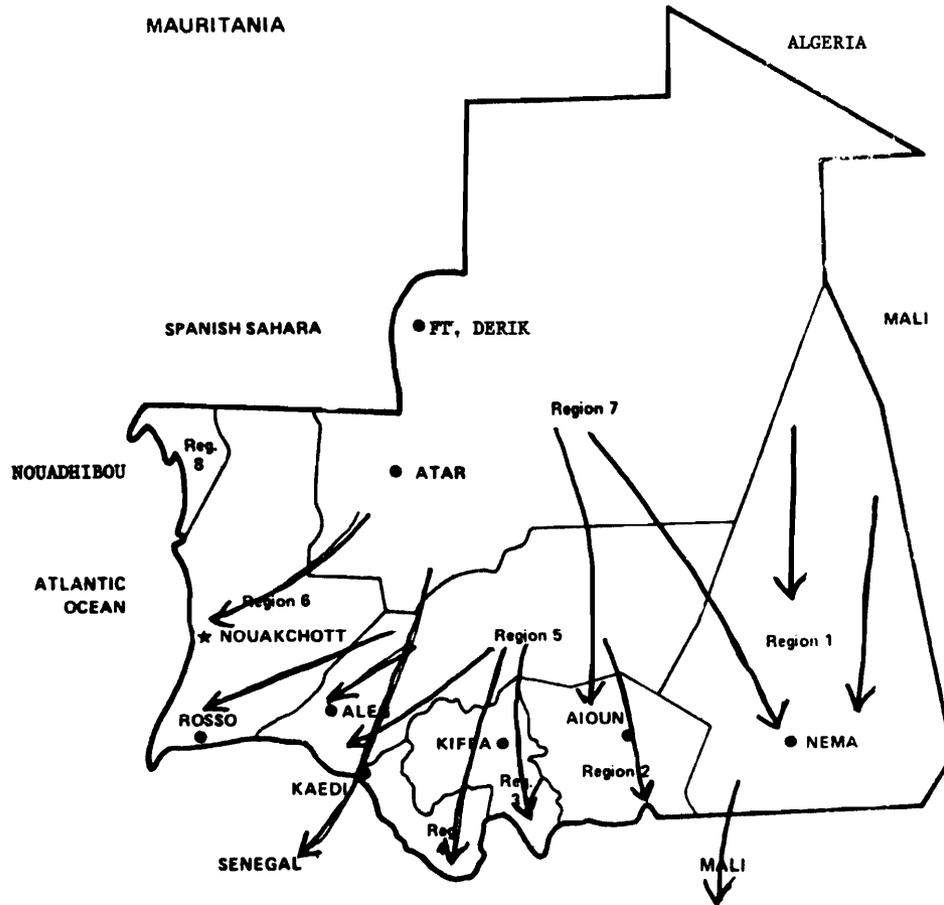
<u>Area</u>	<u>Monthly Quantities Per Person Delivered</u>
Boutilimit-Aleg-Maderdra	4 kg cereal + 1 kg powdered milk
Nouakchott	10 kg cereal
Aloun-Rosso-Kiffa	5-7 kg grain + 1 kg powdered milk
Atar-Chinguetti	10 kg wheat + 1 kg milk
Nema	2 kg grain + 1 kg milk

Approximately 10 kg of wheat and 1 kg of nonfat dry milk would constitute the recommended calorie allowances for a healthy person for 1 month.

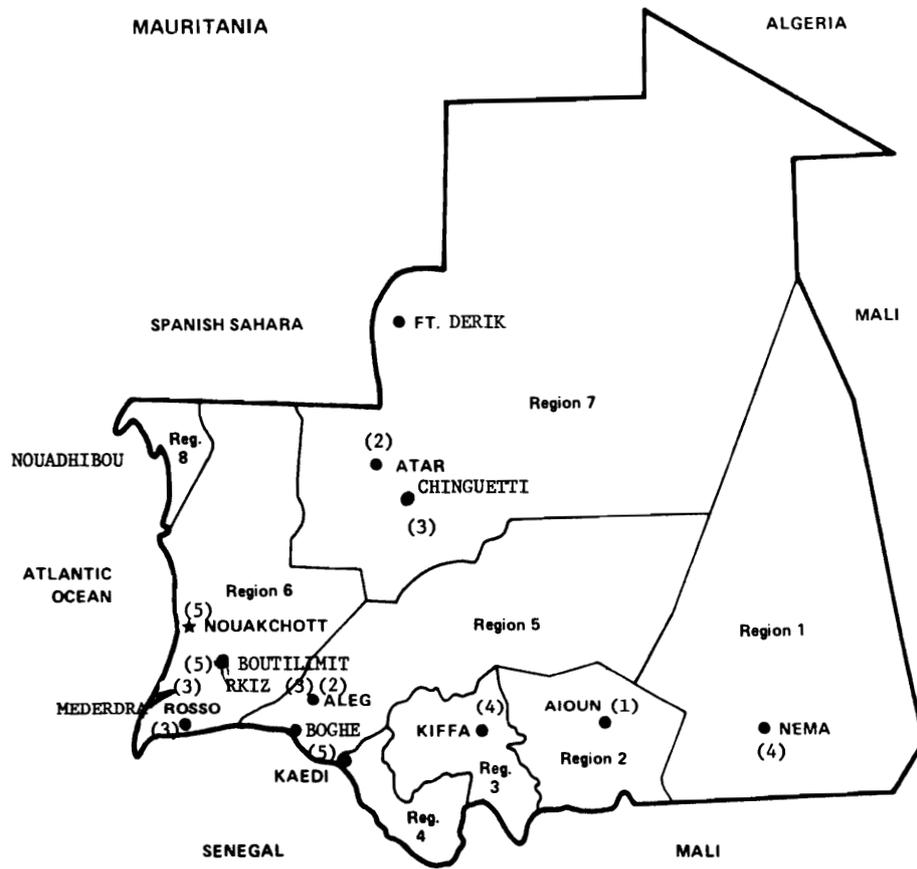
A possible explanation for the fact that areas such as Atar and Chinguetti are receiving more per capita relief foods than other areas suffering worse from undernutrition is that food distributors may be allocating foods on the basis of gross population data and not taking into account massive southward migrations that have occurred.

F. Livestock Losses

Estimated at 25-40 percent overall. Herds belonging to nomads who have come to the cities in search of relief have been reported as totally extinguished.

Population Movements
During Dry Season, 1973

NUMBER OF CLUSTERS BY TOWN AREA



NIGER

For survey purposes, villages of Niger were divided into Nomad and Sedentary groups, excluding towns with a population of 5,000 or more. Ten clusters each from the nomadic and sedentary portions of the population were randomly selected for visiting. About half the sedentary and nomad clusters fell in areas designated by the Niger government as being severely affected by the drought, therefore some comparison between areas highly affected (mostly northern areas) and less highly affected (mostly southern areas) is possible. Approximately 20 children were examined in each cluster.

A. Nutritional Status

Area	Nomad		Percent Below Undernutrition Threshold				Sedentary*		Total	
	Number Clusters	Number Children	Percent <Threshold	Number Clusters	Number Children	Percent <Threshold	Number Clusters	Number Children	Percent <Threshold	
North	7	145	14	5	106	3	12	251	9	
South	4	85	8	5	102	5	9	187	6	
Total	11	230	12	10	208	4	21	438	8	
Malian Refugees	1	20	25							

*Excludes all villages of population 5,000 or more.

Data from Niger strongly suggest that undernutrition is more a problem among nomadic than among sedentary populations and also more prevalent in the north than in the south.

Less than 2% of children had edema.

B. Disease Surveillance

1. Measles

<u>Year</u>	<u>Cases</u>	<u>Case Fatality Rates</u>
1957	1,060	4%
1958	5,350	<1%
1959	11,374	3%
1960	8,903	4%
1961	11,978	11%
1962	4,202	7%
1963	4,928	5%
1964	14,412	4%
1965	27,547	2%
1966	6,717	2%
1967	5,548	2%
1968	11,259	2%
1969	25,054	3%
1970	1,755	6%
1971	2,886	2%
1972	29,050	NA
1973	35,532*	3.3%

*Based on January-June data

More measles is being reported in 1973 than in any previous year for which data are available.

<u>Age Distribution of Measles Cases</u>						
<u>January-May, 1973, from Two Northern Dispensaries</u>						
<u>Site</u>	<u>Age</u>					<u>Total</u>
	<u><1</u>	<u>1-4</u>	<u>5-14</u>	<u>15-44</u>	<u>45+</u>	
Tchin Tabaradin	5	82	98	64	0	249
Telemeses	0	7	25	25	0	57
Total	5	89	123	89	0	306
Percent of Total	2%	29%	40%	29%	0	100%
Cumulative Percentage Distribution	2	31	71	100%		

The age distribution of these cases indicates a much larger proportion of cases than usual among older persons. Normally, approximately 80 percent of reported cases would be expected to be found in children under 4 years of age.

2. Cholera

Cases have been officially reported to WHO from Dosso and Niamey departments.

3. Meningococcal Disease

408 cases

4. Smallpox Scar Rates (Percent with Scar)

<u>Age Group</u>	<u>Nomads</u>	<u>Sedentary</u>	<u>Previous Assessment 1/69</u>
1-4	24%	42%	
5-14	48%	72%	
15-44	59%	81%	
45+	48%	67%	77%

Assuming that presence of a smallpox scar is also indicative of measles immunization, the nomadic child population should be considered highly at risk to measles.

C. Mortality

The average annual death rate from 1965-1971 in Niger is 23/1000.

Death Rates (Per 1000) Last Year

<u>Area</u>	<u>Nomads</u>		<u>Sedentary</u>		<u>Total</u>	
	<u>Number Clusters</u>	<u>Death Rate</u>	<u>Number Clusters</u>	<u>Death Rate</u>	<u>Number Clusters</u>	<u>Death Rate</u>
North	7	66	4	38	11	59
South	4	17	4	17	8	17
Total	11	54	8	29	19	44

Death Rates Per 1000 Last Year (Cause Attributed by Villagers)								
Area	Nomads				Sedentary			
	Number Clusters	Measles and/or Famine	Other	Total	Number Clusters	Measles and/or Famine	Other	Total
North	7	52	14	66	4	13	25	38
South	4	2	15	17	4	4	13	17
Total	11	39	15	54	8	9	20	29

Percent of Total Deaths Attributed by Villagers to Measles and/or Famine Last Year

Area	Nomad		Sedentary		Total	
	Number Deaths	Percent	Number Deaths	Percent	Number Deaths	Percent
North	105	78	20	35	125	71
South	9	11	8	25	17	18
Total	114	73	28	32	142	65

Age Distribution of 54 Deaths Attributed by Villagers to Measles and Famine

Cases	<1	1	2	3	4	5-7	8-9	10-12	13-14	15-24	25-44	Total
Measles	1	7	4	-	2	8	4	3	-	4	1	37
Famine	1	-	2	1	-	7	2	4	-	-	3*	17
Total	2	7	6	1	2	15	6	7	-	4	1 3*	54
	18 33%					28 52%			8 15%			

*Exact age unknown

There is a strong indication that death rates have increased this year and that the population most affected are the nomads, particularly those still in the north. Furthermore, measles and/or famine would appear to be responsible for a significant proportion of these deaths. The age distribution of 54 measles and famine deaths indicate that the under 12 year old population is contributing most to mortality totals.

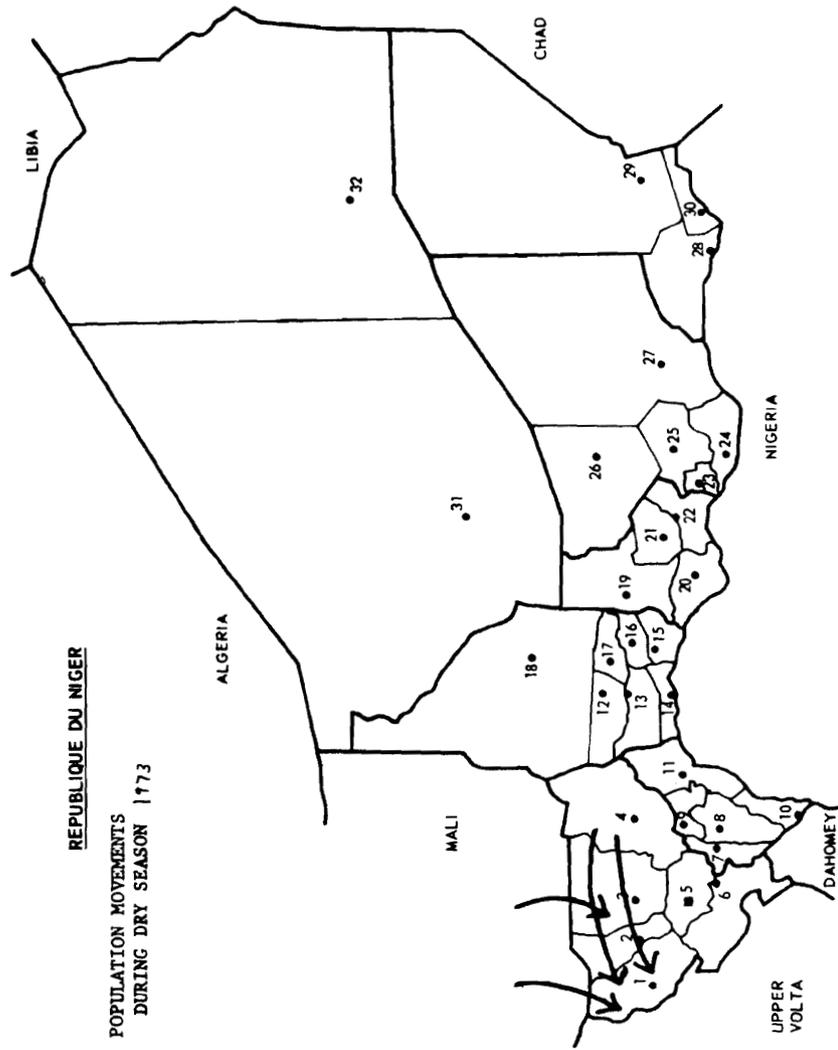
D. Population Migration

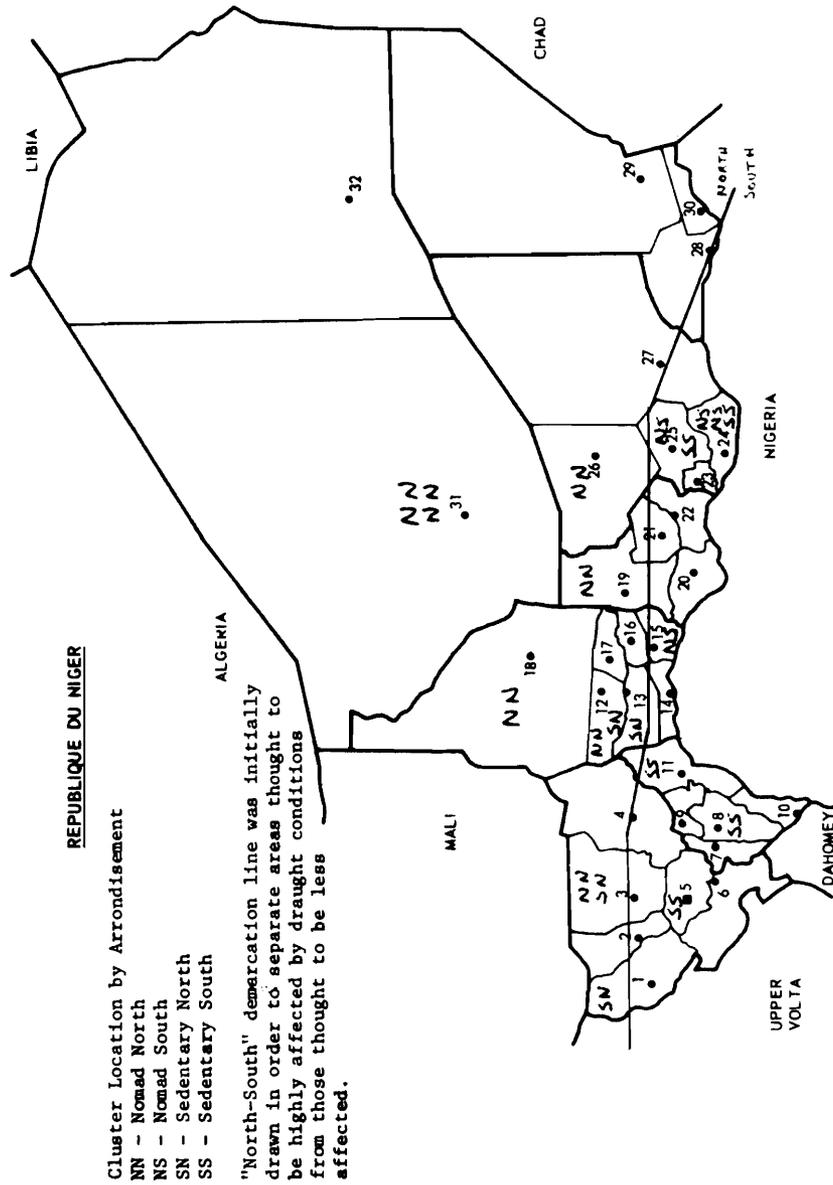
Migration from Mali into West-North Western Niger has been reported. In addition, westward migration within Niger from Filingue and Niamey arrondissements into the Tero area (west-northwest) has been reported.

Lazar camp, near Niamey, contained Malian Tuaregs who normally come no farther south than Gao (Mali). In the Tera area, Malians were seen this year reportedly for the first time.

E. Food Distribution

Distribution of food was noted as erratic. An example of one sedentary village receiving adequate calorie supplies for 1 month and an adjacent nomad encampment receiving only one bowl of powdered milk per person points out the need for a specialized distribution system that deals directly with nomad encampments. Traditional enmities between nomadic and sedentary populations make it unrealistic to assume that sedentarists will feed nomads from a food allotment to a village.





Mali

Areas designated for the nutrition survey were those defined as disaster areas by the Malian government; i.e. Cercles of Nara, Niuro, and Region of Gao. Capitols of arrondissements were excluded for consideration; and, given severe shortages of gasoline, villages to be visited were selected on the basis of anecdotal information as being typical of other villages in the area. Nomad clusters were from specially created government camps in the Gao Region. Twenty sedentary clusters and three nomad clusters for a total of 517 children were examined.

A. Nutritional Status
 Percent Below Undernutrition Threshold

Date	Area	Nomads			Sedentary			Total		
		Number Clusters	Number Children	Percent <Threshold	Number Clusters	Number Children	Percent <Threshold	Number Clusters	Number Children	Percent <Threshold
8/73	Timbuctu	1	35	80				1	35	80
7/73	Gao	1	50	70	5	124	49	6	174	55
9/73	Gao	1	51	35	5	112	30	6	163	32
8/73	Mioro				6	126	3	6	126	3
8/73	Nara				9	182	4	9	182	4
Total*		2	85	74	20	432	17	22	517	26

*Excludes Gao revisit in 9/73

In Mali, the problem of undernutrition appears to be much more acute both in the north and among nomads. It was noted on the return visit to the Gao nomad camp that many of the nomads were gone and that sedentarists now made up a large proportion of the camp population. It is noted that the percent of children below the malnutrition threshold in Gao nomad camp in September was about the same as that found in sedentary villages in the Gao area. Villages visited in the Nioro and Nara areas (both declared disaster areas by the Malian government) showed insignificant rates of undernutrition among the child population.

Twenty-five children (0-4 years) in the Timbuctu nomad camp and 19 in the Gao nomad camp were examined for edema. Rates of 40% and 43% respectively were found. Only 3 of 209 children in sedentary populations examined were found with edema. The high edema rates among nomads is strongly suggestive of a deficit balance of protein in relation to protein-calorie intake. This has not been noted in other countries and perhaps this should be investigated further in order to make sure that the appropriate types of foodstuffs are delivered to these persons.

B. Disease Surveillance

1. Measles

<u>Year</u>	<u>Cases</u>	<u>Deaths</u>	<u>Case Fatality Rate</u>
1968	26,262	838	3.2%
1969	43,512	1,927	4.4%
1970	9,071	267	2.9%
1971	16,594	70	4%
1972	37,861	1,692	4.5%
1973	25,554*	997	3.9%

*Estimate based on January-May data

Measles cases reported from Mali are back to precampaign levels. Case fatality rates have remained constant.

2. Cholera

No cases officially reported.

3. Meningitis

Seven hundred ninety cases and 136 deaths reported occurring in 1972. One thousand eight hundred and thirteen cases were reported in 1971.

Seasonal peak occurs during February-April. No unusual increase is predicted for 1973.

4. Tuberculosis

Nine hundred sixty-eight cases and 45 deaths reported during 1972. One thousand two hundred cases were reported in 1971. No unusual increase is anticipated during 1973.

5. Pertussis

Eight thousand, six hundred, twenty cases and 62 deaths were reported during 1972. Eleven thousand cases were reported in 1971. No dramatic change in incidence is expected during 1973.

C. Mortality

Deaths in a nomad camp (population: 10,000) at Timbuctu were reported at 5-10 per week in July when the camp was initially formed. This rate had dropped to 2-3 per week by late August. The average annual death rate for Mali is 266 per 10,000. This would equal about five deaths per week in a camp of this size.

D. Population Migration

Mali has a constant internal migration to the cities from rural areas. Bamako has grown so greatly from this migration that its exact population is difficult to ascertain. Other regional capitols have modest increases in their populations. These urban populations have seasonal fluctuations. During the dry season a city population may increase up to 20 percent as is the case in Mopti. Then once the rains come, this mostly male population returns to their villages to cultivate.

This year the seasonal migration has been more pronounced due to the drought. The nomads flocked to Gao and Timbuctu seeking government aid. Seven special nomad camps were created by the Malian government to care for an estimated 50,000 displaced nomads. Mopti also had a much heavier seasonal increase due to the nomads who came down from the Gao region. Bamako had some migration from the Gao region, many of these people seeking assistance from their extended families in Bamako.

Mali also has a constant external migration. In the Kayes region, the Saracolle men traditionally leave their villages to work and trade throughout West and Central Africa. Also, a large number of Saracolle work in France as unskilled laborers for several years. Despite these long absences; these men always return home. This year there has been no surge in this emigration.

Also in the Kayes region there is a transhumance between Mali and Mauritania. Peul and Maure herdsmen drive their livestock north during the rainy season, then they come south during the dry season. However, this year the Peuls and the Maures are very hesitant about bringing their herds too far north because of the losses suffered last year.

In Gao, Somai men often go to Ghana and Dahomey where they work as water carriers or on other unskilled trades. This migration is not permanent and after a year or two, they usually come back. This year the migration to the coast has increased a great deal. Unfortunately there are no firm estimates for the extent of this migration.

This year many Tuaregs had fled to Niger and Upper Volta to escape the drought's effects. There are estimates that 40,000 Tuaregs are in Niger and 35,000 are in Upper Volta. Some observers have questioned this estimate, but there are no real census data available in Mali to determine the exact extent of this migration. Another migratory pattern runs between Bamako and the Ivory Coast where there are large Malian communities in Abidjan and Bouake. With unemployment in Mali increasing while the Ivory Coast's economy is experiencing a sustained growth, this migration should continue and increase. This migration has a tendency to be more permanent than the other migration patterns cited.

E. Food Distribution

Since the railroad has placed a high priority on grain shipments, some commodities are scarce. In May, Bamako lacked kerosene for 2 weeks. Presently, Bamako has a shortage of diesel fuel. Often stations are out for several days. In Kayes, there are very few luxury items due to the grain shipments. In May, the City of Kayes was without gasoline for almost 2 weeks.

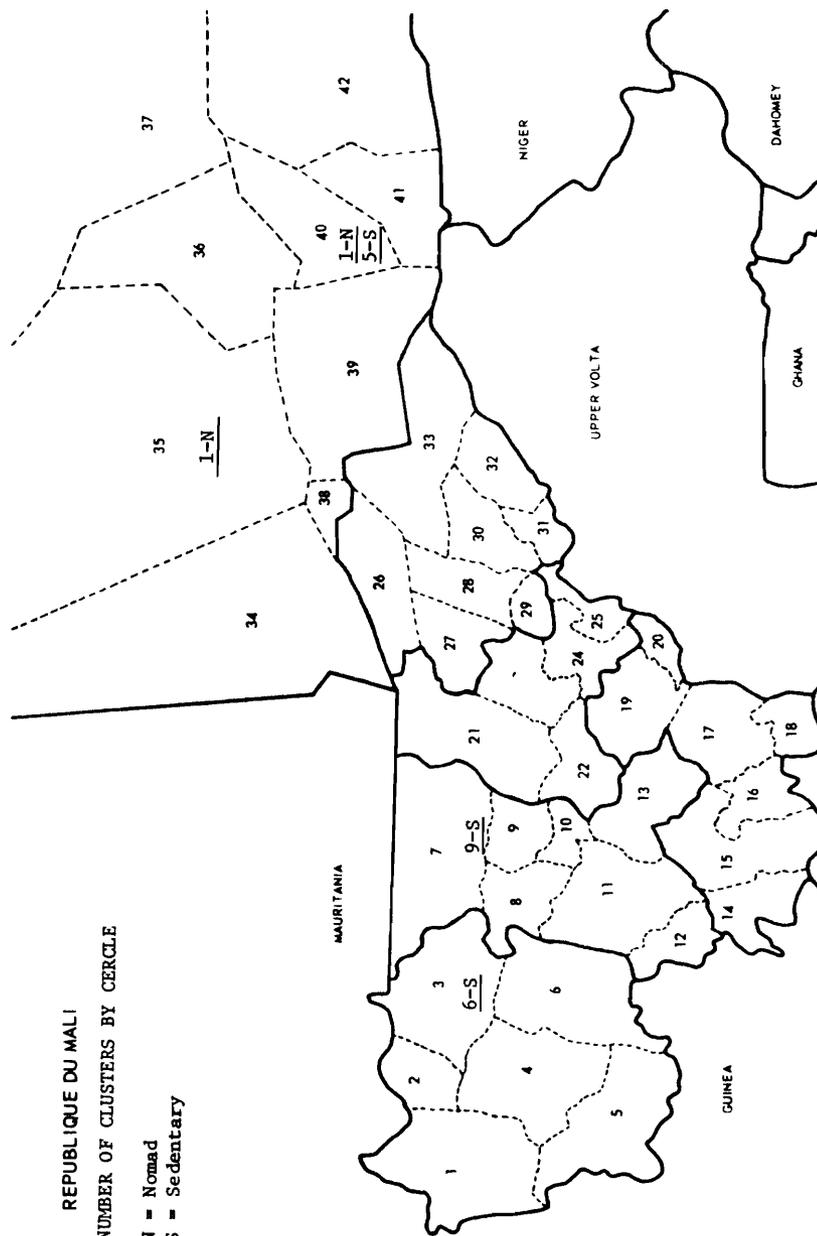
The Dakar/Bamako railroad hauls about 2,000 metric tons of grain inland weekly. AID and Embassy officials state that the railroad is operating at optimal efficiency. In addition, about 3,000 metric tons of grain come up from Abidjan.

The grain is flown to Gao, Timbuctu and Goundam. Gao receives about 600 tons monthly. Timbuctu and Goundam receive about 300 tons a month. This just barely meets the minimum grain needs for these areas. Military trucks transport grains from Bamako to Nara. At one time there were 14 trucks carrying grain, but the number has been reduced lately. About 13 tons a day are flown in from Dakar. Niore receives about 13 tons daily by air.

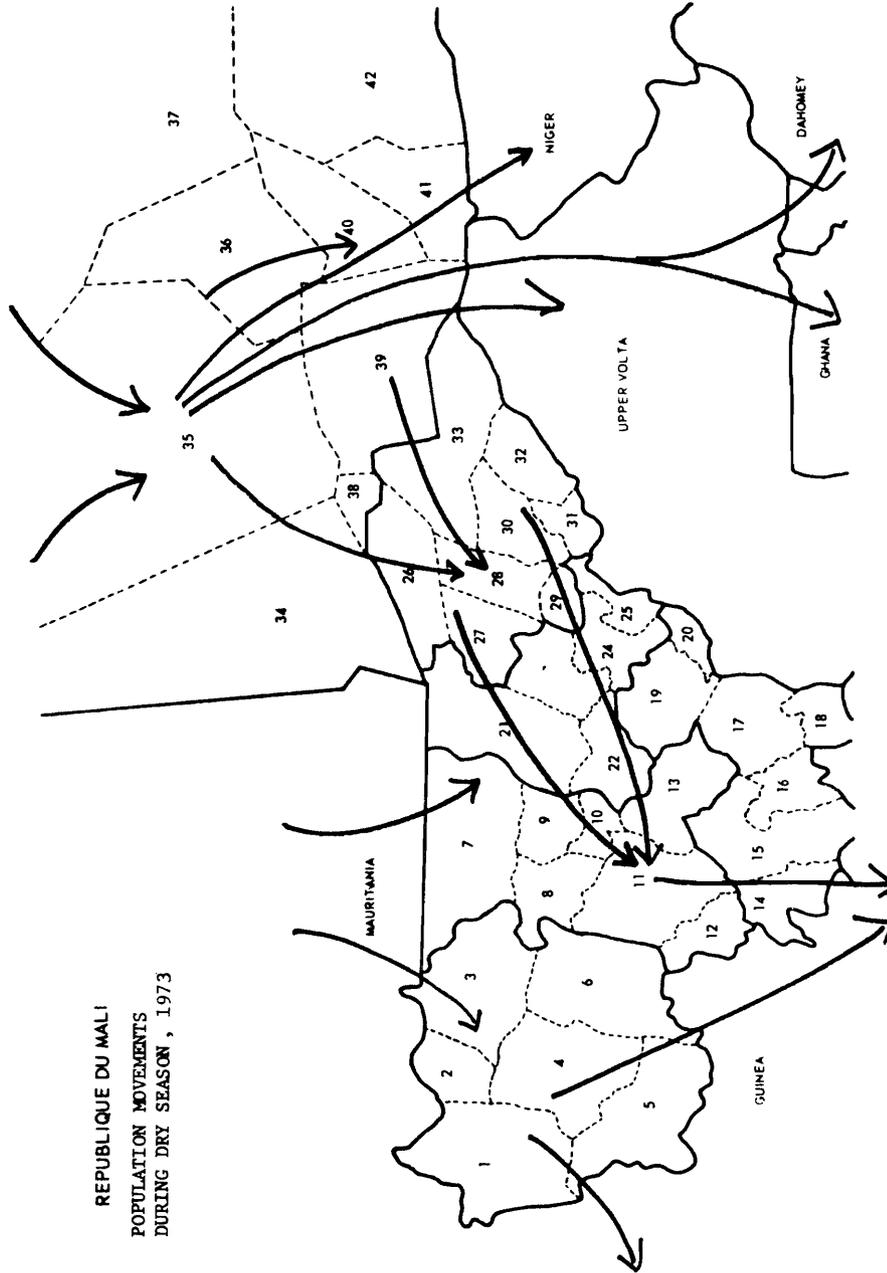
Then the grain is distributed from the cercles to arrondissements. At the arrondissement, the peasants have to purchase the grain and arrange to transport it to their village. Usually the grain is divided among the families, each family transporting its share.

F. Livestock Losses

Estimated 80 percent in Gao area and 25 percent in Niore-Nara area.



REPUBLIQUE DU MALI
 POPULATION MOVEMENTS
 DURING DRY SEASON, 1973



UPPER VOLTA

The survey area for Upper Volta was the five cercle northern area consisting of Dori, Djibo, Ouadalan, Ouahigouya, and Titao cercles. The population was grouped in sequence by village and 30 clusters randomly selected.

Initially, 20 children per cluster were seen, but as the survey proceeded, larger numbers of children per cluster were measured in order to expand the data base.

Upon completion of the survey in the north, a village in the south of Upper Volta, Po, was arbitrarily selected for survey as an area not affected by the drought. Results from Po may be used as a reference Voltan population relatively unaffected by drought conditions.

A. Nutritional Status

<u>Area</u>	<u>Percent Below Undernutrition Threshold</u>		
	<u>Number Clusters</u>	<u>Number Children</u>	<u>Percent <Threshold</u>
Dori	6	241	11
Djibo	7	229	13
Ouadalan	3	214	16
Ouahigouya	12	211	1
Titao	4	101	6
Total	32	996	10
Po	1	340	3

Less than 1 percent edema was found.

The first five areas are contiguous and were initially believed to constitute the core of drought-affected Upper Volta. Height and weight measurements suggest, however, that the problem is more acute in Djibo, Ouadalan, and Dori cercles than in Titao and Ouahigouya. These most acutely affected cercles are located in the extreme north and northeast portion of the country. Po, located on the southern border of Upper Volta with Ghana, was chosen as a village thought a priori to be unaffected by the drought. Measurement of children from this village bears out this assumption and provides a baseline against which to compare the more severely affected northern areas.

B. Disease Surveillance

1. Measles

<u>Year</u>	<u>Cases</u>	<u>Deaths</u>	<u>Case Fatality Rate</u>
1962	27,797	1,021	3.7%
1963	7,953	290	3.6%
1964	5,117	211	4.1%
1965	21,225	635	3.0%
1966	12,001	203	1.7%
1967	13,647	206	1.5%
1968	4,763	1,805	37.9%
1969	14,959	848	5.6%
1970	10,204	602	5.9%
1971	19,174	881	4.6%
1972	21,251	670	3.2%
1973	61,029*	3,479	5.7%

*EST. based on Jan-May data.

More cases of measles will be reported this year than in any year during the preceding 11-year period. Reported case fatality rates have remained constant.

2. Cholera

<u>Area</u>	<u>Cases (confirmed & suspect)</u>	<u>Deaths</u>
Ouagadougou	624	179
Djibo, Dori		

3. Cerebral Spinal Meningitis

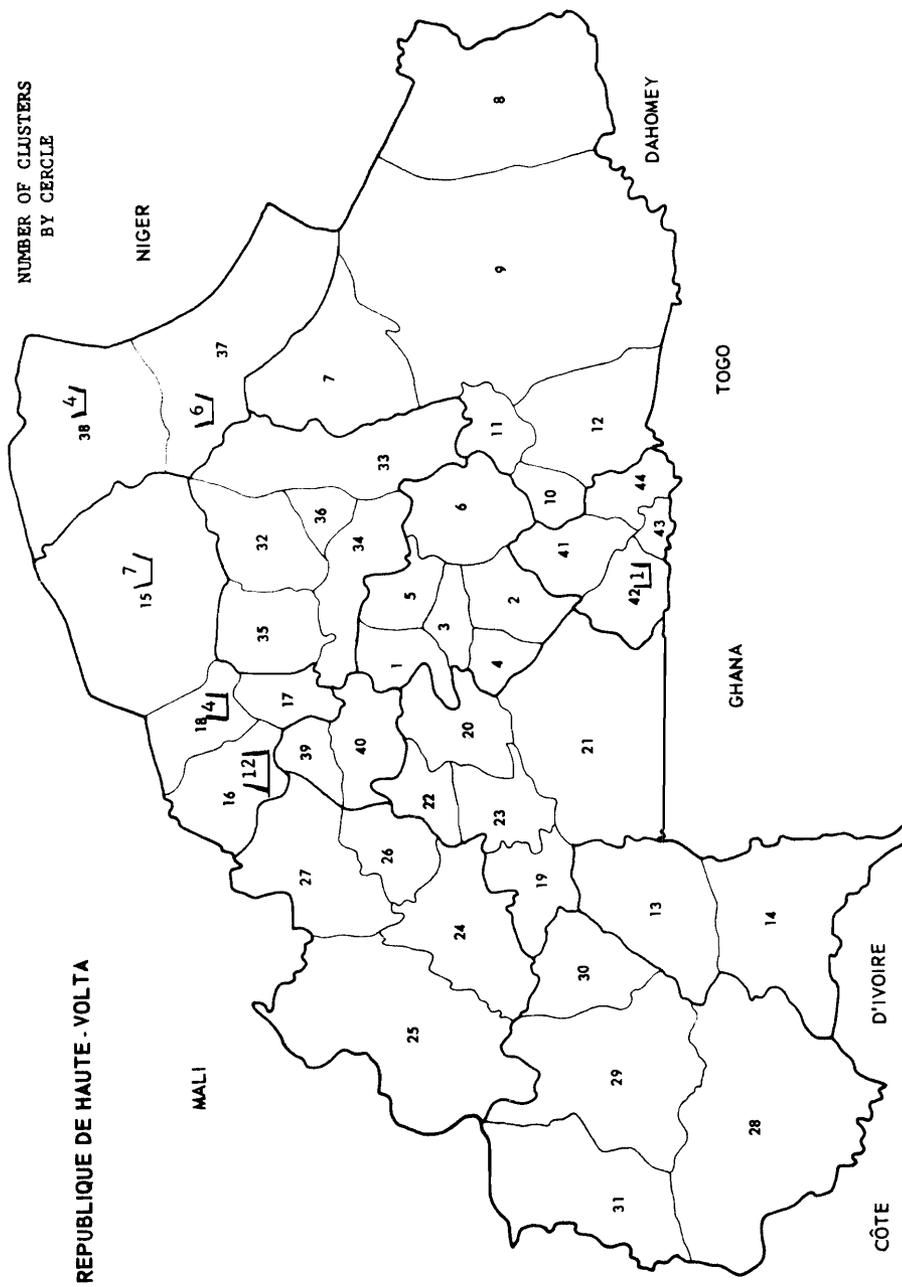
<u>Year</u>	<u>Cases</u>	<u>Deaths</u>	<u>Case Fatality Rate</u>
1970	19,960	1,525	7.6%
1971	6,067	565	9.3%
1972	2,886	434	15 %
1973 (Jan-May)	1,989	283	14%

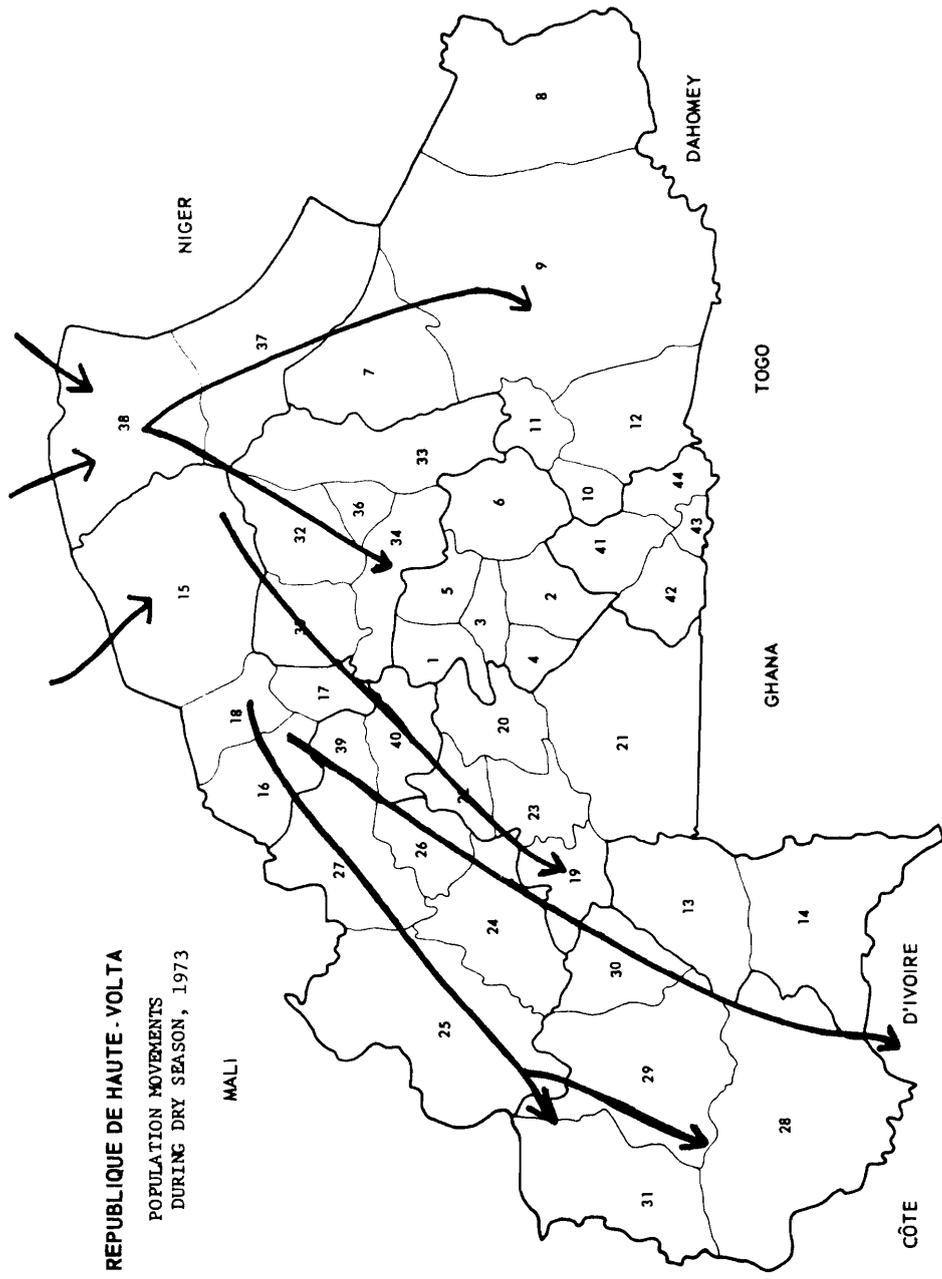
C. Population Migration

An estimated 80 percent (200,000) of the population of the three northernmost cercles and 10 percent (98,000) of the population of the nine north central cercles had moved south prior to the initial rains in June. Kaya, just north of Ouagadougou, received many of these persons. By early September, an estimated 10-30 percent of these people had returned to the north.

D. Livestock Losses

Estimated at 30-50 percent.





Hal Sheets graduated in 1973 from Reed College.

Roger Morris has worked in the State Department, on the National Security Council Staff, and as a legislative assistant in the U.S. Senate.