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9. ABSTRACT

This report on Africa's Sahel countries - Chad, Mali, Mauritania, Niger, Senegal, and Upper Volta - has two purposes. First, to examine how, during the past few years, bad weather and rising prices have affected the area's economics regarding production, budgets, balance of payments, income distribution, etc.; and second, to collect a large body of data on recent economic developments in the Sahel. Sources for the data were the IBRD, the IMF, the Bulletin of the Central Bank of West Africa (BCEAO) and of Central Africa (BCAC), and the Direction de l'Aide au Developpement of the French Ministry of Co-operation. The data are very inconsistent, and difficult to compare, but here have put into a more understandable and accessible order. Much is contained in tables and graphs. The report's findings conclude that the effects of the drought, though indeed severe, were not as devastating as predicted and feared. It is felt that this relative reprieve was due to an enforced interdependence among the countries and its additional assistance. The Sahel and the world also now realizes the need for agricultural development and the importance of price policy in this area.

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THE RECENT ECONOMIC EVOLUTION
OF THE SAHEL

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SUMMARY OF MAIN FINDINGS

1. The people of the Sahel countries - Chad, Mali, Mauritania, Niger, Senegal and Upper Volta - are generally recognized as being among the very poorest in the world, and their economies as being among the world's least developed. This is true by all measures of development - Gross Domestic Product per capita, social facilities per person, energy usage per person, share of labor force outside agriculture, road mileage per km. or per person, etc. They are also among the world's most dependent people - dependent on weather for their basic livelihood, dependent on a basic and delicate ecological balance for survival, dependent on imports of fuel for energy and food for essential consumption, on investment capital imports for economic modernisation, on imported manpower for the performance of many jobs requiring special training and skill. They are dependent also in the sense that they lack control over major aspects of their economic policies because they have large and uncontrollable frontiers, because of monetary and budget constraints inherent in their small size and their institutional connections with France, and because of scarcities of administrative capacities.
2. The Sahel economies have done poorly since 1960. Between 1960 and 1970 GDP in the region as a whole grew at about 2.5% per annum, or about half as fast as in the developing world generally. Three countries (Chad, Senegal and Upper Volta) may have had growth as low as 1% per annum over the post-independence decade. Per capita GDP for the region as a whole was stagnant or declined during these years.
3. The poor growth performance is explained (a) by the region's well-known and formidable economic handicaps - among them a relatively poor resource endowment, large size and high transport costs, lack of economic, social and organizational infrastructure, (b) by factors related to post-independence adjustments, and (c) by inadequate attention to rural development and bad agricultural price policies.
4. The economic effects of the drought can be defined and categorized in various ways: "reversible" and "irreversible" effects; effects involving losses of income and those which impair capital stock; "tangible" and "intangible" effects. "Irreversible" effects are of three main kinds: loss of human life; permanent physiological damage to the affected population, particularly children; irreparable ecological transformations such as destruction of topsoil and permanent yielding of vegetation to sand.
5. The "irreversible" effects are the most important from the human and ecological point of view. However, very little hard information is available on the incidence of these effects, or their approximate magnitude. Food aid, the effectiveness of the domestic and international relief effort, the ability of the most severely affected groups to move to accessible locations, and the relative brevity of the period of acute food shortage, probably moderated the drought's effects on human mortality and its potential physiological damage to children.

6. The "intangible" effects were both negative and positive. The most important negative intangible is the human suffering and unhappiness caused by frustrated productive effort, scarcity of food, and persistent uncertainty about the future. For hundreds of thousands, there was forced movement into strange and often uncongenial surroundings - camps, towns, distant countries. In addition, the drought created various stresses of a somewhat different kind. Migration of Malians into Upper Volta generated conflicts over rights and obligations of the people and governments in the area. This was a major factor in the December 1974 border incidents which have resulted in Mali-Upper Volta hostility, reductions in mutual economic relations, increasing military expenditures and new tensions. Also, the drought entailed scarcities of commodities necessary for survival, sharp price rises, differential pricing arrangements, opportunities for windfall profits and smuggling. Many traders naturally capitalized on such opportunities. This exposed the private distribution system to attack by governments and to the frequent imposition of new systems of state control or activity in the distribution sector.

7. The drought reduced capital assets in two forms: animals and trees. The main capital loss was the reduction of livestock herds. Recent estimates place cattle losses through death and premature sales and slaughter at about one-third of the total Sahel herd. This is somewhat less than the 50% loss which was originally feared. Losses were lowest in the Upper Volta (15%) and Senegal (25%). Also, over 10% of the gum arabic-yielding *Acacia* trees are said to have been destroyed.

8. Agricultural output between 1970 and 1974 was in almost every country and every crop lower than in the mid-sixties. In 1972/73 and 1973/74, the worst drought years, the effects were disastrous, not only on food crops but on export crops also. Niger was worst hit: cotton production fell to almost nothing in 1973/74 and groundnuts to one-quarter of the production level of the late 1960's. Senegal's groundnut output was down to two-thirds its recent "normal" level, Mali's was down about 20%, Chad's about 25%. Between 1972 and 1973 aggregate agricultural output fell by 13% in Mauritania, 16% in Upper Volta, 20% in Senegal, 21% in Mali. Production in 1973/74 was no greater than in 1973 in most of the countries; in Mauritania it was much less (only one-quarter of normal production).

9. Export volumes of agricultural commodities fell, though not so much as anticipated, and not in all cases. This is partly because export crops are frequently grown in wetter, less vulnerable regions. This is the case with cotton; cotton export volumes remained roughly constant in Chad and Upper Volta, increased in Senegal and did not fall until 1974 in Mali. Groundnut exports in 1973, on the other hand, were half their level of the late sixties in Niger, and sharply down also in Senegal.

10. Government revenues declined in absolute terms only in Chad. In Mauritania and Senegal, receipts have increased at a faster rate than in the 1960's. In the other states, revenue behavior has been about the same as in the recent past. High prices for commodity exports, the growth of non-agricultural sectors - particularly mining - and aid-related construction activity are the main explanations for this relatively good revenue performance. The main revenue loss from drought was the suspension of cattle tax, but this was balanced by a compensatory aid grant from the European Development Fund.

11. The drought appears to have had relatively few direct expenditure-raising effects, though obscurities in the budget and the existence of many non-budget channels of expenditure make this conclusion tentative.
12. The balance of payments effect of the drought was expected to be devastating. Senegal, Mali and Chad did in fact experience serious deterioration in their external balances in 1973, to which the drought contributed via reduced export volumes and increased need for food imports. But factors other than drought were at work also - e.g. in Senegal, repayment of capital, and in Mali large budget deficits and rice imports. Mauritania, Niger and Upper Volta retained relative balance in their payments position, for three main reasons. (a) Export earnings held up, partly because groundnut and cotton price rises compensated for reductions in volume, and partly because mineral exports (uranium concentrates in Niger, iron ore in Mauritania) provided a source of both stability and growth; (b) foreign aid inflows doubled between 1972 and 1973, to approximately \$300 million, much of it food aid; (c) worker remittances grew substantially, and were especially significant in Upper Volta and Mali.
13. World-wide price inflation, which came on the heels of the drought, raised new dangers to Sahel economies, dangers in some ways more ominous in economic terms than those of the drought. The balance of payments threat, which looked potentially crippling at the end of 1973, proved manageable in most of the Sahel countries, for three main reasons. (a) The Sahel's poverty shielded it from some of the consequences of oil price rises. Except in Senegal, per capita energy consumption in the Sahel is very close to the lowest in the world. While crude oil and petroleum product imports thus approximately doubled in 1974 in most Sahel countries, as a proportion of total imports, oil imports remained relatively low. Between 1973 and 1974, oil imports grew from 6% of total imports to 11% in Mauritania (half of it consumed by the mining industry); from 6% to 13% in Senegal and from 9% to 11% in Upper Volta. (b) External aid donors continued their support at the same high level that prevailed in 1973. Food aid played an obviously critical role, because of the importance of food imports in total imports: 25% in 1972, 34% in 1973 and 22% in 1974 in Senegal; 22% in 1972 and 34% in 1973 in Mauritania; 26% in 1972, 49% in 1973 and 59% in 1974 in Mali. (c) As noted for 1973, the terms of trade were favorable for the Sahel; groundnut products, phosphates, uranium showed great buoyancy in 1974 and cotton - though lower than in 1973 - was still well above its average level of the 1960's.
14. Senegal had the most spectacular balance of payments performance in 1974. From the largest deficit in its history in 1973, it moved into a (probable) surplus position in 1974, largely because of the five-fold increase of phosphate prices and the near-tripling of groundnut prices, as well as the growth of tourist receipts and remittances. On the other side, Mali found itself in the worst balance of payments position in the Sahel, matching its position as the state with the largest budget deficit. Its debt to the French Treasury, in the Operations Account, grew by 16 billion Malian Francs (about \$70 million) in 1974, raising the cumulative total to 55 billion MF (approximately \$240 million). In 1974 most of the other part of Mali's external debt (amounting to some \$280 million) was rescheduled or possibly dropped. Mali's 1974 budget deficit was 25% of its total budget expenditures.

15. No easy explanation can be found for Mali's status as the sick man of the Sahel. Local observers stress employment policy - the hiring of all high school and university graduates. But other countries (e.g. Upper Volta) have apparent rates of increase of public payrolls as big as Mali's, without the same fiscal consequences. Probably more relevant factors are: Mali's lack of a stabilizing mining industry; the Malian penchant for rice consumption not matched by local production; a possibly greater leadership unwillingness (as compared to other Sahel states) to take political risks; the continuing willingness of the French Government to finance budget and payments deficits of growing magnitude; a larger than average state sector subjected to dubious price policies and marketing arrangements.

16. The world inflation, combined with drought, led to internal price increases at rates unknown at least since the 1940's. Between 1971 and 1974, urban food prices rose by some 50% in Mali and Niger, and by about one third in Senegal and Upper Volta. General price levels, at least as indicated by existing price indices, rose less sharply. Prices paid to producers of cotton and groundnuts generally rose only slightly between 1970 and 1974, then shot up, frequently by 50% or more (cotton in Mali and Niger, groundnuts in Mali, Niger and Senegal). Wage rates - the statutory minima (or SMIG) - rose by more than 100% between 1972 and the end of 1974 in Mali, Mauritania and Senegal, and by 60% in Niger and Upper Volta.

17. Inflation has reduced the effectiveness of public sector operations. The real cost of government activities has risen more than government revenues in general, and much more than allocations to maintenance and other non-personnel items.

18. The costs of development-related inputs have risen very appreciably - fuel costs, power, fertilizers, transport costs, imported equipment, etc. A general construction cost index in Senegal reveals a 60% increase between June 1973 and November 1974.

19. Sahel governments have always regulated the local prices of basic foods. In 1973 and 1974 they felt compelled to devote extremely large amounts of money to subsidies, particularly for cereals and sugar, in an effort to protect consumers from the rises occurring on world markets. The amounts involved were quite staggering, by Sahel standards: at least 500 million ouguiyas in Mauritania (18% of the current budget expenditures in 1973), twenty billion Malian Francs in Mali for rice and sugar subsidies in 1974 (an amount equal to three-quarters of locally-raised budget revenues in that year). In Senegal, between October 1973 and November 1974, subsidies on rice, sugar and cooking oil amounted to about 12 billion CFA francs - equivalent to one-quarter of the Senegalese recurrent budget. These costly subsidy policies had profoundly negative effects: transfer of resources from potential developmental use to current consumption; redistribution of income from export crop growers to largely urban consumers, with consequently negative incentive effects on production as well as dubious equity implications; stimulation of smuggling; stimulation of consumption; and stimulation of consumption of imported grains (rice) as against local sorghum and millet.

20. The social and economic incidence of drought and inflation has varied. The most northern and "Sahelian" countries (Mauritania, Mali, Niger) were hit hardest by drought; the more "Sudanese" countries (Upper Volta and Senegal) were less sorely affected. Rural people suffered much more than urban, and within rural society cattle raisers suffered greater losses than sedentary farmers - mainly because their capital stock was diminished as well as their income. Among cattle-raising people, Tuaregs and Maures suffered greater damage than Fulani, who are more mobile. Except in Mali and Upper Volta, farmer incomes throughout the 1970's were well below their 1967-69 level, even in money terms. Wage earners did better, at least until 1974, though their real income also fell in the 1970's. Unskilled workers have in general done much better than skilled and educated workers; the latter have experienced especially severe declines in real income in the 1970's.

21. By abruptly raising the level of cost of development-related inputs, inflation has had obviously negative effects on the prospects of the Sahel by diminishing the real value of aid inflows measured in current prices. In order to improve the welfare of Sahel people, and increase the region's development prospects as well as its capacity to withstand future disasters, the real volume of aid will have to be maintained or expanded, but this means much higher amounts of assistance in current prices. This disadvantage is not compensated by the other general effect of inflation - reduction of the real burden of debt - since these countries are not heavy borrowers, except Senegal and Mali, and much of Mali's debt is presumably written off now anyway.

22. The "intangible" negative effects of drought and inflation (inter-state conflict, attacks on the marketing system, and lagging efficiency in public sector operations because of declining real expenditure on non-salary items) are balanced by a number of positive intangible effects. The drought forced the Sahel states together in order to coordinate relief discussion, aid needs and regional programs. It signalled the need for closer world attention to the pressing human and ecological problems of the Sahel. It brought a wider external awareness of the Sahel countries, which translated into more contact and greater and more varied forms of assistance. Time has been gained to deal with the fundamental problems of livestock development, notably the divergence between private and social benefits and costs in traditional herding: animals are privately owned, grazing land communally owned, so herders have no private interest to restrict herd size. The Sahel now has a brief breathing spell in which to deal with this basic problem. The drought and inflation, finally, have given new urgency and awareness of the critical need for agricultural development and new emphasis on the importance of price policy. These intangible effects can be of the greatest significance for the long-term economic future of the Sahel.

CHAPTER I. INTRODUCTION

This report has two central purposes. First, it tries to tell what has happened to the economies of the Sahel during the past few years. These have been extraordinarily eventful years for the Sahel countries. The over-riding event, of course, has been the bad weather. Since the late 1960's the region has been the victim of successive years of abnormally dry weather, and some years of severe drought. And since 1972 the Sahel has been caught up in the traumatic changes occurring in the world economy, notably increases in price levels at rates without parallel in the past.

The world community responded in a massive way to the human and economic needs created by the drought in the Sahel. But donors involved in this effort - in AID and other donor agencies or international organizations - as well as other interested parties, have not really known how these extraordinary changes are affecting the economies of the region, even at the most superficial levels. There are plenty of data around. But most of it is terribly soft, and very little of it is recent. Moreover, even where there is relatively abundant (and even relatively recent) information - as for example in the reports of the World Bank and the International Monetary Fund - these are on a country basis. There exists no reasonably comprehensive economic survey of the Sahel region as a whole.

So the first objective is straightforward: to see how bad weather and rising prices have affected the economies of the region in their conventional dimensions - production, budgets, balance of payments, income distribution, etc. Because of the recency of the events in question, much of what is written - in the literature of unpublished reports (such as those of the IBRD) as well as in the very thin published literature - is speculative in nature. There is for example much discussion of how the drought might be expected to affect cash crop production, or government budgets, or the balance of payments. But until very recently there haven't been many relevant numbers to look at, that is, data for the years 1973 and 1974, which could indicate what actually did happen. In this report we bring together such data as could be found in official reports, in the published literature, and in the field, as of March 1975.

This kind of information should be useful in several respects. It will allow AID to better assess the results of its own past efforts in the Sahel, and those of other donors and local authorities. It will put project and program formulation in broader perspective, which is important as donor and local attention (hopefully) shifts from relief to development. And by giving a more detailed view of recent economic performance and policies in the Sahel, it should allow a better general understanding of the overall economic problems of the region. This should be of use not only to AID and other donors, but to all those concerned with the Sahel.

The second objective of the report is to make available a base line study - to bring together in one place, and in a reasonably homogeneous form, a large body of basic data on recent economic developments in the Sahel countries. An interested and reasonably energetic observer can come up with a great deal of information about the Sahel economies - their structure, the behavior of government expenditures, trends in the balance of payments, and so on - if he has access to the unpublished literature in Washington and Paris. But those without such access can find little. And even in the unpublished literature there is not much data that is well-processed and put in some historical perspective. The IBRD and the IMF, whose reports made available much data for these countries, are - with one or two exceptions - unhistorical. Data series are pushed back a few years, but rarely more. So if one wants to know how marketed groundnut production changed in the past decade, or how producer prices have behaved, it is necessary to search through two or three reports - or to look elsewhere.

Moreover, the comparison of successive reports, even those done by the skilled and serious professionals responsible for Bank and Fund reports, normally reveals a bewildering set of inconsistencies. Where two successive IBRD country reports present data for overlapping years, for example, there are almost always difficult-to-explain inconsistencies, even in the most pedestrian of items - imports, for example. This isn't surprising. These reports are usually done by different individuals who examine new and different sources, and whose specific interests and needs differ. Bank and Fund reports, moreover, are not generally intended to be scholarly documents, even if the staff had time to lavish on them.

There are, moreover, frequent and large inconsistencies among the major sources of Sahel data. There exist two important sources other than the country reports of the IBRD and the IMF. One is the Bulletin of the Central Bank of West

Africa (BCEAO) and of Central Africa (BCAC). These are published monthly, are very carefully put together and rich in information. The other source is the Direction de l'Aide au Developpement of the French Ministry of Co-operation. The study units in this agency produce periodic reports and studies of great value: Dossiers d'Informations Economiques on individual countries; conjunctural studies on individual countries, occasional special studies of various sorts, ranging from long and detailed analyses of rural development problems in Senegal or assessments of national income accounts over time, to brief analytic notes on the impact of oil price rises on the Francophone African countries.

Comparison of the data in these three sources is very commonly exceedingly frustrating. Because the underlying data are so bad, and because each source uses different (and usually unspecified) definitions, there are almost invariably large differences in their figures. Attempts to link an IMF series, for example, to one contained in a Dossiers d'Informations Economiques frequently proves impossible.

We have made considerable efforts in this report to confront the different sources. We've sought to make them consistent, and to synthesize them in a set of basic country tables. These are contained in Annex B. But we had neither time nor resources to carry out this task as fully or as satisfactorily as would be desirable. We did not do what should be done at some stage: fully and systematically appraise the existing series of economic data for these countries, document clearly and fully the sources of differences in these series, and show how reconciliations are made or what the alternative estimates look like where they are irreconcilable.

Despite the imperfections and the gaps, which are considerable, the report should meet the real need for an easily accessible compilation of basic statistical information on the Sahel economies. It can and should be improved in the future. Meanwhile its statistical annexes can serve as a set of economic indicators useful to aid practitioners, to students of Sahel affairs, and to Sahel officials.

Because there are so many numbers in this report, a special word of caution is necessary. The apparent abundance of available data might mislead the unwary. These data are very weak. Whenever one leans on them they tend to give way, revealing an underlying lack of substance or reality. Apparently invented

estimates, vast differences in official estimates, generalized uncertainty of definition - all of these lead to common margins of error of 20-25% and frequently more. The different estimates of rates of growth of national output, given in Chapter I, are good illustrations, as are the different and overlapping estimates of Mali's balance of payments, given in Table VII, Annex B.

None of this should be surprising. Not only are statistical units small and poorly financed in the Sahel, but the difficulties of generating acceptable data are immense. Everything related to external trade - merchandise exports and imports, remittances, the balance of payments as a whole - is necessarily part fantasy, since so much of total trade and total intra-regional economic relationships takes place unrecorded. The vital data on agricultural production, marketing, size of livestock herds are all spun from a thin web of skilled (and sometimes not so skilled) guesswork. It's the same with most other data. Figures on wages actually paid, or actual earnings, are very sparse; we rely mainly on wage rates, and then only on legal or bargained minima. Consumer price series, where they exist, usually contain "official" or controlled prices, not actuals in the market. Sometimes it's not clear what prices are included.

Many people have contributed to this report. Mahmoud Diallo was part of the Survey Team and assisted throughout. Annette Pinckney of AID/Washington accompanied us in Niger and Mali and helped in Washington also. Robert Pogson and Charles Steadman of the University of Michigan gathered documents in Washington, and generally helped on the bibliographical side; Mr. Pogson also worked on the drafting of the report. Peter Block, Brendan Horton and Michael Lopez of the University of Dakar and the University of Michigan helped on the Senegal data. Jay Smith of the University of Ouagadougou and the University of Michigan worked on the Upper Volta. Laurie Effron of the University of Abidjan and the University of Michigan provided some comparative information on the Ivory Coast. Angela Penrose assisted with Niger data. Biddy Martin served in many valuable roles - as secretary, research assistant, bibliographer, administrator, general overseer of what became a fairly complex operation. Sylvia Coury did an extraordinary typing job, under trying conditions.

Those who helped in the Sahel countries are too numerous to list here. In every country we visited, busy local officials and AID representatives gave us invaluable guidance and help. Since we could spend only a short time in each country, we couldn't have functioned without their co-operation. We hope the report will prove to be of some use to them.

CHAPTER II. THE CHARACTER AND PERFORMANCE OF THE SAHEL ECONOMIES

1. Some Indicators of Poverty

Recent events have dramatized the vulnerability of the Sahel countries, and brought to world attention the extent of the region's poverty.

At least five of the six Sahel countries^{1/} (Senegal is the exception) are, by virtually all indicators and definitions, among the poorest and least developed in the world. A few of the conventional measures are summarized in Table 1. The story they tell is clear enough.

They are among the world's least industrialized countries: except in Senegal and Niger, manufacturing was less than 6% of GDP in the middle and late 1960's, as compared with an average of 14% in the 82 LDC's for whom data are given in Annex A, Table (i). Life expectancy in 1966 was less than 40 years in all six of the countries, as against an LDC average of 48; in this, as in almost all the measures available, the Sahel countries rank in the lowest 25 among the LDC's. Their infant survival rates are in the neighbourhood of 800 per 1,000; the LDC average is 842. Under 10% of their populations are literate (Senegal 13%); the LDC average is 41%. Their secondary level enrolment ratios were under 4% (Senegal 9%) in the mid-sixties. They have access to extraordinarily little machine-generated energy: energy consumption per capita in 1966 was only 20 kg. of coal equivalent in Mali, less than 14 kg. in Niger, Upper Volta and Chad; the LDC average was 427 kg.

In all these respects the Sahel countries are among the dozen or so least developed of the world's countries, as the ranking indicators in Table 1 indicate. By many of the measures in the Table, there are only three or four countries which approach the Sahel in this cheerless ranking: Nepal, Yemen, Somalia and Ethiopia. It is hardly surprising that they are on everybody's list of least developed countries; the UN's list of 25 "relatively least developed" (except Senegal and Mauritania); the IBRD's list of "MSAs" - most seriously affected countries (oil crisis listing); the Rome Food Conference's list of countries having the lowest level per capita/per diem intake of calories.

^{1/} Gambia is not considered in this report despite its recent inclusion in "the Sahel" by international organizations.

Table 1. Measures of Relative Poverty and Development

		Chad	Mali	Mauri- tania	Niger	Senegal	Upper Volta	LDC ^{1/} Average
GNP per capita in 1967	(Actual	\$70	\$80	\$130	\$70	\$190	\$50	\$271
	(Rank	(75)	(70)	(54)	(75)	(43)	(81)	
Life expectancy in 1966	(Actual	31	26	40	39	37	32	48.2
	(Rank	(79)	(82)	(53)	(57)	(61)	(71)	
Infant survival per 1,000 live births	(Actual	840	877	810	800	907	818	874
	(Rank	(61)	(52)	(68)	(72)	(41)	(66)	
Agricultural labor force as percentage of economically active population	(Actual	92%	90%	89%	96%	74%	87%	62%
	(Rank	(79)	(75)	(74)	(81)	(52)	(70)	
Share of manufacturing in GDP in 1966	(Actual	5.0%	6.0%	1.4%	11.0%	13.7%	2.0%	13.56%
	(Rank	(71)	(67)	(79)	(53)	(39)	(78)	
Energy consumption per capita in 1966; kg. of coal equivalent	(Actual	12	21	53	14	145	12	427
	(Rank	(79)	(75)	(64)	(77)	(49)	(79)	
Share of non-primary products in exports in 1966	(Actual	3.0%	1.6%	0.9%	4.3%	5.6%	4.0%	13.26%
	(Rank	(60)	(64)	(70)	(51)	(45)	(54)	
Literacy	(Actual	8%	3%	3%	3%	8%	8%	41.3%
	(Rank	(71)	(80)	(80)	(80)	(71)	(71)	
Enrolment in secondary education as percentage of population aged 15-19 in 1964	(Actual	2	7	2	1	9	2	21
	(Rank	(78)	(59)	(78)	(81)	(55)	(78)	
Enrolment in higher education per 10,000 inhabitants in 1964	(Actual	2	65	11	2	75	2	208.7
	(Rank	(76)	(51)	(70)	(76)	(47)	(76)	

Source: Annex A, Table (i).
1/ 82 countries.

2. Dependence

The Sahel countries are not only extremely poor; they are also intensely dependent on conditions and forces beyond their influence, and this in a world where lessened dependence is increasingly prized.

The elements of this dependency status are many and well known. First and most basic is dependency on the weather or, more precisely, on rainfall. Production in these economies is overwhelmingly rainfed; pasturage for animals and output of staple foods depend on the amount and distribution of rainfall, and this is notoriously irregular.

Dependent on uncertain rainfall patterns to feed its people and its animals, the Sahel is constrained by its physical environment in another, more fundamental sense. Its ecological balance is terribly fragile, and less is known about it than about gentler, more densely populated, more intensively exploited regions. This makes successful adaptation more demanding, and means that ecological errors are at once more likely and more costly. There is less margin in every sense. The effects of over-grazing on plant cover are perhaps the next most commonly cited examples, but there are many others. For example, small reductions in rainfall seem to have disproportionate effects on plant growth. This derives from the rainfall-evaporative demand relationship; where the amount of rainfall is small relative to evaporative demand for water, even minor changes in rainfall tend to have magnified consequences.^{1/} A similar phenomenon has recently been noted: rainfall patterns in recent years have had a kind of multiplier character in the northern parts of the Sahel; in years of good rain these regions seem to get a far larger amount than their expected "normal", and in bad years they are much drier than "normal".^{2/}

In this sense the ecological system is extraordinarily delicate and Sahelian society is subject to uncommon hazards, many of them beyond the effective control of the people.

The more conventional forms and aspects of dependency are also to be found. (a) The Sahel countries import all their petroleum and, even before the recent years of bad weather, most of them imported significant amounts of food. In the six-year period 1965-70, food imports averaged 12% of Niger's total imports,

^{1/} Bunting, Domet, Elston and Milford: Weather and Climate in the Sahel, 1973, (Mimeographed).

^{2/} S. Bethke, Sudano-Sahelian Rainfall, FAO, 1974.

15% of Chad's, 18-21% for Mauritania, Mali and Upper Volta and 31% for Senegal. What is particularly striking about these food imports is their steady increase between 1965 and 1970: in absolute terms in all the countries, relative to total imports except in Senegal and Upper Volta.^{1/}

(b) The Sahel countries are very short of trained people, so they are dependent to an unusual degree on imported skills. Typically, more than half the secondary school teachers are foreign. The outflow of educated people is small. Mauritania, for example, had only about 180 high school graduates in 1973, and only 49 in maths and sciences. In none of the countries except Senegal do more than 500 secondary school graduates emerge each year. Skilled and managerial jobs remain expatriate-dominated.

(c) The Sahel countries are highly dependent on outside donors for public funds - in the case of Niger, Mali and Chad even for current budget support. In these latter states the budget documents occasionally show current budget surpluses. But when account is taken of public sector financial operations as a whole, deficits are the rule - deficits financed by foreign grants. This means, of course, that for Niger, Mali and Chad, all investment expenditure has had to be externally financed.

The degree of external dependence for public investment resources is somewhat less intensive in Senegal, Mauritania and Upper Volta. But here too, all development plans rely on foreign financing for the great bulk of public development expenditure.^{2/} The non-agricultural private economy also is financed as well as managed by outside capital, though not in Mali and Mauritania, where the state has taken over major industry; Mauritania's mining enterprises were nationalized in November 1974.

^{1/} EEC Statistical Office, Foreign Trade Yearbook 1969-70, Vol. I and II. Cited in UNCTAD Research Division, Selected Statistical Tables on the Six Drought-Affected African Countries (June 1973).

^{2/} In Mauritania, 90% of public investment between 1963 and 1968 was financed by external aid. In Senegal, the "adjusted" 1969-73 plan of 92 billion CFA francs was to be financed 60% by external aid; public investment in the 1973-75 plan (85 billion CFA francs) was to be two-thirds foreign aid. These are planned investments; the percentage of aid in actual expenditure is invariably much higher. In the late 1960's only about 12% of total public investment was locally-financed in Upper Volta, and in the years 1966-69 the figure was 15% for Niger. Mali's 1970-73 plan was to be financed only to the amount of 12% by local resources; the actual proportion was lower.

(d) Because of their long and uncontrolled frontiers and the old tradition of north/south movement of goods and people, the Sahel economies have limited control over trade flows. Annex A, Table (ii) gives some rough estimates of the size of unrecorded trade in recent years and of the scope of this activity.

The figures in the Table represent the roughest kind of statistical detective work; nobody really knows what their margins of error are. They argue, in any case, that smuggled imports are about 15-20% of total imports in Niger and Mali, 10-13% in Senegal and up to one-third of total imports in Upper Volta. Smuggled exports ranged from 33% to 52% of the total in Mali between 1968 and 1972, and about 20% in Niger. In Chad, recorded livestock exports are normally about 40,000 head; true exports are believed to be 200,000 head. An even greater proportion of Mauritania's livestock exports are believed to be "unofficial".^{1/} Between 15% and 20% of Senegal's total exports similarly went unrecorded into neighboring countries, until the recent rise in export values reduced the smuggler's share of the total.

Smuggling puts serious limits on the autonomy of internal economic policies. No Sahel country can have an independent price policy or an independent commercial policy; more precisely, it can have such policies only at a heavy price in terms of smuggled exports and imports.

(e) Autonomous economic policies are constrained in other ways. By virtue of membership of the Franc Zone, Senegal, Upper Volta, Niger and Chad have agreed to some explicit restrictions on their fiscal and monetary independence in return for a line of credit at the French Treasury (the Compte d'Operations) and for other benefits in trade and aid. (Mali has a similar agreement, though with fewer apparent restrictions.)

^{1/} The official estimate for 1973 is that unrecorded cattle exports from Mauritania numbered 155,000 head, while recorded exports were 24,400 head. Cattle are the largest element in unrecorded trade in the Sahel. Official 1970 customs statistics, for example, showed Malian exports of 14,700 head of cattle to Ghana. Ghana's import statistics show 24,000 head. Mali's export statistics for Ivory Coast in 1970 record 57,000 head of cattle sent to that country. Ivory Coast import figures show 118,000 head imported from Mali.

These arrangements - along with the related but not inherent overvaluation of the CFA franc - are believed in many quarters to be fundamental obstacles to economic growth and development in the Sahel.^{1/} There is certainly some cost in Franc Zone membership, and any proper assessment of these costs would have to take into account the presumably associated benefits of French money aid, French technical assistance and French support in the EEC. It would also have to take account of the basic fact that even in the absence of the restraints imposed by the Franc Zone institutional connections, the objective constraints inherent in the size, location and structure of these economies would persist. The Sahel economies are too small, too open,^{2/} too inflexible to be able to have much effective monetary and fiscal discretion.

Some of the Sahel countries have dealt directly with this matter of dependency. One of Mauritania's post-independence economic objectives was to rid itself of this overt dependency on the French budget subsidy to its current budget; by 1967 it had achieved this goal. The Franc Zone arrangements have been loosened recently, and Mali and Mauritania have withdrawn. But the ties with France remain a source of restiveness, a symbol of dependence and control.

^{1/} AID, Draft Development Assistance Program FY 1975, Central and West Africa Region Development Assistance Program, (Washington, February 1975), pp. 7-11. This discussion appears to conclude that the advantages of the Franc Zone arrangements are simply "palliatives for the deeper underlying disadvantages" of the system. See *Africa and Monetary Integration*, edited by Rodrigue Tremblay (Montreal, 1974) especially the article by Patrick and Sylvianne Guillaumont "Zone Franc et Developpement: les caractéristiques de la zone franc sont-elles désassociables?" for the view that overvaluation and Franc Zone membership are separate issues.

^{2/} Exports in 1970 were about 5% of GDP in Mali and Upper Volta, 10-12% in Niger and Chad, 22% in Senegal and 49% in Mauritania. Imports were 9% of GDP in Mali, 15-20% in Upper Volta and Niger, 24-31% in Chad, Senegal and Mauritania. These figures are surely indicative of openness, but even they understate the degree of openness, in two respects. (i) The trade figures are probably "official" trade; and (ii) about 30-40% of the GNP estimates in these areas is an imputed value for subsistence production. So taking account of unrecorded trade and calculated as a share of marketed GNP, imports and exports would be much more substantial. This means that budget deficits or expansionist monetary policies have quick effects on the balance of payments, on rates of exchange in parallel markets in neighboring countries, and on flows of illegal trade.

3. Poor Economic Performance

The Sahel economies cannot be said to have prospered during the past fifteen years.

(a) National income data in the Sahel, perhaps even more than in most less developed regions, are especially weak and irregular. Just how wide the margins of error can be is illustrated in Table 2 below, which shows different estimates of GDP growth during the 1960's. The smallest range between the highest and lowest estimate - all from quite reputable sources - is 23% for Mauritania. For Chad, the highest estimate is 10 times the lowest, for Mali thirteen times, and for Upper Volta six times. All of which is a good reminder of the softness of the data - especially the aggregates - which are so readily used in analyzing these economies.

Table 2. Estimations of Real GDP Growth 1960-1970
(Average Annual Rate of Growth)

	<u>SOEC</u>	<u>SIEC</u>	<u>UN</u>	<u>OECD</u>	<u>IBRD</u>	<u>UNCTAD</u>	<u>OTHER</u>
Chad	2.1	2.2	1.2	1.5	1.4 ^{1/} 2.2 ^{2/}	0.5	5.5 ^{2/}
Mali	3.0	2.5	0.5	2.8	6.6	5.2	
Mauritania	7.4	8.0	7.7	7.3	6.5	6.9	
Niger	2.4	2.0	4.7	2.0	0.9	2.4	
Senegal	1.6	1.6	1.3	2.0	2.1	1.0	
Upper Volta	3.9	3.3	3.0	2.0	1.5	0.7	

1/ Two different Bank estimates.

2/ Planning Ministry estimate.

SOEC: Secteur des Etudes Socio-Economiques de Synthèse (Bureau des Programmes, Direction de l'Aide au Développement, Ministère de la Coopération, Paris.)

SIEC: Secteur Information Economique et Conjuncture (Bureau des Programmes, Direction de l'Aide au Développement, Ministère de la Coopération, Paris.)

UN: United Nations, N.Y.

OECD: Organization for Economic Cooperation and Development (Development Assistance Committee.)

IBRD: World Bank.

UNCTAD: United Nations Commission for Trade and Development (UNCTAD).

Source: République Française, Ministère de la Coopération, Economie, Emploi et Formation: Evolution et Perspectives pour 14 Etats Africains et Malgache, I, Evolution du P.I.B. 1950-1970, Perspectives 1970-1990, Direction de l'Aide au Développement, Bureau des Programmes - Secteur Synthèse, Sept. 1974.

Table 3. Per Capita GNP, Population and Growth Rates of Real Product

Country	Per Capita GNP in 1970 (US Dollars)	Average annual growth rates of per capita real product (per cent)			Population (millions) 1970	Average annual growth rates of population (%) 1963-70	Average annual growth rates of total real product (per cent)		
		1960-71	1968-71	1970-72			1960-70	1968-71	1970-72
Chad	70	0.2	0.4	1.2	3.64	2.5	0.5	1.0	2.7
Mali	100	2.5	2.4	1.6	5.05	2.1	5.2	5.0	3.3
Mauritania	154	3.2	1.7	2.4	2.17	2.2	6.9	3.8	5.4
Niger	82	0.9	-0.9	-1.8	4.02	2.7	2.4	-2.4	-5.0
Senegal	178	0.4	-1.6	0.4	3.93	2.4	1.0	-3.8	1.0
Upper Volta	60	0.3	1.4	1.0	5.38	2.1	0.7	2.9	2.1
Total of above	98	1.3	0.4	0.6	23.19	2.3	2.3	0.1	1.4
Total developing countries	211	2.4	3.2	2.6	1,674.03	2.7	5.1	6.0	5.4

Source: UNCTAD Secretariat, adapted from Selected Statistical Tables on the Six Drought-Affected African Countries, June 1973.

In any event, the general thrust of the aggregate data is clear: the 1960's (and the early 1970's as well) were years of economic stagnation or regression for the region as a whole. The data are conveniently summarized in Table 3 compiled by UNCTAD. The Table shows only Mauritania and Mali with significant growth rates during these years. In the Mauritanian case there is no reason to question the figures: as Table 2 shows, all estimators agree that output grew at a rate of between 6.5 and 8% per annum. Mauritania's performance rests on iron ore: the growth of this new and important industry explains that country's strong showing in aggregate terms. There were other elements at work: Mauritania's cattle benefitted from rinderpest campaigns and other sanitary and developmental efforts during the 1960's, and this raised herders' incomes, assets and welfare. But most of Mauritania's economic expansion of the 1960's occurred in a tiny segment of the economy - in terms of people affected or demand for other local inputs. The 7-8% increase in output was not translated into anything like a corresponding increase in the income or welfare of the mass of Mauritanian people.^{1/}

The relatively high GNP growth figure for Mali which is in Table 2 is puzzling, since it conflicts so obviously with micro level observations suggesting very poor performance. The UNCTAD data undoubtedly call for special reserve in this case. It can indeed be seen in Table 2 that the UNCTAD estimate of Mali's GNP growth is in fact much higher than most other estimates.

It is evident that the six Sahel countries as a group had much slower growth in gross output and income than did developing countries as a whole: in 1960-70, total Sahel GNP grew at 2-2.5%, while LDC's generally had a 5% rate of increase.^{2/} After 1968 the region's performance worsened, in terms both of rates of increase of output and relative to other LDC's. In per capita terms, growth from 1960-70 was probably negative in Chad, Senegal and Niger, and probably for the region as a whole as well.

^{1/} As can be seen in Table (i), Annex A, based on its structural characteristics, the "expected" 1967 GNP in Mauritania is about \$40 per capita, rather than its actual GNP that year of \$130.

^{2/} If the "best" estimates for 1960-70 are used (i.e. those of SOEC) the average annual rate of GDP increase for the Sahel is 3.4%.

(b) The impression of stagnation or slow growth is reinforced by less aggregative indicators. Figures on agricultural production, marketing and export are shown in Table 4 below (production), in Table (iii) of Annex A, and in Tables I and III of Annex B. The tables bring out a number of interesting points.

(i) The export sector is tiny, except in Mauritania and Senegal. It was less than 30 million a year in 1970 in the other Sahel countries. Because much trade is "unofficial" the true values of exports are much larger, but still small by LDC standards.

(ii) There was a little buoyancy in main cash crop production in the sixties: groundnut exports grew by 7% per annum in Niger between 1963 and 1970 and by 35% per annum in Upper Volta; cotton exports expanded by some 8% a year in Mali and more rapidly in the Upper Volta. But those are the only positive elements in the export picture of the 1960's. Groundnut exports fell by 8% in Mali and by 13% in Senegal between 1963 and 1970. In 1970 exports per capita remained very small.

(iii) From the mid-sixties on, marked agricultural stagnation and decline is the rule. Production figures for established crops almost never reach their mid-sixties levels until - perhaps - 1974/5. The data in Table 4 are striking in this respect.

(iv) Marketed production and export behaved even more poorly. In Niger, for example, 1966 was the peak year for recorded groundnut marketings; even in years of good rainfall marketed production never came close to the 190,000 tons of that year. In Senegal, 1961 to 1965 represented the peak for marketed groundnuts; in those years 750,000 to 900,000 tons were general. After 1966, 600,000 to 800,000 tons was more common.

(See Table 17 and Annex B, Table I.)

(c) Slow growth is evident too in available estimates of money incomes of the two main groups in the money economy - growers of cash crops and wage earners. Table 4 shows a common pattern everywhere in the Sahel.

(i) Producer prices for cotton were highly stable throughout the 1960's. In Chad, cotton prices for the producer were unchanged for 14 years. In Mali, cotton prices rose once in eight years - by 18% in 1966. Cotton prices actually fell in Niger by some 15% between the early and late sixties, and they fell also in Upper Volta.

Table 4. Agricultural Production, Principal Crops, 1966/67 - 1974/75
(1,000 tons)

	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	Forecast 1974/75
CEREALS:									
<u>Millet + Sorghum</u>									
Chad	674	711	700	651	610	631	590	-	-
Mali	738	830	556	700	715	715	474 ^{2/}	530 ^{2/}	910
Mauritania	90	110	50	110	81	80	50	25 ^{3/}	-
Niger	1,120	1,350	948	1,384	1,100	1,230 ^{4/}	1,130	780	1,134
Senegal	423	655	450	635	401	583	323	467	650
Upper Volta	-	860	925	830	770	772	769	1,138	900
<u>Corn</u>									
Senegal	42	67	35	49	39	39	20	20	30
Upper Volta	-	64	66	69	72	66	2	-	-
<u>Rice</u>									
Chad	37	32	35	37	39	51	25 ^{1/}	30 ^{2/}	35
Mali	-	103	80	96	98	117	60 ^{2/}	48 ^{2/}	120
Niger	20	33	39	38	37	27	32	23	28
Senegal	125	138	58	156	91	108	37	50	90
Upper Volta	-	28	29	31	36	37	29	-	-
CASH CROPS:									
<u>Cotton</u>									
Chad	123	102	149	117	95	109	104 ^{2/}	115 ^{2/}	121
Mali	-	39	50	51	59	74	72 ^{2/}	58 ^{2/}	67
Niger	7	6	7	11	10	8	5	1	11
Senegal	1	4	10	12	12	21	23	34	-
Upper Volta	-	-	32	36	24	28	33	27	29
<u>Groundnuts (unshelled)</u>									
Chad	125	88	99	115	96	75	75	76 ^{5/}	80
Mali	159	119	96	136	158	152	134	120 ^{2/7/}	145
Niger	202	209	177	207	144	171	140 ^{5/}	50	84
Senegal	857	1,005	830	789	582 ^{8/}	988	570	643 ^{2/}	989
Upper Volta	-	73	75	75	78 ^{8/}	66	67	63 ^{2/}	-

Table 4 (continued)

Sources: Chad: BAN; Authorities.

Mali: D.I. 1972-73; Authorities; B 1975.

Mauritania: Annuaire Statistique 1972, RIM; ECA Yearbook; B 1975; Authorities.

Niger: BCEAO 1975; A 1974; D.I. 1972-73; Authorities.

Senegal: 1960/61 to 1968/69, A 1974; 1969/70 to 1972/73, Situation Economique du Sénégal 1973, p. 24; 1973/74, B 1975, p. 67; 1974/75, MDM, Senegal.

- 1/ Source: ECA for earlier years; for 1972/73, 1973/74 and 1974/75, untitled and undated document presented to the "Secrétariat Technique" of an unspecified organization (probably CILSS), p. 4.
- 2/ Preliminary.
- 3/ Includes 3,000-4,000 tons of maize.
- 4/ Earlier figures, A 1974; 1972/73 to 1974/75, MER, Situation de l'Agriculture Nigérienne après la Sécheresse, Niamey, 1975.
- 5/ Earlier figures, Dossier d'Information, Niger 1971/72, October 1973; 1972/73 to 1974/75, Nigerian authorities.
- 6/ Earlier figures, BEAC reports; 1972/73 to 1974/75, Chadian authorities.
- 7/ Earlier figures, Dossiers d'Information; 1972/73, Mali, March 1974; after, Malian authorities.
- 8/ 1970/71 to 1973/74, Upper Volta authorities (Direction du Plan, Aperçu sur la Situation de l'Agriculture 1967/68-1972/73).
- 9/ Estimated.

Table 5. Indices of Producer Prices and Producer Revenues,
Principal Crops, 1961-1974

			1963/64	1964/65	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75 ^{1/}
<u>Chad</u>	Cotton:	P ^{2/}	100	100	100	100	100	100	108	112	119	165
		R ^{3/}	108	104	108	156	120	96	116	112	124	164
1960/1 - 1964/5 = 100												
<u>Mali</u>	Cotton:	P	100	-	118	118	132	147	147	147	147	221
		R	120	133	133	213	253	360	453	440	267	613
	1961/2 - 1964/5 = 100											
	Groundnuts	P	102	95	175	244	218	218	218	218	218	291
		R	122	67	78	122	189	244	200	167	144	289
	Rice:	P	126	109	157	157	217	217	217	217	217	348
R		145	109	255	73	218	182	255	182	218	727	
<u>Niger</u>	Groundnuts:	P	-	100	78	78	78	87	91	104	122	239
		R	-	100	135	124	120	107	126	108	29	135
1964/5 = 100												
1964/5 = 100	Cotton:	P	-	100	87	87	87	91	92	98	98	144
		R	-	100	80	90	135	129	113	75	19	234
<u>Senegal</u>	Groundnuts:	P	95	95	95	95	95	102	122	122	134	218
		R	107	98	91	68	66	54	107	66	78	n.a.
1961/2 - 1964/5 = 100												
1968/9 = 100	Cotton:	P	-	-	-	100	117	117	96	105	115	146
		R	-	-	-	100	178	183	287	335	487	n.a.
<u>Upper Volta</u>	Cotton:	P	100	100	100	94	94	94	94	94	103	118
		R	750	750	150	250	275	175	200	250	200	300
1961/2 - 1964/5 = 100												
1964/5 = 100	Groundnuts:	P	-	100	96	95	84	92	92	96	94	121
		R	-	100	161	158	111	155	155	258	281	374

Source: Table I, Annex B.

1/ Forecast.

2/ Producer price.

3/ Producer revenue.

- (ii) Prices paid to groundnut producers fell in Niger and Mali between the early and mid-sixties. In Niger they briefly rose, but at the end of the decade were still below their level of the early sixties. The same producer price prevailed in Senegal throughout the decade.
- (iii) Since marketed output was nowhere rising very fast, producer incomes were stagnant in money terms and declining in real terms as prices of consumer goods rose through the decade - typically by approximately 50-60% except in Mali, where the rise was much greater. Thus the real incomes received by Chad cotton growers as a group in 1968-70 were about the same as in 1960-61. The real return to a unit of labor in cotton production probably fell by 50-60% over the decade. In Senegal the total income distributed to groundnut growers fell by about one third over the decade; and the real return to labor inputs in groundnuts had fallen by more. In Niger money return to groundnut growers and to cotton growers declined, and real returns declined much more. The only exception to this pattern seems to be cotton growers in Mali.

Wage earners fared a little better in the 1960's, but not much better. After substantial gains in real wages during the 1950's, the 1960's were a period of wage freeze; average earnings rose in both private and public sectors, as workers moved along scales. But wage rates were virtually unchanged for most of the decade in most Sahel countries. Table 5 gives levels and changes in the legal minimum wage since 1960. On the reasonable assumption of consumer price increases of about 4% per annum, then real wages for unskilled workers (or, what may not be the same thing, real returns for a unit of unskilled labor) fell steadily, and generally deeply, through most of the decade.^{1/}

^{1/} Thus in Chad, wage rates (SMIG) rose 20% between 1960 and 1970, while the only available price index (for European consumers) shows a rise of 37% during this period. In Mauritania, the SMIG rise was 15% between 1963 and 1970, while the European price index rose 28%. In Mali the SMIG was unchanged between 1960 and 1970, while consumer prices rose by 66% between 1966 and 1970 alone. In Niger, the SMIG rose by 3% between 1960 and 1969 (then it rose another 8% in 1970) while consumer prices are estimated to have risen by 4% per annum. Senegal's 1969 SMIG was 27% above the 1960 level, while the African consumer price index was up 20%, and the food price index was up nearly 30%. In Upper Volta, wages in 1969 were 2% above their 1960 level, while consumer prices were up 5%, in the official index.

Table 6. The Evolution of Legal Urban Minimum Wage Rates (SMIG) 1960-1975
(CFA francs per hour)

	Chad	Mali	Mauritania	Niger	Senegal	Upper Volta
1960	15	16	-	27	40	29
1961	15	16	-	27	41	29
1962	15	16	-	27	44	29
1963	15	16	35	27	44	29
1964	22	16	35	27	44	29
1965	22	16	35	27	44	29
1966	22	16	35	27	44	29
1967	22	16	35	27	44	29
1968	22	16	35	27	47	29
1969	22	16	41	28	51	30
1970	26	16	41	30	51	31
1971	30	16	41	30	51	31
1972	30	16	41	30	51	31
1973	30	22	41	30	54	34
1974	30	31	48	42	73	42
1975*	n.a.	35	84	48	107	47

Source: Annex B, Table VIII.

*January.

Even greater stability of rates characterized money wages in the civil service, which employs between one-third and one-half of those in wage employment. Rates of established fonctionnaires remained virtually unchanged between 1960 and 1973, though some earnings improvements took place as civil servants received regular salary increments. Except for the small minority of civil servants at the top of the scales, however, these incremental increases were at a rate much lower than that of price increases.

4. Reasons for Poor Economic Performance

It is not hard to explain or find reasons for the general stagnation or decline in real output and income during the Sahel's post-independence decade.

(a) There is first of all the long list of general obstacles to economic expansion in this region: poor resource endowments, including the quality of agricultural land; extremely small numbers of educated people; severely limited organizational and economic decision-making capacities; limited knowledge of the environment, particularly its agricultural potential, i.e. little in the way of field research, work on locally-suitable seed varieties, experiments with fertilizers and irrigation, etc., extremely unfavorable physical location (700 to 1,500 miles from seaports), with consequently enormously high transport costs.

(b) There were, in addition, a number of problems particular to each country. Senegal, after 1960, had to confront a "Vienna problem": its administrative and economic infrastructure, swollen as a result of Dakar's position as capital of the colonial French West African Federation, had to accommodate to its much smaller economic and political hinterland. In Mauritania a new State had to be created in a physical sense: Nouakchott was raised from the sands. Mali paid a heavy economic price for its revolutionary experiment, and the post-revolution adjustment has proved long and difficult. In Chad, civil disturbances, later civil war preoccupied the government and burdened its budget. The Upper Volta, until 1966, experienced particularly notable economic mismanagement.

(c) Several factors of a general type were also at work. All the Sahel countries, like those of Francophone Africa generally, had to adjust to institutional realignments in the inherited colonial situation. These ranged from slow and long-term matters such as the erection of new, more indigenized administrative structures and reforms in educational systems, to more immediate adjustment problems, such as were involved in removal of special prices and protection for African groundnuts in the French market.

(d) Finally, there was at work in the Sahel (as in many other parts of the world in the 1960's) a set of policies unfavorable to farmers and to agricultural expansion. One of the most commonly-cited of such policies is the heavy taxation of the agricultural sector in relation to the money income of farmers and herders, and in relation to public expenditure on agriculture.^{1/}

But the most fundamental deficiency was in the price policy area. Governments in the Sahel, through their various "Stabilization Funds" and marketing agencies, kept producer prices low, raised them little or not at all when world prices rose, cut them speedily - and usually deeply - when world prices fell.

The nature and magnitude of the price policy problem can be briefly illustrated with the help of Tables 7 to 9. They relate to Niger and Senegal but are typical of the other Sahel states as well.

^{1/} There is a great deal in this criticism. One cannot help feeling, however, that there is something a bit uncharitable in it. A country with a small money sector, little social or physical infrastructure, few non-agricultural resources, cannot conceivably find the means to develop and sustain even a modest administrative establishment - not to speak of the financing of development activities - without taxing the agricultural sector. Presumably the issue is one of degree. In any event, one of the important benefits of a mining industry, enclave or not, is its potential indirect protection of farmers against tax collectors.

Table 7. Price Structure, Niger, Groundnuts,
1968-1973
(CFA francs per kg.)

	1968	1969	1970	1971	1972	1973
Producer Price	18.4	17.8	20.00	21.00	24.00	28.00
Export Tax	2.25	2.25	2.25	2.25	2.25	2.25
Marketing Cost	20.72	22.48	24.30	24.00	23.83	26.00
Delivered Price, CIF	40.8	44.73	47.55	50.25	50.08	56.45
World Price, European Port	45.44	52.47	54.00	65.90	65.90	79.98
Margin to Caisse de Stabilisation	4.64	7.74	6.45	15.65	29.90	41.55

Source: République du Niger, La Situation de l'Agriculture Nigérienne après la Sécheresse (Niamey, 1975), mimeographed.

The report from which this table is taken comments as follows:

"From 1968 to 1973 the farmer received 10,000 CFAF more per harvested ton, while the margin realized by the Stabilization Fund (Caisse de Stabilisation) increased about 37,000 CFAF, or a proportion of 1 to 4. In a year of normal production the deductions taken by the Caisse de Stabilisation exceed 1.5 billion CFAF, while public expenditure coming from this source of revenue does not exceed 100 million CFAF annually. This figure (1.5 billion CFAF) is larger than that of basic agricultural investment (estimated in 1974 at 1.3 billion CFAF) or that of the total recurrent cost of the Ministry of Rural Economy and Climate (... 762 million CFAF in 1973/74) plus the investment expenditure of the National Investment Fund (100-130 million per year ...)."

Table 8 shows similar data for Senegal, for that part of the groundnut crop exported as shelled nuts. It shows farmers' gross proceeds declining sharply and steadily from the early 1960's, and, as in Niger, the government benefitting from the improved world price picture after 1969. Table 9 gives the data for groundnut production sold to mills for local refining - the bulk of Senegal's marketed output. It shows a five-fold increase in the state trading organization's profit

1/ Ibid., p. 11.

Table 8. Shelled Groundnut Prices and Proceeds, Senegal, 1962-1973

	1962/3	1963/4	1964/5	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3 ^{1/}
1. Producer Price (CFAF kg.)	21.5	21.5	21.5	21.5	20.5	17.6	17.9	18.4	21.2	23.9	25.1
2. Export Price (CFAF kg. FOB)	47.5	47.5	47.5	44.5	44.0	37.6	39.2	50.6	66.0	59.7	76.0
3. Marketed Production (thousand tons, shelled) ^{2/}	53	55	59	69	52	59	42	42	28	50	27
4. Total Proceeds (billions CFAF) of which	25	26	28	31	23	22	16	21	18.5	30	20.5
5. Farmers' Share	16.4	16.8	18	21.2	15.1	14.8	10.7	10.9	8.5	17.1	8.9
6. Government Share	4.1	4.3	4.7	2.6	1.7	1.6	1.7	6.1	7.0	8.0	8.6
7. Marketing Cost	4.8	4.9	5.2	6.9	5.9	5.7	4.0	4.0	3.0	5.0	3.0

Source: IBRD, Senegal: Tradition, Diversification and Economic Development, 1974, p. 12 (adapted).

Differences between price and proceeds in this table and in table I, Annex B, are due to different definitions - e.g. average prices vs. prix nu basule Kaolack. The differences are not significant.

^{1/} Estimate.

^{2/} Refers only to output exported in form of nuts.

between 1971/2 and 1972/3, while the price to producers rose only a little more than 20%. In fact, while ONCAD's profits were rising so fast, total payments to groundnut producers were way down, since production sold to oil mills was down by 40% between 1973/4 and 1971/2.^{1/}

Table 9. Price Structure Unshelled Groundnuts, Senegal, 1970-1973

	1971/2	1972/3	1973/4
	(in metric tons)		
Production sold to mills	750,000	380,000	429,000
	(in CFA francs per metric ton)		
Producer price	23,100	22,500	28,500 ^{1/}
Commission to cooperatives	600	600	1,000
Purchase price for ONCAD	23,700	23,100	29,500
Marketing costs	5,534	6,084	7,908
Total cost price	29,234	29,184	37,408
Average sale price to oil mills	34,235	41,896	76,000
ONCAD trading profit	5,001	12,712	38,592
	(in millions of CFA francs)		
Total cost of ONCAD purchases	21,925	11,090	-
Total ONCAD receipts	24,961	14,337	-
Total trading profit	3,036	3,247	15,300

Source: B 1975

^{1/} Includes special rebate (ristourne) of CFAF 4 per kg.

Marketing policies per se, as distinct from price policies, also contributed to lagging agricultural performance. Almost everywhere efforts were made to "rationalize" systems for buying cash crops and selling consumer goods to rural people. This almost invariably involved attempts to restrict the scope of

^{1/} Although the general trend of policy was the same in Upper Volta as in the Senegal and Niger cases, one moderating element existed there: private traders were able to purchase groundnuts at prices substantially above the officially fixed producer price. Between late 1968 and 1974 the price paid by private traders was 25-40% higher than the official price.

private traders, usually by granting monopoly or near-monopoly rights to "co-operatives". However desirable the objective of reducing exploitation by merchants, alternative marketing arrangements are invariably less efficient and more troublesome administratively, and the record - in the Sahel and elsewhere - strongly suggests that these public or semi-public trading organizations contribute in various ways to the maintenance of low producer prices and to other disincentive policies. Moreover, as is well-known, rural marketing institutions involve a good deal more than crop purchase: agricultural and consumer credit, transport services, and retail consumer goods distribution are also at stake. Replacement of private traders or restriction on their activities, if it is to be reasonably successful in economic terms, involves the creation of a workable set of complex agricultural institutions. Sahelian agricultural policy foundered on this problem in the 1960's, and it continues to be a major preoccupation today.

In a region so bereft of natural advantage and so susceptible to external neglect, it would certainly be wrong to overstress the price and marketing policy aspect of agricultural performance in the 1960's. These were however important factors, and they persist into the 1970's, in the changed context of drought and world inflation.

CHAPTER III. THE ECONOMIC IMPACT OF THE DROUGHT

1. Rainfall Patterns

If the sixties were hard for the Sahel and its people, the seventies promised to be far worse. For the basic problems were still at hand: how, with very limited resources in men and money, to overcome the formidable barriers to the Sahel's economic expansion; how to integrate and adapt the new state structures and their heterogeneous populations; and the discovery of suitable economic policies and strategies. But in addition, weather and the changing world economy dealt the Sahel some sharp blows.

The bad weather began with the drought year 1968, paused in 1969, then stretched unbroken for the years 1970 to 1973, culminating in the catastrophic droughts of 1972 and 1973.^{1/}

The general features of the drought - in terms of rainfall and river flow - are well known. Average rainfall, first of all, was very low. The extent of the rainfall deficiency is shown in Table 10 below, and in chart form in Annex A, Graphs 1 - 4. The region as a whole had only 80% of its "normal" average rainfall in 1971 and scarcely two-thirds in 1972 and 1973. These averages are bad enough, but they do not tell the full extent of the disaster. Within the Sahel region as a whole, and within individual Sahel countries, there were differences in the extent of dryness so that, while average rainfall may indicate only moderate departures from "normal", important regions may be seriously short of water. This can be seen from the figures in Table 11, which show how wide a

^{1/} The rainfall pattern was itself a factor in explaining the Sahel economies' poor economic performance in the 1960's. It was not a critical factor, however. Rains were at or above their 50-year "normals" for most of the decade, as can be seen in Graph No. 4, Annex A. The drought of 1968 was followed by very good rains in 1969. So, at least in terms of average rainfalls, the 1960's were not generally deficient. Nor is there reason to believe that the pattern of distribution of rainfall was in any way out of the ordinary - which is to say that there were undoubtedly important variations within regions, so that some parts of the Sahel may have had persistent bad rains even in the 1960's.

variation there is among the main climate bands. In 1972, for example, the Sahel as a whole received 68% of "normal" rainfall, but the northern zone (0-500 mm.) got only 42% of its "normal", while the southern zone, below the 900 mm. isohyet, received 75% of "normal".^{1/}

The usefulness of a given volume of rainfall also of course depends on its distribution over the growing season. A geographer comments as follows:^{2/}

"It can happen that two years with equal rainfall above the average give quite different yields: the one, plenty of excellent pasture, the other a dramatic shortage. This was so in 1967 and 1968, when the total rainfall at Agades was 155.3 mm. and 165.1 mm. respectively (annual mean 1921-54: 164.2 mm.). Now 1967 was a good year, whilst 1968 was a year of drought when animals died in large numbers. Whilst in 1967 the rains were well distributed, in 1968 the total was higher but the amount of useful rain was very low: 50.2 mm. fell at the end of April within 6 days. The following month, May, received only 0.5 mm. on one single day; in other words, not only were the 50.2 mm. useless, they caused premature germination and sprouting of vegetation, which could not mature properly, because of lack of rain in May. From this point we may say that drought corresponds to a shortage of useful rain preventing the normal development of vegetation."

In addition to low and unevenly distributed rainfall, which obviously threatened rainfed agriculture, the succession of dry years affected river flow, reducing the flow of the region's main rivers to record lows, and menacing river-flood agriculture as well. Table (iv) in Annex A shows that the average annual flow of the Senegal River fell to one-third its normal flow in 1972-73, the Chari to less than half and the Niger to about two-thirds. The maximum flood level in 1973-74 also fell sharply to between half and two-thirds of normal.

2. The Economic Effects

There does not seem to be any analytic literature on the economic consequences of drought, no systematic attempts to define and measure economic incidence. In one recent study there is a brief discussion of these matters.^{3/} The authors

^{1/} Table 42 below shows the extreme variations in Senegal, even in good years such as 1974.

^{2/} E. Bernus, "Drought in Niger Republic", in Savanna (Nigeria), Vol. 2 No. 2, December 1973, p. 129.

^{3/} Benjamin Wisner and Philip Mbiti, "Drought in Eastern Kenya: Nutritional Status and Farmer Activity", in G.F. White (ed.) Natural Hazards, (OUP, New York, 1974) pp. 89-90.

Table 10. Sahel-Sudano Rainfall, 1972-1974
(% of normal, by month)

	Normal	1972	1973	1974	monthly rains as % of total annual normal rains
May	100	99	52	64	5.6
June	100	96	68	70	11.2
July	100	67	75	112	22.2
August	100	63	75	91	32.2
September	100	59	58	83	19.8
October	100	80	37	n.a.	5.2

Source: Adapted from S. Bethke, Sahel-Sudano Rainfall 1974, FAO (World Food Program), October 1974, mimeod., p. 2.

Table 11. Rainfall by Climate Band in the
Sahel, June-September 1974, as % of normal
(1972 and 1973 for comparison)

Zone	Normal	1972	1973	1974	June/Sept. rains as % of total annual normal rains
0 - 500 mm. (25 stations)	100	42	57	79	90.5
500 - 900 mm. (32 stations)	100	69	65	90	88.6
900 mm. (19 stations)	100	75	82	96	81.5
<u>Total/Average</u>	<u>100</u>	<u>68</u>	<u>70</u>	<u>91</u>	<u>85.4</u>

Source: Adapted from S. Bethke, Sahel-Sudano Rainfall 1974, FAO (World Food Program), October 1974, mimeod. p. 3.

distinguish: (1) "direct monetary costs" to government, primarily for famine relief; (2) "production losses"; (3) "social costs measured by increases in nutritional problems and nutritionally related disease". This interesting effort at definition is too succinct; it has a number of ambiguities. A systematic treatment would have to consider a variety of other "social costs" besides those

related to nutrition. And the question of how relief costs should be treated is quite complicated: it depends on the marginal social benefit of non-relief expenditure, which in turn depends on how expenditure decisions are made. If, as is most likely, relief expenditures represent reallocations from other current or consumption expenditure, then they are not real costs but transfers.

It is not possible here to consider in detail the conceptual problems posed in trying to do a systematic analysis of the economics of drought. Some analytic framework is necessary, however, to give order and coherence to the discussion. We will, first of all, consider "effects" rather than "costs". This allows us to bypass many sticky conceptual issues, and also is more consistent with the preoccupations of policy makers and aid donors, who are interested in such matters as budget and balance of payments.

In considering "effects" of the drought we will distinguish "tangible" from "intangible" effects. The "tangible" effects are the conventional economic factors usually evoked whenever the consequences of drought are discussed: production losses, budget and balance of payments effects, income distribution impact. "Intangible" effects are both negative and positive, including on the negative side the human suffering from hunger, uncertainty, forced movement, and the stresses on domestic institutions and on international relations; and on the positive side such results as greater awareness of ecological dangers, broadened contacts with donor nations and institutions, greater disposition to individual and social change or innovation.

The effects of drought are also "reversible" or "irreversible". All the intangible effects are presumably reversible, but this is not so for the tangible effects. When people die because of drought this is an irreversible loss, as it is when drought turns topsoil to dust or laterite, destroying its fertility for ever. The economically most important tangible effect - loss of production - is "reversible". Rainfall below "normal" leads to lowered production. The difference between output in a "normal" year and output in the drought year

represents the loss due to drought, adjusted for other output-affecting factors such as population changes, price and policy variables, etc.^{1/}

The distinction between "reversible" and "irreversible" effects is usefully supplemented by another distinction - between losses of income and losses of income earning assets. This distinction is relevant in treating the livestock sector in particular. When drought kills off animals it not only reduces current incomes from milk and meat; it destroys income earning assets as well. Raising animals is not like growing millet. A good rain or series of rains doesn't mean a return to the pre-drought position. Years of effort and saving are required before the herd can be reconstituted.

In the discussion that follows we will treat in order the irreversible effects, then the reversible ones. The intangibles will be treated last, not because they are less important but because less is known about them. The irreversible tangible effects, similarly, are only briefly considered, not because of their lack of importance but because of lack of knowledge.

Three main "irreversible" effects can be identified: loss of human life; permanent physiological damage to affected populations, particularly children; ecological transformations which can't be repaired, at least not at reasonable cost. The "reversible" effects include: livestock losses and agricultural output reduction, reduction in general economic activity following falls in agricultural output; budget and balance of payments impacts.

^{1/} One can't be overly comfortable with the theoretical foundation of this notion that social cost is measured by loss of output due to rainfall deviation from "normal". In a given ecological region there is presumably some normal variation of rainfall and hence of output, and these normal variations have to be distinguished from the extreme variation called "drought". Similarly, there is presumably some given carrying capacity for men and animals under given technology. If because of a period of good rains and positive outside intervention the number of animals exceeds the ecologically sustainable level, and large numbers of animals die in an ensuing dry period, is it altogether right to count these losses as social "costs"?

Tangible, Irreversible Effects

(i) Human Mortality. There were undoubtedly many deaths attributable to the drought. Direct drought-induced deaths, which are relatively easy to count, were probably rare, however. There are very few reports of people dying from hunger or thirst. The drought worked on mortality through its generalized debilitating effects, and hence creation of greater vulnerability to sickness and disease. It's hard to find an appropriate estimate for the numbers involved. In 1974 some people talked of 100,000 deaths due to drought. But it was never clear where that number came from. The inflow of food aid would seem to have moderated - if not prevented entirely - direct or indirect mortality effects on the scale implied.

(ii) Physiological Damage. In the acute phase of the 1973 drought, doctors from the Atlanta Disease Control Unit studied the nutritional status of thousands of Sahel children. They found significant numbers seriously undernourished. Since it is known that children in certain age groups (e.g., post-weaning) are particularly vulnerable, and since it is likewise suspected that important physiological effects can be associated with malnutrition (e.g. brain cell growth), significant irreversible costs may be involved. But specific knowledge is very limited on these matters. Nor is it clear the one severe episode of malnutrition has these physiological effects. What does seem clear is that various observers in 1975 have commented on the apparently healthy condition of Sahel populations, and the lack of observable signs of unusual under-eating.^{1/}

(iii) Ecological Change. A number of examples of irreversible ecological changes are often mentioned in discussions of the impact of the Sahel drought. One refers to the interaction between drought and soil characteristics. Drought raises soil temperature and reduces its humidity. As the topsoil heats up, its life-giving organisms die and its physical composition changes. It turns to dust, presumably irretrievably. A related drought-induced change has to do with changes in plant cover, notably trees. Prolonged dry weather lowers water tables, reduces soil moisture and generally thins out plant cover. On sandy hillsides in particular, plants lose out in their struggle against suffocation. This phenomenon is also related to the more popular notion of "southward advance of the Sahara".

^{1/} Report of the "At-Risk" Mission, AID, December 1974.

It is known that the drought has resulted in a thinning of plant cover in severely affected regions. Trees - not only on hillsides but in affected areas in general - have withered and died; the acacia, which yields gum arabic, have perished by the thousands in Senegal and Mauritania; according to some estimates, over 10% of Senegal's acacia trees died in the recent drought.^{1/} What is not so clear is the extent and degree of permanence of these changes. It is widely disputed that the "southward advance of the Sahara" is related directly to short-term variations in rainfall; it rather derives from basic imbalance between men, animals and environment in a particularly delicate ecological situation.

(a) Livestock

For millions of people in the Sahel, livestock is either the basis of their entire economic system, or the focus of a major share of economic activity. There are few reliable statistics on the numbers of people engaged wholly and/or partly in stock-raising in the Sahel.^{2/} A certain number of estimates are nonetheless in circulation. In Mauritania, for example, it is commonly said that 70% of the population is engaged in the livestock sector, and about 50% can be imputed for Chad. In Mali a recent estimate is 30%.^{3/} In Niger a proportion of 20% is widely quoted, and in the Upper Volta about 15%. Everywhere the livestock sector makes a significant contribution to national output - roughly from 10% to 25%.^{4/}

1/ Le Sénégal face à la Sécheresse, paper prepared for the Workshop on Drought in Africa, Dakar, Feb. 1975. It could be argued that income-generating assets like acacia trees can be replaced at reasonable cost, so their loss should be more properly defined as a reduction in capital stock, not as a permanent ecological loss.

2/ This judgment is expressed in UN Secretariat, Special Sahelian Office, Livestock; a Survey of the Range Recovery and Animal Production Sector in the Sudano-Sahelian Zone, ST/SSO/10, November 1973, p. 7.

3/ Gakou, B. Le processus inflationniste au Mali. (Thèse de doctorat, Aix-en-Provence, 1975.) For Mauritania, a nomad population of 68% of the total is given in RIM, Ministère de la Planification et du Développement Industriel, Direction de la Statistique et des Etudes Economiques, Comptes Economiques 1972 (avril 1974), p. 2.

4/ According to the Upper Volta's national accounts for 1968, livestock accounted for 11% of GNP. In Chad the proportion was 16% in 1971; in Mauritania 25% in 1972; in Niger 22-32% (1968-69), and in Mali it varies from 17% (1972 accounts) to 20% (1969). The livestock sector is least important in Senegal - 8% of GDP in 1970.

The estimate of livestock "losses" has been a major preoccupation - almost an obsession - of those concerned with assessing the drought's impact. The size of losses has become a matter of political or ideological significance, and hence subject to polemics.^{1/} Unfortunately, there are serious problems of definition and measurement involved here, which make any reasonable assessment of losses extremely difficult. Herd size statistics have always been underestimated because taxes are at issue. Drought-induced livestock "loss" figures generally include (a) "normal" animal death rates (about 11% for cattle), mainly due to calf deaths; (b) premature slaughters, and (c) animals sent south, especially across frontiers.

A number of post-1973 herd size estimates have now been made, by national authorities and by outside agencies, notably a European Development Fund-sponsored survey late in 1973 and early in 1974. The results of these efforts are reflected in Table 12, which must be interpreted with even more caution than is usually needed when confronting Sahel statistics. They show losses of about one-third of the overall cattle population between 1972 and 1973, and tend to be somewhat smaller than earlier estimates. Although the figure of one-third of the cattle herd is now widely believed to be reasonably close to reality, it is still too early to be sure.

In any case, the shrinkage of herd size represents an enormous economic loss to the cattle-raising population of the Sahel. There are three aspects to this loss: (1) smaller herd size means a smaller flow of current income, mainly because milk supplies are much lower and the sale of animals in exchange for millet may involve higher real cost to the stock-raiser who now has a smaller herd and changed structure. (2) loss of cattle involves reduction in income-generating assets (capital stock). The wealth of herders has thus been gravely diminished, as has that of sedentary farmers who keep savings in the form of cattle. (3) the drought had a series of longer-term effects: it caused generalized feeding deficiencies, increased fractures, reduced fertility, induced higher abortion rates, and reduced survival rates of calves. All of this may have effects on the productivity of herds. It will surely mean difficulties in reconstituting them.

^{1/} In a recent article, for example, J. Suret-Canale, a French Marxist historian and Africanist, vigorously put forward the statement that the herds in Niger were 45% fewer than formerly, and in Mauritania 90% fewer, and this even before the 1972-73 drought! (Difficultés du néo-colonialisme, Revue canadienne des études africaines, 1974.)

The response of herders to the drought has been clarified by some recent studies of herd age structure.^{1/} In general, the youngest males and the oldest bulls and cows were slaughtered first; i.e., the main strategy was to save cows in reproductive ages. As the drought worsened and prospects for survival declined, herders slaughtered increasing numbers of females. In Niger, at the Niamey slaughterhouse, 70% of the cattle slaughtered in 1973 were female, whereas in 1968 the proportion was only 30%.

Another factor increasing the difficulty of reconstituting herds is the greater vulnerability and hence higher mortality rate of young females in drought conditions.

Throughout the Sahel, then, it appears that the post-drought generation of calves is especially small in number. This will make itself felt through the latter half of the decade, in a scarcity of reproducing animals.^{2/}

To better define the economic consequences of drought on livestock, and to quantify some of the costs, is one of the main tasks for future economic research in the Sahel.

(b) Agricultural Production

The dry years between 1970 and 1974 have had important deterrent effects on agriculture. Very little of the agricultural output in the region comes from irrigated cultivation. Most is rain-fed, supplemented by river flood production along the Niger, the Senegal and Chari rivers. The rainfall deficiencies of 1970 and 1971 were bad enough; low rainfall, poorly distributed, led to a decline in utilization of marginal areas on the northern edge of the cultivable Sahel. Areas south of the 700 mm. isohyet were generally less affected. But in the severe drought of 1972-73 the rivers (and Lake Chad) reached their lowest levels since the beginning of the century, and the river flood component of the Sahel's agricultural output drastically declined.

^{1/} Notably by Dr. M. Garcia, a veterinarian at the Communauté Economique du Bétail et de la Viande in Ouagadougou. Dr. Garcia visited water points in the Upper Volta Sahel, and sampled 6,000 animals out of an estimated total of 900,000.

^{2/} M. Garcia, La Structure du troupeau bovin Sahélien au Niger et en Haute Volta après la sécheresse in Communauté Economique du Bétail et de la Viande, Revue Trimestrielle d'Information Technique et Economique, Avril-Sept. 1974.

Table 12. Size of Cattle Herds, 1966-1973
(thousands of head)

	1966	1967	1968	1969	1970	1971	1972	1973	% "loss" 1973/1972 ^{2/}
Chad ^{1/3/}	4,400	4,500	4,500	4,500	4,500	4,600	4,700	3,000	37
Mali ^{3/}	-	4,800	4,800	4,900	5,000	5,300	5,000	3,300	34 ^{4/}
Mauritania ^{3/}	-	2,400	2,400	2,600	2,600	2,500	2,300	1,600 ^{5/}	30
Niger	4,000	4,100	4,200 ^{6/}	4,000	4,000	4,100	4,200	2,700 ^{7/}	36 ^{7/}
Senegal	2,400	2,500	2,500	2,500	2,600	2,700	2,500	2,200	25
Upper Volta	-	2,400	2,400	2,500	2,700	2,500	2,600	2,200	15

^{1/} Until 1973, ECA Statistical Yearbook 1973; the 1973 estimate of the FED study (footnote 3) is the same as that made in the Chad Service de l'Elevage, Nov. 1974, "Situation après la Sécheresse".

^{2/} See Statistical Appendix Table II.

^{3/} All 1973 estimates of herd size (and hence herd loss due to the drought) come from Fonds Européen de Développement, Situation Actuelle de l'Elevage dans le Sahel, 1974. Where different estimates exist they are noted in footnotes. The Mauritanian estimate is however from more recent Mauritanian Government publication, Bilan de la Sécheresse. The FED estimate for herd size in Mauritania in recent years seems particularly casual, and differs from all available estimates. The FED gives the cattle population of Mauritania as 2,300,000 in 1968, declining to 1,460,000 in 1972, and to 800,000 in 1973.

^{4/} This is the FED estimate. They proceed to say that the true "loss" will probably be in the neighborhood of 25% when all livestock return from their foreign pasturages.

^{5/} The 30% loss estimate comes from RIM, Bilan de la Sécheresse (1974). FED estimate is 800,000 head out of a 1972 herd of 1,460,000. An alternative semi-official estimate is that herd size fell to 1.4 million in 1970 and 900,000 in 1973.

^{6/} There are significantly conflicting estimates among different sources on the 1968 herd size. The common figure cited is 4,500,000. But this is not used here because the 4,100,000 is more reasonable-looking, and is the figure used by the Ministry of Rural Economy.

^{7/} This estimate from the FED 1974 Survey is lower than many others. For example, the 1973 Statistical Report of the Direction de l'Elevage gives a cattle loss of 2 million head between 1972 and 1973, or over 50% of the herd.

^{8/} Probably the most knowledgeable observer of these matters in Upper Volta estimates the loss at 7-8%, in addition to normal losses. M. Garcia, Evaluation des Pertes sur le Bétail dues à la Sécheresse en Haute Volta. C.E.B.V., Rapport de Mission, Fév.-Mars 1974.

Table 4 shows the evolution of agricultural production since the mid-sixties. Although production data are notoriously weak, there cannot be any mistaking the story these numbers tell. Agricultural output went into marked stagnation or decline. Beginning in the late 1960's in Chad, for example, production of millet and sorghum fell by some 15%, to reach a low of less than 600,000 tons in 1972, as against a mid-sixties output of about 700,000 tons. Senegal and Niger maintained about the same level of production through the years before 1972-73.

With respect to cash crops the picture is worse, and the data a little more reliable; marketed production, not shown in the Table (see Annex B, Table 1) showed even less encouraging a growth picture. The main Sahel cash crops, groundnuts and cotton, declined - in most cases very dramatically. This was especially true in Senegal, where average output in 1970-72 was only about 75% of the mid-sixties average. Production of groundnuts also fell (by some 20%) in Upper Volta and more (30-40%) in Chad; cotton production held up a little better, but it is only in Senegal that there was any output growth. In Chad and Mali there was stagnation. With respect to rice, despite much discussion of increased output, the late 1960's and the 1970's saw the virtual disappearance of such production as had been marketed earlier. Gum arabic, important in Senegal and Mauritania, fell from an average output of 5-7,000 tons in each country to under a thousand tons in Mauritania in 1973 and 1974, and about 3-4,000 tons in Senegal.^{1/}

In assessing the impact of these declines in agricultural output it is important to recall the special features of these economies, particularly with respect to labor force distribution. In Mauritania, for example, the dualism of the economy is particularly marked. Out of a population of 1.2 million, 42,000 work in the "modern sector": 9,000 in Government, 5,000 in mining, 3,200 in manufacturing and construction and 20,000 "independents". In the "traditional sector", 250,000 are pastoralists and 110,000 agriculturalists. According to one official estimate, (rural development commission) the total value of agricultural production fell by two-thirds between 1970/71 and 1972/73 (from 600 million UM to 200 million UM), but this directly touched only 15% of the population.

^{1/} Mauritania A 1974; République du Sénégal, Le Sénégal face à la Sécheresse, paper presented to Workshop on Drought in Africa, Dakar, Feb. 1975.

All of this, it should be stressed, is with respect to production estimates. The picture for marketed production (see Annex B, Table I) is even more depressing, and this is before the blow that came in 1972-73. The Table indicates how hard the drought was. In Mali 1972-73 millet production fell by one-third, and 1973-74 was not much better. Mauritania's food grain production, most of it from river flood agriculture, fell to one-quarter of "normal". Marketed rice fell away to virtually nothing in Upper Volta in 1972-73 (2,000 tons as against 66,000 in 1971-72) and to some 20,000 tons in Senegal, down by half from the previous two years. Marketed groundnuts fell to about one-third their usual level.

(c) Changes in National Income

The overall movement of output and income in the recent past can be seen most clearly in the national income estimates, with due regard to their limitations. Here too, the movements are so unambiguous that the accounts cannot be seriously misleading, though of course the magnitudes are arguable. Niger's accounts, for example, show the following:

Table 13. Niger, Economic Growth 1966-1971

	1966	1967	1968	1969	1970	1971	1967-71	
	CFAF ^{1/}	%	Growth Rate %					
Agriculture	54	56	0.3	-5.2	-1.7	-2.3	11.9	-0.6
Mining	.04	0						
Industry	8.7	9						
Services	33.7	35						
GDP (PIB)	96	100	1.6	-2.1	2.4	4.0	7.3	2.6

Source: A 1974.

^{1/} In billions.

This is a current price series. And it is before the 1972-73 drought, before agricultural output and GDP reflected the effects of the 1972 and 1973 rains. It is also a gross output estimate, not taking population growth into account. If these figures are even remotely credible, and if population has been growing at anything close to "official" rates (2.3% p.a.) then rural real per capita incomes in Niger have fallen drastically since 1967, and especially since 1972.

A similar series for Upper Volta shows similar results:

Table 14. Upper Volta, Economic Growth, 1970-1973

	1970	1971	1972	1973
GDP (billions current CFAF)	96	101	103	110
Agriculture	40	39	39	36
Industry	15	17	18	19
Other	41	45	46	55

Sources: ECA, Statistical Yearbook; Upper Volta authorities.

An unofficial estimate for 1974 indicates no change in the level of output as compared to 1973 - in current prices. In terms of real output this suggests a decline of about 10% between 1970 and 1974 in total GDP, with an even sharper decline in the agricultural sector.

Table 15 summarizes GDP changes in Senegal, Mali and Mauritania.

Table 15. GDP: Mali, Mauritania and Senegal, 1970-1974
(Unofficial Estimates)

	1970	1971	1972	1973	1974
Mali: GDP in constant prices (billions Malian francs)	-	170	177	166	166
primary sector	-	73	76	60	55
secondary sector	-	23	24	25	26
tertiary sector	-	71	77	81	86
Mauritania: GDP in constant market prices (bns. ouguiyas)	-	9.7	10.1	10.1	-
primary	-	3.5	3.1	2.5	-
(agriculture)	-	(0.5)	(0.4)	(0.3)	-
(livestock)	-	(2.5)	(2.1)	(1.5)	-
secondary	-	4.3	4.8	5.4	-
tertiary	-	1.9	2.1	2.2	-
Senegal: GDP in current market prices (billions CFAF)	234	217	261	231	-
primary	63	48	66	48	-
secondary	42	42	48	46	-
tertiary	129	128	146	137	-

Sources: BML 1975; BMA 1975; BS 1975.

The table, which is based on very rough preliminary estimates, shows overall stagnation or slight decline in output since 1970. The magnitude of national income and agricultural sector loss due to the 1972 drought, as estimates in the national accounts, is underscored in the following table:

Table 16. Real Output in 1973 as % of 1972

	Mali	Mauritania	Senegal ^{1/}	Upper Volta ^{1/}
Gross Domestic Product	-6	+1	(-19)	(-9)
Agricultural Sector Output	-21	-13	(-20)	(-16)

Sources: see previous table.

^{1/} Estimates for Senegal and Upper Volta made by deflating the available (current price) data by the consumer price index. Consumer prices rose by 8% in 1973 in both countries. The output declines, as measured in current prices, were: Senegal: -11 for GDP, and -12 for agricultural sector output; Upper Volta: -1 for GDP, and -8 for agriculture.

In all the countries the indicated magnitude of 1973 reductions in agricultural output and income seems to be between 15% and 20% - an extraordinarily severe loss to people already very poor. The available figures for the 1973/74 crop year (production 1973, sales and consumption 1974) do not show much improvement except in Senegal, where groundnut production rose by over 10%, cotton by around 50% and cereals by some 40%. In Mali the millet estimate for 1974 was up over 10%, but all other crops were down fairly sharply (10-20%). In Upper Volta and Niger most commodities are reported as down from 1973, except for a suspiciously large millet estimate in Upper Volta. Niger had a very bad year in 1973/74. All sources agree that Chad's millet crop in 1973/74 was off substantially from the previous year.

For most of the countries of the Sahel then, the year 1974 was as bad or worse than 1973 in terms of production of cash crops as well as production of food. So the severe income and welfare loss of 1973 persisted through 1974 - or would have in the absence of intervention. But this of course is the background to the massive aid efforts of 1973 and 1974.

(d) Agricultural Exports

In drought conditions a reduction of agricultural exports would be anticipated a priori on four main counts: (i) in times of declining incomes and rising uncertainty, where issues of minimum survival needs arise, producers tend to shift out of cash crops and into food crops; (ii) output in general falls, hence export crop output falls; (iii) for crops produced partly for the market and partly for self-consumption (groundnuts is the main Sahel example), the share of output self-consumed by producers rises; (iv) where production is partly for home markets and partly for exports, a greater share might go to local processing enterprises, for market reasons (transport cost advantages) and for non-market reasons (preferential buying arrangements enjoyed by local manufacturing).

Most of these anticipated results seem, in fact, to have occurred though they are hard to sort out and measure.

(i) The impact of the drought on overall agricultural production, just discussed, is the most general and the most important influence on exports.

(ii) Everywhere in the Sahel there has taken place a shift out of crops primarily for sale into food crops, and, where possible, even into "safer" varieties of food crops. A striking illustration of the latter is in Senegal. Senegalese farmers normally plant one-third of their millet crop to "petit mil" and two-thirds to "gros mil"; "gros mil" is much higher-yielding, but has a significantly longer growing season. In 1974 these proportions were reversed - two-thirds went into "petit mil", the safer though less productive crop. Senegalese farmers also planted greatly expanded acreage to millet in 1974.^{1/}

Examples of shifts of resources out of export crops into other lines of production (notably food crops) can be found throughout the Sahel. Niger offers one example of abandonment of cotton for food crops. In 1970 some 20,000 ha. were planted to cotton, in a region well-suited to cotton production and little affected by dry weather in recent years. Yet in 1973/74 this had shrunk to only 8,700 ha. This particular example reflects only partly the search for security, and hence is only indirectly a consequence of the drought. It is also due to

^{1/} The anticipated harvest for 1975 is 650,000 tons of millet (480,000 "petit"). The 1974-75 rice harvest is also expected to be larger - 90,000 tons instead of the 37,000 tons in 1972-73 and the 50,000 tons in 1973-74.

changes in relative prices - millet and sorghum having become more profitable than cotton.^{1/} So growing of food in this case was partly the response of commercialized farmers.

(iii) The available production and marketing statistics for groundnuts (Table 14) do not show any strong or general tendency for the proportion of output marketed to fall in recent years, except in Senegal. That such a tendency does not stand out more generally may be due to the weakness of the production data, which are best for Senegal.^{2/}

Finally, exports have also been reduced in some countries because local processing industry claims a growing share of the shrinking total. There are many examples. Under the "conventions" (or concession agreements) covering the terms of operation of particular manufacturing industries in Niger, very substantial advantages are usually accorded to the incoming investor. In industries involving processing of local export crops (groundnuts and cotton) one part of these agreements is the guaranteed delivery of a certain volume of inputs at a fixed or specially negotiated price.^{3/}

^{1/} The Ministry of Rural Economy notes: "... it is fitting to search for the causes of this failure not only in the competition with food crops (sorghum) but especially in a disastrous price policy practised at the farmer level... ". Ministère de l'Economie Rurale, République du Niger, La Situation de l'Agriculture Nigérienne après la Sécheresse. (Niamey, 1974.)

^{2/} The data also fail to support the (reasonable-sounding) proposition that farmers should be expected to eat more (hence market less) groundnuts when production declines. Inspection of the Table shows little regularity in the relationship between changes in production and changes in % marketed. Given the weakness of the production data, as well as the frequent differences in estimates of marketed output, this is not a conclusion that can be leaned on very heavily.

^{3/} It is worth pointing out that even if no such agreements existed, the local processing industry would have powerful arguments for receiving concessional purchasing agreements - notably by evoking the spectre of collapse, unemployment, (presumed) added balance of payments strain, etc.

Table 17. Marketed Groundnuts as a Percentage of Estimated Total Groundnut Production^{1/}

	1963-1975									
	1963/64	1964/65	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
Chad										
Production	-	-	88	99	115	96	75	75	76	80
Marketed	-	-	-	-	-	-	-	-	-	-
%	-	-	-	-	-	-	-	-	-	-
Mali										
Production	-	148	119	96	136	158	152	-	-	-
Marketed	75	49	29	33	57	-	60	-	43	65
%	-	33	24	34	42	47	39	37	-	-
Niger										
Production	-	129	209	177	145	144	171	140	50	84
Marketed	-	106	183	164	165	130	146	110	25	60
%	-	82	88	93	-	90	85	79	50	71
Senegal										
Production	952	1,019	1,005	830	789	583	988	570	643	489
Marketed	798	870	834	623	601	454	764	466	501	-
%	84	85	83	75	76	78	77	82	78	-
Upper Volta										
Production	-	-	73	75	75	78	66	67	63 ^{2/}	-
Marketed	6	6	10	10	8	10	10	16	18	17
%	-	-	13	14	10	13	15	24	29	-
TOTAL										
Production	-	-	1,494	1,187	1,260	1,059	1,452	992	909	
Marketed	-	1,031	1,056	830	831	980	980	644	587	
%	-	-	71	70	66	93	67	65	65	

Source: Annex B, Table II.

^{1/} Unshelled.^{2/} Estimated.

Thus it is that in Niger the State groundnut marketing agency (SONARA) must sell groundnuts to the ailing, under-utilized milling industry at prices well below prevailing export prices (40-50% below in 1972/73).^{1/}

It is the same with cotton. The Niger Textile company - NITEX - is a typical import-substitution type of enterprise. It is the biggest industrial enterprise in Niger, with over 500 workers. It also has a special purchasing agreement with Niger's cotton marketing agency, the CFDT. In the past four years total production of cotton fiber has declined from about 4,000 tons in 1969/70 to 1,000 tons in 1973/74. In 1969/70, NITEX received one-quarter of the production. The rest went to export markets. In 1973/74 the 1,000 tons produced seem to have all gone to NITEX. The drama is that for cotton, like groundnuts, the delivered price to the processing mill is well below the price obtainable on world markets.

In Upper Volta, the Regional Development Organizations, which purchase groundnuts, must sell about one-quarter of their purchases to CITEX, a groundnut oil refinery, at a price fixed well below the market price. In 1972/3 this price was 33 CFAF per kg. of shelled nuts, while the price being paid in Ouagadougou was 112 CFAF. Similarly, in Senegal, it can be seen in Table 18 that profits from export sales in most recent years have been much higher than sales to local manufacturers, which suggests that similar arrangements prevail in that country.

Table 18. Differential Profits on Local Sales and Exports of Cotton, Senegal, 1969-1974

	1969/70	1970/71	1971/72	1972/73	1973/74
	(CFA francs per kg.)				
Profits on Local Sales	(-2)	13	38	15	23
Profits on Exports	(-7)	23	36	27-32	149

Source: Annex A, Table (xiii).

^{1/} There is another irony, related not to these purchasing matters but to the structure of world prices for groundnut products. Because so few unprocessed groundnuts are available on world markets, shelled groundnuts earn almost as much as refined oil and oil cake. So local processing may not only in the end have a negative foreign exchange effect but an overall negative income effect.

The result of all these forces is the generally depressing picture of export sector stagnation or decline, which can be seen in Table 19.

(e) Cattle Exports

Meat and cattle are major exports for five of the Sahel's six countries, despite the fact that most live animal exports do not show up in recorded trade figures. Thus meat accounts for 10-25% of Chad's recent exports, 35-50% of Upper Volta's, 15-20% of Niger's, 20-35% of Mali's. Mauritania has substantial exports of animals, but these do not appear at all in recent trade figures, though as recently as the late 1960's they amounted to as much as 10% of the total - a lot, considering the weight of mineral exports in the total.^{1/}

Evaluation of the drought's impact on cattle exports requires the weighing of two opposing tendencies. On the one hand the drought reduced available export supply by death and increased (premature) local slaughter. On the other hand the drought led many more herders to take or send their cattle to the coastal countries where fodder was available. They had not only survival reasons to do this; relative prices strongly favored trekking south, since heavy local slaughter rates drove down local beef prices in the face of a demand made smaller by reduced income in the north.

Given the scarcity of usable data on actual cattle movements across frontiers, sales, repatriations and so on, it is not possible at this time to say whether the herd-reducing effect or the export-raising effects were dominant. The number of Zebu cattle slaughtered in Abidjan rose from 49,500 head in 1971 to 55,000 in 1972 and 52,000 in 1973, declining to 43,100 in 1974. This rise of 10% during the worst of the drought and subsequent decline by 15%, suggests that the export-raising effects were most important. One other suggestive bit of evidence pointing in the same direction relates to changes in remittances. Malian authorities indicate that remittance inflow increased from 9 billion Malian Francs in 1973 to 18 billion in 1974, and they believe this is due mainly to increased cattle sales by Malian herders who moved south to escape drought conditions.

^{1/} République Française, Secrétariat d'Etat aux Affaires étrangères, Direction de l'Aide au Développement, Département de l'Elevage, Exportations de Viandes par les Pays Sahéliens Francophones: Statistiques, 1970-1972, juin 1973.

Table 19. Recorded Exports: Principal Commodities, 1964-1974
(thousands of tons, billions of CFAF)

			1964 ^{3/}	1966	1968	1969	1970	1971	1972	1973	1974 ^{4/}
Chad	Total	Value	6.7	5.8	7.6	8.0	8.2	7.8	9.0	8.5	
	Cotton	Quantity	3.8	32.7	42.2	47.5	39.0	34.6	40.7	36.2	
		Value	5.2	4.5	5.8	6.6	5.5	5.3	6.1	5.4	
	Beef	Quantity	2.1	1.8	6.4	7.2	14.3	11.8	6.2	3.8	
		Value	0.2	0.2	0.7	0.7	1.5	1.5	0.9	0.6	
	Mali	Total	Value	3.0	8.9	8.8	13.3	17.8	21.5	22.7	25.3	28.6
Cotton		Quantity			11.3	14.9	18.2	20.0	22.8	21.0	15.0
		(fiber) Value			3.1	4.1	6.0	7.0	7.9	10.3	19.0
Groundnuts		Quantity		21.0	15.9	10.4	23.0	30.0	38.0	26.0	19.0
		Value		1.4	1.3	0.8	2.5	4.0	4.0	4.7	4.3
Livestock ^{5/}		Quantity			7.4	11.3	15.2	14.2	13.3	12.6	13.4
	Value			2.0	3.9	5.4	5.2	4.7	4.7	5.5	
Mauritania	Total^{6/}	Value	2.2	3.4	3.4	3.9	4.9	5.0	6.0		
	Iron	Quantity	5.0	4.1	7.7	8.5	9.2	8.6	8.6	10.5	11.4
		Value	2.1	3.2	3.2	3.5	4.3	4.1	4.0	4.1	6.0
	Copper	Quantity	-	-	-	-	-	-	7.6	16.8	21.8
		Value	-	-	-	-	-	0.2	0.6	1.1	2.3
	Livestock ^{5/}	Quantity	78.0	76.0	89.0	230.0	172.0	230.0	153.0	-	-
Value		0.2	0.2	0.2	0.4	0.3	0.4	0.2	-	-	
Niger	Total	Value	4.7	8.6	7.1	6.3	8.8	10.7	13.7	13.8	12.0
	Uranium	Quantity	-	-	-	-	-	0.4	0.4	1.4	-
		Value	-	-	-	-	-	2.0	2.4	5.4	7.0
	Groundnuts + products	Quantity	98.0	189.0	172.0	135.0	150.0	113.0	137.0	87.0	-
		Value	3.2	6.2	4.9	4.0	5.7	4.7	6.2	3.7	-
	Cotton (fiber) ^{5/}	Quantity	1.9	2.0	2.9	2.2	1.3	4.9	1.4	0.7	-
		Value	0.3	0.3	0.4	0.3	0.2	0.6	0.2	0.1	-
	Livestock ^{5/}	Quantity	-	-	20.0	20.0	32.0	45.0	55.0	63.0	-
Value		-	-	0.9	0.9	1.4	2.0	2.2	2.3	-	

Table 19. Recorded Exports: Principal Commodities (continued)

			1964 ^{3/}	1966	1968	1969	1970	1971	1972	1973	1974
Senegal	Total	Value	30.2	37.1	37.9	31.9	42.2	34.7	54.4	43.2	89.9
	Groundnuts	Quantity	0.5	0.6	0.7	0.4	0.4	0.2	0.6	0.3	-
		Value	23.7	28.7	27.4	17.7	20.9	12.7	29.3	15.6	28.5
	Phosphates	Quantity	0.7	0.8	0.8	0.8	1.0	1.2	1.4	1.4	1.4
		Value	2.4	2.6	2.6	2.7	3.3	3.8	4.6	4.9	25.9
	Upper Volta	Total	Value				5.3	5.1	4.4	5.1	-	6.0^{4/}
Cotton		Quantity	1.8	2.4	12.0	12.7	28.0	16.5	19.0	18.0	-
		Value	0.2	0.3	0.9	1.6	1.5	0.9	1.1	-	-
Livestock ^{5/}		Quantity	24.5	27.0	32.5	25.9	23.0	23.9	32.6	5.7 ^{1/}	15.0 ^{2/}
		Value	1.8	2.2	2.5	2.2	1.8	1.9	2.3	0.5 ^{1/}	1.6 ^{2/}

Source: Annex B, Table IV.

^{1/} 6 months only.

^{2/} 6 months only.

^{3/} 1965 for Chad.

^{4/} Forecast; recorded exports only.

^{5/} 1,000 heads.

^{5/} Billions ouguiyas.

(f) Budget Effects

The drought could be expected to have adverse effects on public sector finances in two main ways: (i) it generated a set of new and urgent social needs involving care for drought victims and attention to their recovery and rehabilitation; (ii) it reduced the tax base and tax capacity in the wake of declining income, output and trade.

The actual effects have been rather more nuanced. This may be so because we cannot really tell what happened, because it is so hard to see clearly in the budget documents the reality of recent fiscal history. Unfortunately, some of the most interesting things that happen in Sahelian public finance are not evident from the budgets. Extra-budgetary accounts make up a significant proportion of total public sector revenues and expenditures. The most important of these are the various caisses for price stabilization and for marketing, and the investment or development accounts, such as Road Funds - not to mention external development assistance which is invariably extra-budgetary. So it is in many instances impossible, or possible only with occult knowledge, to find out the budget cost of doing something - subsidizing food staples, for example. And the true fiscal effects of such dramatic events as the rapid decline of groundnut exports are often hidden in murky intra-public sector transactions.

There is another source of obscurity. Some expenditure relevant to assessing the economic impact of the drought seems to take place in two particularly opaque budget lines - the subsidy and transfer item, and "unclassified" expenditures.

All of this said, a certain number of generalizations emerge from the budget data, which are summarized in Tables 20, 21 and 22, and in Annex B, V, VI(A) and VI(B). The discussion must obviously be incomplete, given the variety of issues and the number of countries involved.

1. Revenue performance in the 1970's has not been appreciably different than in previous years, at least in money terms and for most of the governments in the Sahel. As can be seen in Table 16, revenue growth in four of the six countries was more than 7% p.a. during the years 1970-73, which is high by Sahel historical standards. Mauritania was the star performer, as it has been during most of the decade. Chad has lagged behind the others, as it always has; no other Sahel state had revenue decline so consistent, and of such large size; 1974's revenues were 17% lower than those of 1971. Niger revenues grew at a relatively low rate of 3% annually.

2. The factors explaining revenue performance vary from country to country. One observation seems central, however: non-agricultural sectors provided the stability and/or growth necessary to offset declines in income and economic activity due to the drought. Mauritania is a good example. Iron ore exports account for about 40% of the total receipts from taxes on international trade, and 20% of the total budget receipts. Taxes on income and profits are another 20%. Both rose by about 50% between 1970 and 1973. Mauritania's revenues could thus rise at 15% annually despite the disastrous effect of the drought on its livestock and its agriculture.

It is the same with Niger, though this is not readily apparent. Niger had a particularly disastrous groundnuts crop in 1973 - marketed nuts fell from 165,000 tons in 1969-70 to under 20,000 tons in 1973-74. Groundnut incomes went way down, and exports fell to almost nothing, all of which should have sent revenues spiralling down a la Chad. But the activity of the modern sector remained at a high level, and even accelerated, with some new construction getting under way and the inflow of new external aid. The volume of business turnover rose 16% in 1972 and 14% in 1973.^{1/} Also, this was the time of the rise of the uranium industry; uranium exports rose from 2.4 billion CFAF to 5.5 billion between 1972 and 1973. This helped sustain and increase the volume of taxable recorded imports and exports as well as income and profits taxes,^{2/} and allowed government revenues to increase even in the face of agricultural disaster.

In Senegal, similarly, the yield from income taxes rose by 30% between 1969/70 and 1972/73, revenues from import duties rose 20%, and excise taxes also rose smartly.

3. The main direct revenue effect of the drought was the elimination of the cattle tax in a number of countries - for example Niger, Chad, Upper Volta and Mali. This tax generally accounted for between 5 and 10% of total revenues in the late 1960's, but it was a tough tax to collect, stimulated smuggling and in the period

^{1/} Secrétariat d'Etat aux Affaires Etrangères, Direction de l'Aide au Développement, Bureau des Programmes, Secteur Information Economique et Conjoncture, Indicateurs Economiques, Niger, Mai 1974.

^{2/} In 1972/73 (October-September) return from income and profits tax rose by 6%, from taxes on imports by 12%, and from export taxes by 3% over 1971/72. BCEAO, Indicateurs Economiques, No. 223, December 1974.

Table 20. Annual Percentage Changes in Government Revenue, 1962-1974

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973 ^{1/}	1974
Chad	-	-	-	-	-	-10%	21%	12%	2%	-2%	-13%	-3%	
Mali	-	-	-	7%	10%	-	-	5%	8%	5%	9%	7%	
Mauritania	-15%	-4%	9%	3%	9%	10%	9%	17%	21%	18%	10%	32%	
Niger	-	6%	22%	3.5%	5%	-2%	20%	6%	5%	4%	0%	20%	
Senegal	-2%	8%	-3%	-1%	1%	1%	13%	-1%	13%	2%	9%	27%	
Upper Volta	54%	-11%	5%	-19%	-	6%	16%	3%	10%	0%	11%	4%	

Sources: A 1974 Senegal; A 1974 Niger; B 1975 Senegal; B 1975 Mali; B 1975 Mauritania; Dossiers Economiques, various countries; Annex B, Statistical Tables.

^{1/} Based on estimated receipts for 1974 fiscal year, except in Senegal, where it is a provisional estimate of actuals.

Table 21. Government Expenditures by Object, 1969-1974

	Chad					Mali					Mauritania				
	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973
	billions CFAF					billions Malian francs					millions ouguiyas				
Salaries	6.4	7.2	7.2	8.5	8.7	9.2	14.0	14.5	16.0	18.7	710	749	827	938	
Material and Supplies	3.2	4.0	4.1	3.4	2.8	4.0	4.5	4.5	5.9	6.4	349	326	375	436	
Subsidies and Transfers	1.6	1.7	1.8	7.1	2.5	1.7	0.3	0.3	0.7	0.5	172	249	237	239	
Public Debt Service	0.4	0.6	0.9	0.5	0.5	3.2	1.2	1.2	0.6	0.5	35	47	37	34	
Other	1.1	0.8	0.3	0.7	0.2	3.3	0.4	0.2	1.6	2.0	69	156	315	341	
"Coefficient of Effectiveness" (materials & supplies: salaries)	.50	.56	.57	.40	.32	.43	.32	.31	.37	.34	.49	.44	.45	.46	
	Niger					Senegal					Upper Volta				
	1969	1970	1971	1972	1973	1970	1971	1972	1973	1974	1969	1970	1971	1972	1973
	billions CFAF					billions CFAF					billions CFAF				
Salaries	4.5	4.8	4.9	5.2	5.5	19.4	20.8	21.6	23.3	25.5	4.8	5.5	5.8	6.3	7.1
Material and Supplies	2.1	2.5	2.4	2.5	2.6	6.9	7.3	7.6	7.7	8.1	1.7	1.7	1.9	2.0	1.9
Subsidies and Transfers	-	-	-	-	-	5.2	5.7	6.0	7.5	7.5	1.2	1.2	1.1	1.2	1.4
Public Debt Service	0.3	0.6	0.7	0.7	0.4	1.2	1.4	1.1	n.a.	n.a.	0.4	0.3	0.3	0.3	0.4
Other	0.4	0.9	1.0	1.2	1.2	2.6	3.3	3.5	4.3	5.2	-	-	-	-	-
"Coefficient of Effectiveness" (materials & supplies: salaries)	.47	.52	.49	.48	.50	.36	.35	.35	.33	.32	.35	.31	.33	.32	.27

Source: Annex B, Table VI.

Table 22. Government Expenditure and Its Financing, 1969-1974

	Niger					Mali					Mauritania						
	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973	1974	1969	1970	1971	1972	1973	
	billions CFAF					billions Malian francs					billions ouguiyas						
Current Revenue ^{1/}	10.9	11.5	12.1	12.6	12.6	21.7	23.5	24.7	26.9	28.7		2.0	2.2	2.8			
Current Expenditure	10.1	10.6	11.2	11.3	12.3	21.8	23.2	27.5	30.5	33.5		1.9	2.1	2.8			
Surplus/Deficit	0.8	0.9	0.9	1.4	0.3	21.8	23.2	27.5	30.5	33.5		0.08	0.09	-0.07			
Capital (or Development) Expenditure	2.0	1.6	2.5	3.1	3.3	-	2.3	3.0	2.7	2.9		0.37	0.50	0.61			
Other Operations ^{2/}																	
Overall Surplus/Deficit	-1.2	-0.8	-1.6	-1.8	-3.0	-2.2	-2.0	-5.8	-6.3	-7.7		-288	-414	-681			
Financing																	
Foreign Loans & Grants ^{3/}	1.2	0.5	1.3	1.0	3.0	2.2	2.0	2.0	5.2	3.5		210	542	878			
Internal Financing	-13	295	235	750		-0.05	0.03	3.8	1.1	4.2		0.078	-0.128	-0.197			
	Senegal					Upper Volta					Chad						
	1969	1970	1971	1972	1973	1969	1970	1971	1972	1973	1974	1969	1970	1971	1972	1973	1974
	billions CFAF					billions CFAF					billions CFAF						
Current Revenue ^{1/}	41.0	40.7	45.8	46.7	51.1	9.7	10.5	11.0	11.4	12.2	12.3	11.4	12.8	13.0	12.8	11.1	10.8
Current Expenditure	35.8	38.8	40.4	44.3	48.0	8.1	8.6	9.2	9.7	10.6	12.3	12.8	14.1	14.7	15.3	14.7	15.0
Surplus/Deficit	5.2	1.9	5.4	2.6	3.1	1.7	1.9	1.8	1.7	1.6	0	-1.4	-1.3	-1.7	-2.5	-3.6	-5.8
Capital (or Development) Expenditure	2.7	3.3	4.0	4.7	5.8	1.1	1.1	0.8	0.9	1.2	1.2	1.1	0.8	0.9	1.3	.5	.0
Other Operations ^{2/}	-0.3	-0.9	-3.7	1.5	-16.1	-	-	-	-	-	-	-	-	-	-	-	-
Overall Surplus/Deficit	-2.2	-2.3	-2.3	-0.8	-18.8	0.6	0.7	0.7	0.8	0.6	-1.2	-2.5	-2.1	-2.6	-3.8	-4.1	-4.2
Financing																	
Foreign Loans & Grants ^{3/}	-1.2	-1.2	2.0	0.2	19.2	-	-	-	-	0.5	1.2	0.3 ^{4/}	1.6 ^{4/}	2.2 ^{4/}	1.5 ^{4/}	-	-
Internal Financing	2.2	3.9	0.3	0.6	-0.4	-	-	-	-	-	-	1.2 ^{5/}	1.6 ^{5/}	1.2 ^{5/}	2.4 ^{5/}	-	-

Sources: B 1975; B 1975; B 1975; A 1974.

1/ 1969-1972: actuals; 1973-1974: budget estimates.

2/ Extrabudgetary fund transactions.

3/ Mostly grants; however, the 1973 figure for Senegal (19.2 billion) represents largely loans.

4/ French subsidy - Chad.

5/ Unpaid bills - Chad.

of drought ran into increasing resistance among herders. Its yield was therefore declining. The tax was abolished in 1973. The budget incidence of this change was softened by the European Development Fund, which granted each of the countries suspending the tax an aid grant to help cover the lost revenue.^{1/}

4. Local government revenues seem to have been more seriously affected than those of central governments. In Upper Volta, for example, communal revenues fell by almost 20% in 1973 - from 3.5 billion CFA francs to 2.9 billion - and "cercle" taxes fell by about 10% - from 7.3 to 6.6 billion CFA francs.^{2/}

5. Current expenditures have in all cases increased faster than current revenues between 1969 and 1973. Rising import prices and some salary increases affected the outcome in 1973, though this was before the full impact of the world inflation. Salaries are the main item of expenditure; they were between 40% (Mauritania) and 64% (Mali) of total current expenditure in 1970-72. The government wages bill rose in the early 1970's at a rate of between 4% p.a. in Senegal and 20% p.a. in Mali, with the other four countries having rises of 6-10% p.a. Increases in salary payments were thus the major cause of increased current expenditure.

6. Materials and supplies appropriations grew less quickly than salaries, which is a virtually universal phenomenon for governments under fiscal pressure. The so-called "coefficient of effectiveness" (the ratio of expenditure on supplies to expenditure on salaries) declined significantly between 1970 and 1973, except in Mauritania and Niger. (See Table 21.)

7. In 1973 there were current budget deficits only in Niger, Chad and Mali; Mauritania had an insignificant shortfall. (See Table 22.) The 1973 surpluses were smaller in the surplus countries, and the deficits bigger in the deficit countries (except in Mauritania), as compared to 1972, which is perhaps an indirect indication of the incidence of the drought. Mali and Chad have clearly experienced the greatest budget deterioration. In both countries the current budget deficits

^{1/} In at least several countries new taxes were introduced as partial substitutes for cattle tax. In Mali, for example, a tax on cola nut consumption appeared, and in Niger a new tax on building rents. The Mali Government planned to reintroduce the cattle tax in the 1975 budget (which contains an item for it), but as finally passed, the budget left out the tax. A taxe conjuncturelle - an export tax on cotton and groundnuts - was introduced in that year, in addition to the cola tax.

^{2/} République de Haute Volta, Ministère du Plan, Bulletin Mensuelle d'Information Statistique et Economique, 1975, pp. 69-70.

are large and growing. In Mali, the deficit in 1974 was over a quarter of total revenues. In Chad the deficit was almost 40% of revenues in that year. Chad continued to increase its budget through the worst of the drought years, but incomings were only half the amount budgeted in 1974. Also, budgeted defence expenditures grew strongly - from 1.7 billion CFAF in 1969 to 2.4 billion in 1972 and 3.6 billion in 1973. If 1973 budgeted military expenditures were actually spent, they would have amounted to 32% of revenues.

Mauritania has experienced the greatest budget expansion. Between 1969 and 1973 the size of the budget rose by 87%; between 1973 and 1974 it increased a further 20%. The equipment budget rose from 335 million UM in 1974 to a planned 700 million in 1975.

8. Table 22 reveals that capital expenditure (or development expenditure, which is usually the same thing) was greater in 1973 (except in Chad where it was less, and in the Upper Volta where it was the same). Why this should have been so general a phenomenon in the face of the drought is not clear; the most likely general explanation is that the increase represents greater counterpart contributions to aid projects.

9. With the exception of Mauritania, it is difficult to find direct drought-related sources of expenditure increases. Mauritania had an urban influx that was especially large relative to its population. At one point in 1974 some 250,000 rural people were congregated in Mauritanian cities and towns. Most had returned to their areas of origin by early 1975. But not all: the official estimate is that 30,000 to 60,000 will settle in Nouakchott and 10,000 in Rosso. The Mauritanian Government is said to have spent some 200 million ouguiyas (\$4.5 million) on the general care of these nomad refugees. And it is incurring commitments for the eventual resettlement of those who wish to remain in towns. The total Mauritanian expenditure in 1973-1974 is said to amount to 600 million UM, financed by a 5% reallocation from the recurrent budget, a tax on wage earners equal to one day of work per month, and a 1% turnover tax on companies. In his State of the Nation statement in November 1974, the President of Mauritania said that the rehabilitation plan had already spent 2 billion UM - approximately \$45 million; he mentioned 300 trucks and 1,200 employees being involved.

Other governments have incurred similar costs, but where they are found in the budget, and the level of domestic funding of these costs, is unclear. In Niger, budget authorities indicated that subsidies to local government units have risen in 1975, and that this is a direct effect of the drought. But the magnitudes are not large; such subsidies rose from 19 million CFA francs in 1974 to 90 million in 1975.

(g) Balance of Payments Effects

From the point of view of the Sahel's money economy as a whole, it is in the balance of payments that the drought might have been expected to have its most devastating impact. It would widen the already sizeable deficits on goods and service account - in obvious ways - reducing exports (via its impact on agricultural and animal production), increasing imports of needed foods and increasing transport and related charges for moving heavy food grains from distant ports.

In fact the drought did all of these things. As noted earlier, the Sahel's main agricultural exports - notably cotton and groundnuts - were almost everywhere either declining or rising very slowly from the mid-sixties on. Cotton, a minor export in Senegal, is the main exception.

Into this generally very sluggish export picture came the drought-related declines of 1973 and 1974. Total export earnings rose little, or actually declined, as the traditional agricultural exports (groundnuts and cotton) sagged. The summary table on exports (Table 19 above) and the Annex A Table (iii), give the details.

The import situation was potentially most menacing. Table 23 below shows strikingly how substantial was the dependence of the Sahel on food imports and how, except in the Upper Volta, food imports were growing in the 1960's at a faster rate than total imports. With the loss of staple output of the magnitudes of 1972 and 1973 the impact on purchased imports was immediate, despite the assistance extended by the outside world.

Table 23. Share of Food Imports in Total Recorded Imports, 1965-1970
(per cent)

	Average 1965-70	1965	1966	1967	1968	1969	1970
	%	%	%	%	%	%	%
Chad	15	10.5	12.8	15.4	13.1	18.7	18.7
Mali	20	19.5	21.0	14.3	19.5	15.6	28.6
Mauritania	18	8.5	13.9	17.0	25.4	21.6	23.2
Niger	12	8.6	12.4	14.3	11.0	1.7	12.0
Senegal	31	36.3	36.2	36.3	35.4	32.0	27.1
Upper Volta	21	22.4	25.6	23.4	19.8	18.5	18.3

Source: EEC, Foreign Trade Yearbook, 1969-1970, Vols. I and II, Table 14 in UNCTAD, Selected Statistical Tables, June 1973.

These changes of the early 1970's, whether caused or only magnified by the drought, posed the first real threat to the stability of the post-independence economic system that had evolved in Francophone Africa.

In the middle and late 1960's, there emerged a recognizable pattern among the Sahel countries with regard to the health of their balance of payments. There was one clearly sick man - Mali. One was ambulatory but fragile - Chad. The others were frail but active - though none of course could be called robust.

Five of the six countries - Mali being the exception - were in a rough kind of external equilibrium in the late 1960's. These five ran relatively small deficits on current account, which were in general covered by external aid, mainly from France and the FED. In several of the countries (Senegal, Niger and especially the Upper Volta), remittances from emigrant nationals also were important in covering the goods and services deficits. The system had a built-in stability. Deficits on current account would widen not autonomously, but in response to changes elsewhere in the balance of payments. (Minor, year-to-year fluctuations were taken care of by extensions or reductions of credits in the operations account at the French Treasury.) That is, only if more aid came in or if export earnings increased, would imports and other services respond.

Each of these countries responded to the drought-induced balance of payments crisis in different ways. Mali was plunged more deeply into deficits and debt. Chad saw its precarious equilibrium slip away. Senegal was badly hurt in 1973, but bounced back smartly in 1974. Niger, Upper Volta and Mauritania managed to come through without much difficulty.

Mali was most hurt. Its balance of payment situation had been delicate enough up to 1970. But its overall deficit grew by over 20 times between 1970 and 1974, from 700 million Malian francs (MF) in 1970 to 12.5 billion MF in 1974. Imports rose four times as fast as exports. This was not so much due to sinking exports. The value of exports in fact rose from an average of about 20 billion MF in 1970-71 to 25 billion MF in 1973 and 29 billion (estimated) in 1974; cotton and groundnut earnings increased - indeed doubled between 1970 and 1974 - despite falling volumes. It was import growth that brought on Mali's predicament; the value of imports tripled between 1970 and 1974, and although drought relief arrived in substantial quantities (about 40 billion MF between 1970 and 1974) Malian food purchases, especially cereals, rose phenomenally: from 4 billion MF in 1972 to 14 billion in 1973 and 35 billion in 1974. As a proportion of total imports, food imports increased from 30% in 1970 to 52% in 1974.

Mali came close to the edge in 1973, and is not far from it now. Its outstanding public debt is in the order of \$ US 280 million. Debt service due in 1973 amounted to about \$26 million, a quarter of its exports of goods and services and about 45% of total government revenue that year.^{1/} Debt service would remain at this level for about five years. In fact, Mali rescheduled her debts in 1974, very quietly. Its debtors - 65% of its debt is to communist countries - apparently agreed to soft terms, for the debt service has almost dropped out of the budget; only about 1.5 billion MF is allocated to it in 1974. Meanwhile Mali has run up a huge debt in its account at the French Treasury - the Operations Account. It owed the French \$54 million in 1970 (45 million SDRs). In 1974 it ran this debt up to \$114 million (95 million SDRs). It is in effect the French Treasury which has financed the Malian expenditure for imported foods.

^{1/} Mali did in fact fall into arrears on some debt service in 1973. Accumulated unpaid external debts in December 1973 amounted to about 6 billion Malian francs.

Chad's story is similar but more muted. Chad was in much better external circumstances in the late 1960's than was Mali. The country ran the usual goods and service deficit, which averaged about 8 billion CFA francs annually in the period 1968-1971. This deficit arose from a modest excess of merchandise imports over exports (average 1968-1971: about 2.5 billion CFA francs) and a much bigger deficit on services, due primarily to an extremely heavy payments burden for freight and insurance - i.e. transport. The cost of transport for Chad was 2-3 times greater than the goods deficit, directly reflecting Chad's extraordinarily difficult geographical position.

The deficit on goods and service was, in the pre-drought period, more than amply covered by aid inflows and by sizeable pensions paid by France to Chad citizens. Aid alone averaged about 5 billion CFA francs annually in these years, and unrequited transfers as a whole were somewhat more than the 7-8 billion franc current account deficits.

The result was that Chad ran a small but steady overall surplus - almost half a billion CFA francs in 1969, 800 million in 1970 and 2.3 billion in 1971.

This relatively comfortable state of affairs was transformed by the drought - at least the drought contributed importantly to it. In 1972 there occurred the first overall deficit since 1968. It arose mainly from a decline in aid flows, while the goods deficit and transport costs were rising by 40-60%. The current account deficit did not grow, however, in 1972.

This did happen in 1973. Export earnings remained constant or were up a little - 10.8 billion as compared to 10.1 billion in 1972. Imports, however, rose sharply, from 14.7 billion to 16.4 billion; and the net costs of transport rose from 2.8 billion to 6.2 billion. The result was a widening of the current account gap from 7.5 billion in 1972 (which was about what it had been since the late sixties) to 11.7 billion in 1973. Although aid inflows rose very substantially - doubled in fact from 6.2 to 12.2 - the overall deficit grew from 1.8 billion CFA francs to 2.4 billion.

It appears that the situation worsened in 1974, though accounts for only the first 6 months are available. The overall deficit was growing at a rate about 50% higher than in 1973. In November 1974 Chad drew on borrowing rights at the IMF's new special Oil Facility, and also received a \$4.4 million Arab loan, presumably for balance of payments relief.

Senegal also faced severe difficulties, and 1973 presented in fact its worst balance of payments crisis. But unlike Chad, the Senegalese economy managed to right itself by 1974.

During the 1960's and early 1970's, Senegal was not troubled by basic deficits in its external balance. In 1970-72 for example, it ran a deficit in goods and services, but this was always balanced by aid inflows, remittances, and a little private capital.

In 1973 this equilibrium fell apart. Export values fell, as a result of falls in production, by more than 30% as compared with 1971 - a peak year. At the same time, Senegal, like Mali, needed to increase its foodgrain imports, given its poor harvests that year.

As a result, the trade deficit doubled, reaching 45 billion CFA francs in 1973. Despite large public and private capital inflows Senegalese reserves plummeted by about 8 billion CFAF, falling to their lowest level in history. To finance the deficit, Senegal borrowed heavily in the Eurocurrency market, at commercial rates. Its debt service/export earnings ratio grew from less than 6% in 1972 to 14% in 1973. For a time, at the end of 1973, the Senegalese Government fell behind on debt repayment, though the arrears were never very large.

Despite these ominous events, by the end of 1974 the Senegalese economy had turned around - and this despite the continuing harmful effects of the drought on production, on export volumes and on the need for food imports. How this happened will be discussed later. The basic elements were straightforward enough: a boom in phosphate prices, good groundnut and cotton prices, foreign assistance, growing tourist revenues, and increased remittances from Senegalese working abroad.

Niger's adjustment went more smoothly, for two reasons.

1. Export earnings did not suffer so badly. Recorded export earnings in 1973 were 14 billion CFAF, little different than in 1972. Given the drought, and the sharp falls in traditional exports (groundnuts and cotton), this was not so bad. And uranium was the reason for it. The value of uranium exports rose from 2.4 billion CFAF in 1972 to 5.4 billion in 1973. Without this new and large source of export proceeds, Niger's story would have been quite different. Other things equal, for example, Niger's export earnings without uranium would have fallen to 8.3 billion CFAF in 1973, and a big deficit would have been likely.

2. The other element has to do with Niger's general policy orientation, its taste for caution in fiscal and economic policies. For many years Niger has run significant payments surpluses: 1.3 billion in 1969, 2.6 billion in 1970, 4.3 billion in 1971 and 2.3 billion in 1972. This policy persisted throughout the period of intensive drought. It probably accounts for the relatively slow rise of Niger's recorded imports - from 16.6 billion CFAF in 1972 to 19.1 billion in 1973. Niger was apparently better able than its neighbours to find foreign grant financing for its needed cereals imports; her purchased cereals imports rose only from 14,000 to 16,000 tons. In any event, the fact is that Niger, one of the countries most savagely hit by the drought, was able to make its external adjustments relatively easily, avoiding large growth of debt burdens or other external or internal obligations which might restrict its future options.

The Upper Volta's experience was like Niger's. Its deficit on trade account jumped in 1971, by about 5 billion CFAF to 16 billion CFAF, or some 50% more than in the late 1960's. And in 1973 the deficit rose again to about 20 billion CFAF, from its 1972 level of 18 billion.

The reasons were the same as in the other Sahel countries. Export earnings dropped from 5.1 billion CFAF in 1972 to 4.5 billion in 1973, while imports rose about 12% to 17 billion. Thus food imports rose steadily over the dry years - from an average of about 7 billion CFAF in 1968-69 to 11 billion in 1970 and 1971, and 14 billion in 1972. They then shot up to 25 billion in 1973, most of it for cereals.

These emergency needs were met without disturbing the stability of the Upper Volta balance of payments. Workers' remittances, estimated at 4.5 billion CFAF in 1969-70, grew to 6.7 billion in 1973, and external aid increased by 50%, from 8.4 to 12.6 billion.

The net outcome was that Upper Volta continued in 1973 its "traditional" accumulation of surpluses in its balance of payments. Between 1969 and 1972 this surplus totalled 6.5 billion CFAF.^{1/} It appears to have grown to about 8 billion at the end of 1974. It gives the Upper Volta the odd position - odd for a country so poor in resources and so modestly ranked in terms of GNP and

^{1/} République Française, Ministère de la Coopération, Inflation et Sécheresse en Haute Volta, 1974.

other indicators - of being one of the rich members of the West African Monetary Union; its reserves are second only to those of the Ivory Coast; they amount to some 8 months of imports, a very high figure. Its external assets were said to be earning interest at the rate of 11% in 1974, and thereby making a significant budget contribution - some 660 million CFAF annually, or over 5% of 1974 estimated current revenues.

Mauritania, like Niger, has been among the more sorely afflicted of the Sahel countries in terms of drought impact. Its herds were decimated, its small agricultural output cut to almost nothing. But the "modern" money economy came through strongly, in terms of availability of resources and external economic balance.

As already noted, the drought has devastated Mauritania's livestock - and its small agricultural sector. Approximately 100,000 tons of cereals are said to be produced there in a normal year; this is believed to have fallen in 1973/74 to about 25,000 tons. The "normal" 25,000 tons of rice production is estimated to have fallen to 1,500 tons.

This disaster led to large purchases of emergency food, in addition to the estimated 87,000 tons of food aid distributed by outside donors. Food imports increased from about 700 million ouguiyas (UM) in 1970 and 800 million in 1972 to 1.7 billion in 1973. By no means all of this increase was due to cereals; sugar imports were in fact 440 million UM, or a quarter of the total in 1973, up from less than 200 million UM in 1970. But at least 80,000 tons of cereals were purchased.

Total (recorded) imports rose by about 15% p.a. between 1971 and 1973, because of increased food purchases. Export earnings rose more slowly - 5% in 1972 and 8% in 1973; 1973 export growth came from copper exports, receipts from which doubled to 1.1 billion UM. Despite an increase in volume of over 20%, iron ore receipts were stable, for a variety of special reasons. Other exports declined - fish by 12%, gum arabic by 70%, because of steep falls in output.^{1/}

These circumstances led to Mauritania's first balance of payments deficit in at least three years. The big trade surplus it has run since the middle 1960's

^{1/} Production of gum arabic was very adversely affected by the drought.

turned negative - from +600 million UM in 1970, 900 million in 1971 and 500 million in 1972, to a trade balance in 1973 of -1 billion UM. The balance on services did not change much. Mauritania's goods and services account was thus -2.4 billion, or almost 50% above its 1972 level.

However, this was more than balanced by a large increase in unrequited transfers, and notably in foreign aid. Official transfers grew from 400 million UM in 1971 and 600 million in 1972, to 1.6 billion UM in 1973. Most of this increase was emergency drought relief, which came to about 1.0 billion UM, of which about 770 million UM was food aid.

Beginning in 1973, but appearing in a more pronounced way in 1974, Arab aid contributions came on the scene. In 1974 Mauritanian loan availabilities totalled some \$ US 120 million, of which only a small amount has actually been taken up and spent (a \$ US 7 million loan from Qatar). 35% of this total is said to consist of loans from Arab oil producers, including a 20 year interest-free loan of almost \$ US 5 million from the Arab Special Fund for Arab Non-Oil Producing Countries.

As a result of these various aid inflows, Mauritania's external liquidity has remained unimpaired. Its debt service is very small - about 3% of 1974's probable export earnings. It did have an overall deficit of about 100 million UM in 1973, which may have increased in 1974. But its foreign reserve position is strong. The gross reserves of the Central Bank rose from 1.6 billion UM in 1970 to 6.9 billion in 1972 and remained about the same in 1973. With stronger iron ore prices in 1974, and continued international assistance, both emergency assistance and development aid, the external accounts of Mauritania should remain reasonably healthy.

A number of central points come out of the discussion thus far.

1. Export earnings of agricultural commodities held up reasonably well despite falling volumes. This was due to the increases in the prices of cotton and groundnuts on world markets. The terms of trade for traditional exports were thus relatively favorable. But more important was the rise of non-agricultural exports in maintaining export earnings. In Senegal's case this was a traditional export - phosphate - which began a meteoric price rise in 1973. In Mauritania's case it was iron ore, also a traditional export. In Niger it was something new - uranium concentrates.

2. The response of the international community after 1972 was critical in avoiding an unravelling of the balance of payments situation throughout the Sahel. Table 24 shows the magnitude of the effort and the increase in response to crisis in 1973 and 1974. Several significant forms of aid are not shown in the Table - for example the 1972 cancellation by the French Government of debts incurred by the Sahel states before independence under the FIDES program, and the 1974 Mali debt relief.

3. For a drought-prone economy, it seems reasonable that a non-vulnerable sector of significant size will guarantee some stability in budgets and in balances of payments. A mining industry is about the most non-vulnerable form of activity there is. It is no accident that the Sahel states with mining sectors (Senegal, Mauritania and Niger) have adapted better, have retained internal and external balance more fully than states without mining (Mali and Chad).

4. The Sahel economies displayed unexpected flexibility in these years of crisis. Many cattle-herders effectively dispersed their herds in the south, thereby preventing the massive livestock calamity that was clearly possible. Also, men left their villages for wage employment outside. Villagers already outside were called upon or felt compelled to increase their rate of earnings repatriation. Worker remittances thus played an important role in all the Sahel countries, though probably most important in Upper Volta and Mali.^{1/}

Intangible Effects

We have thus far considered only the tangible effects of the drought. But the most important long-term economic consequences of drought are intangible. These are both negative and positive.

Negative Intangible Effects

(i) Human Suffering. The drought severely damaged the people and societies of the Sahel in a pervasive way. It shook, and continues to threaten, the lives of millions of people. It involved hunger, and painful uncertainty for virtually everyone in the affected regions. For many it meant forced movement for survival. At the peak of the crisis, in April-June 1974, there were perhaps 200,000 people

^{1/} Available balance of payment estimates for Niger and Mauritania are very sketchy on remittances. In the Mauritanian case at least remittances homeward must be substantial, given the fact that tens of thousands of Sarakales from the Senegal River area are known to be working in France.

entirely dependent on food distribution in Niger; In Mauritania some 250,000 people moved temporarily and under dismal conditions into towns, completely destitute. In Mali, another 250,000 may have been forced into total dependency in towns. These intangible effects in terms of human suffering and generalized disruption of life represent the greatest "loss" or "cost" of the drought.

(ii) Inter-State Conflict. Movement of people and animals across national frontiers caused numerous inter-state frictions, especially since these movements were sometimes associated with charges of ethnic discrimination. The upheavals and migrations not only caused friction between states but between different social groups - herders and farmers for example. In one case the results of all this have been the serious deterioration of friendly relations between neighboring states. This is the case of Mali and the Upper Volta. The frontier clash of December 1974 has had particularly unhappy consequences: the curtailment of economic relations between the two countries, closing of the frontier, escalation of military spending and build-up of armies, diversion of energy and attention and diverting resources (such as trucks) from drought rehabilitation and development objectives to military purposes. Inter-Sahel cooperative efforts have also been seriously affected, since the contending countries have not sat together at intra-Sahel meetings since January 1975.

Positive Intangible Effects

(i) Expanded Intra-Sahel Cooperation. If it has caused new tensions, the drought has also brought the Sahel states closer together in key areas. To coordinate drought relief efforts, and also to make joint proposals for regional development (especially river development) schemes, a number of coordinating bodies were created, and some which previously existed (Senegal River Organization, Lake Chad Basin Commission) have been given new life. The extent of these integrating effects should not be overstated. But the fact that donors will require central points of contact for large regional development programs suggests that the intra-Sahel collaboration will have a certain durability.

(ii) Warning Signal Effect. The experience with the disaster of the drought has signalled the need, both locally and in the world community, for closer attention to the human and ecological problems of the Sahel region. It can be argued that major policy changes are almost never initiated except by catastrophic natural

events^{1/} or by major crisis of some other sort. There certainly now exists a far wider awareness of the delicacy of the Sahel environment, the vulnerability of its people and its resources, and the need to know and do more to bring the region into better ecological balance and its people to a better life. Everybody knows there will be future climatic changes which will threaten disaster once again, and that something must be done to prevent such disasters.

(iii) New External Relations. This new awareness of the special needs of the Sahel is translated in more concrete terms by a much broader and more intensive set of relationships between the Sahel countries and the outside world. Aid relationships have in particular become more diversified. The region is now open to many more countries and to a much more intensive degree than five years ago. The world has become involved in the Sahel, and is not likely to drop this involvement quickly.

(iv) Social Learning. A certain amount of social learning has occurred, and institutional competence developed, in the area of disaster relief and rehabilitation. This learning and competence may obsolesce or disappear in a few years, but over the next couple of years, when the Sahel is particularly vulnerable, it provide some abstract protection. The region is far better equipped than it was in 1972 to deal with another drought.

(v) Restoration of Ecological Balance. Ecological balance has been restored in the livestock sector, though at great private cost. The Sahel, and the outside world, now has a short respite, time to come to grips with the fundamental contradictions and problems of livestock development in the Sahel. The central problem is well-known: the responsibility for cattle is individual, while responsibility for land is collective. Rational herders thus try to maximize their share of the land by expanding herd size.^{2/} Unless this built-in propensity to overgraze can be dealt with, positive livestock policies will almost surely lead to another round of herd liquidation when the rains fail again. The Sahel governments, and those in the aid community concerned with these matters, now have 5-10 more years to seek answers.

1/ This is suggested in P. Slovic, H. Kunreuther and G.F. White, Decision Processes, Rationality and Adjustment to Natural Hazard, in G.F. White, editor, Natural Hazards, Oxford University Press, N.Y., 1974, p. 190.

2/ D.J. Stenning, Savannah Nomads, A Study of the Pastoral Fulani of West Bernu Province, Northern Nigeria, Oxford University Press, 1959. See also, Jancke and Ruthenberg, op. cit. Reading Conference, September 1974.

- i) Stimulation of Innovative Behavior. The drought has stimulated adaptive behavior in a variety of ways. Farmers have shown quick responsiveness to relative returns. Cattle herders displayed extraordinary energy and ingenuity finding haven for their animals. Thousands of villagers sought (and - judging from remittance evidence - found) work in far-away coastal countries. This is perhaps no more than the energy of despair. But it is constructive nonetheless. This is indicative of increased flexibility in individual economic agents and in these economies as a whole. And it suggests a greater receptiveness to innovation, even to such profound changes as are involved in sedentarization of nomadic people.
- ii) Greater Awareness of Agricultural Development Needs. Finally, the events since 1972 - drought, high food prices, the growing requirement for imported staples, the attempt at food price subsidization - all have hammered home two consistent policy lessons: that agricultural development must receive greater priority, and that agricultural development cannot be approached successfully without more awareness of price policies and their implications. Were these lessons to be taken in, they could transform policy instincts and attitudes within Sahel decision-making circles. If this happened, it would certainly mark as an historic change, an unforeseen benefit of the traumatic economic upheavals of the past three years.

Table 24. Net Foreign Aid Disbursements to the Sahel,
1965-1974
(billions CFA francs)

	Average 1965-1968	1969	1970	1971	1972	1973	1974
Chad	5.8	6.1	6.7	8.0	6.2	12.2	<u>3/</u>
Mali	5.0	5.9 ^{5/}	4.2	4.0	5.3	10.8 ^{4/ 7/}	18.9 ^{2/ 7/}
Mauritania ^{8/}	2.2	5.1	1.6	2.0	3.0	8.0	5.5 ^{1/}
Niger ^{6/}	5.5	10.0	6.9	9.4	10.6	12.2	17.2
Senegal	12.4	13.7	11.9	16.4	13.0	15.5 ^{2/}	7.2 ^{2/}
Upper Volta	4.7	6.7	6.4	7.6	8.4	12.6	16.7
Total	25.6	47.4	36.1	48.6	36.8	71.3	69.0

Source: Annex B, Table VII; average 1965-68 and 1969 from OECD/BAC, cited in UNCTAD, Selected Statistical Tables, June 1973. Other years: Annex B, Table VII.

1/ Forecast.

2/ Estimated.

3/ The only data available is a six-month estimate from the 1974 balance of payments: 3.5 billion CFAF.

4/ Provisional.

5/ 1969 and pre-1969 figures from UNCTAD report.

6/ Niger is the only country for which we have a comparable series of commitments and disbursements.

The figures in the table are disbursements. Commitments are as follows:

1970: 6.9; 1971: 11.9; 1972: 15.8; 1973: 11.2; 1974: 17.2.

7/ Does not appear to include food aid.

8/ Includes food aid.

CHAPTER IV. WORLD INFLATION AND ITS EFFECTS

The Sahel was coming to grips with its second successive year of drastic shortfall in rains when the Middle East war broke out, and crude oil prices began their ascent. With this came the extraordinarily sharp and sudden rises in commodity prices generally, which characterized international commodity markets after 1973.

Actually, commodity prices had started to move up well before the October war, as the pace of inflation everywhere quickened. Table 25 shows the steep rise of cereal prices after 1971. The graph in Table 26 shows the wheat price rise in somewhat longer time perspective; the graph in Table 27 does the same for sugar.

These developments raised new and particularly grave challenges for the Sahel. The Sahel countries produce no petroleum, and rely almost entirely on oil as their source of fuel. The Sahel's geographical position makes transport cost a particularly critical factor. Since its volume of crop output was unusually low, the Sahel would be unable to take full advantage of the commodity price boom. The general increase in world prices could force reconsideration of existing development projects and plans, because price relationships were shifting so radically.

1. Balance of Payments Impact

The most immediate danger was that a rise in oil and food prices would cause massive, perhaps unmanageable difficulties in the balance of payments. This is why in 1974 the United Nations Emergency Operation put the six Sahel nations on the list of "Most Severely Affected" countries, countries whose external balance was most vulnerable because of changes in world prices.

Table 28 shows the MSA forecast for the 1974 balances of payments of some of the Sahel countries, compared to the most recent available estimates of what actually happened in 1974. Niger and Chad are omitted only because estimates of 1974 actuals are unavailable. The table is revealing. It shows that things turned out rather better than had been anticipated even as late as September of

1974. Only in Mali were the results even approximately as bad as expected.^{1/} Mauritania's overall projected deficit seems remarkably on target, but a look at the components shows that this accuracy was strangely conceived - by compensating errors of large magnitudes in the current and capital accounts. In fact, Mauritania's balance on current account was in deficit by only \$ 13 million instead of the expected \$ 26 million. But unusual capital outflow, for the first time in recent years, caused a deterioration in the overall balance.^{2/}

The reasons for the expected severe deterioration of Sahel balances of payments are obvious: the petroleum price rise, the world food price rises and the drought, which cut agricultural production and exports and increased drastically the needs for food imports.

Preoccupation with petroleum, however, was exaggerated. Table 29 shows that 1973 petroleum imports were less than 10% of total imports into the Sahel; in Mali they were 13%. The estimated impact of the 1973-74 price rises on imports can be seen in the table; the value of petroleum product imports more or less doubled in Upper Volta and Mali, and approximately tripled in Senegal and Mauritania. As a percentage of total imports, they doubled in Senegal and Mauritania, but increased much less substantially in Upper Volta, and actually declined by 25% (from 1973) in Mali.

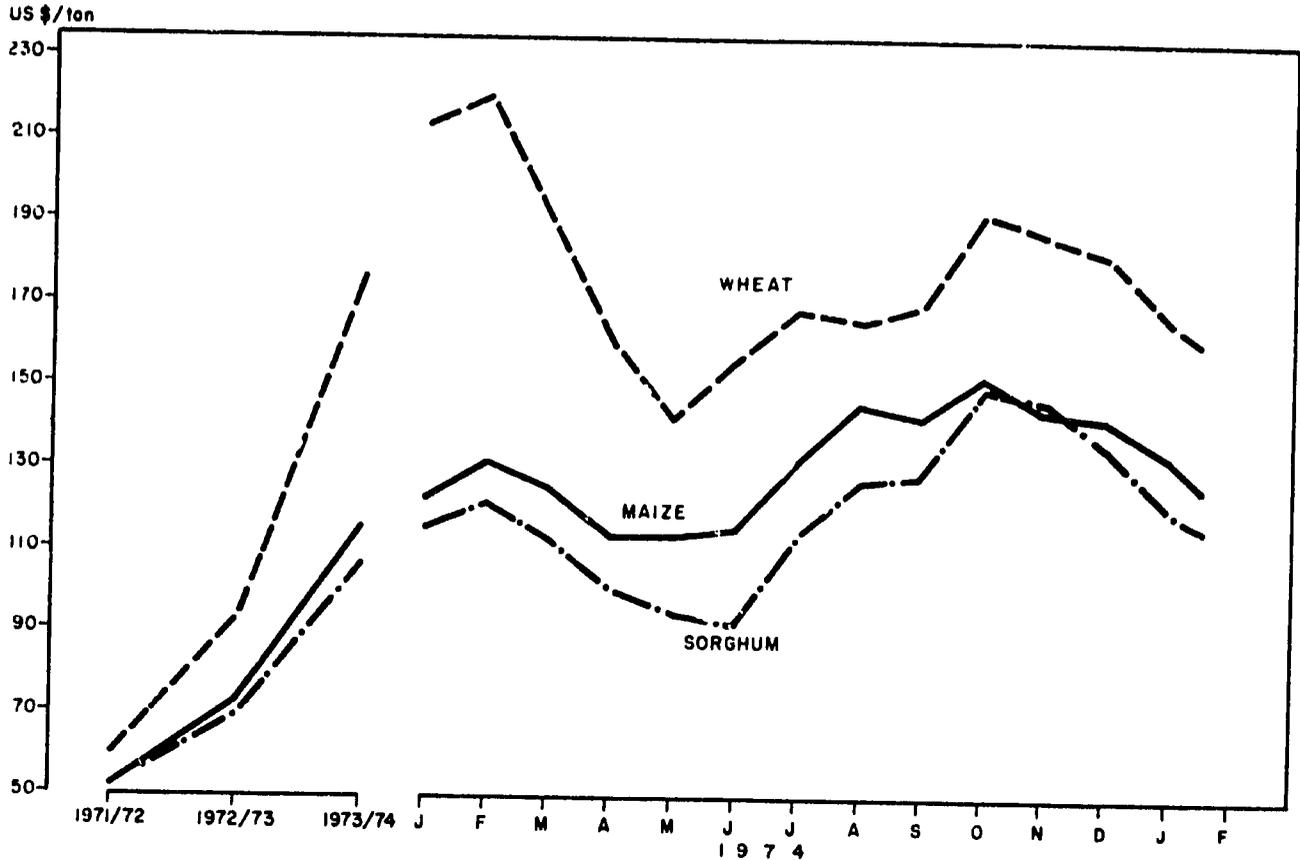
The explanation for the relatively moderate effect of the oil price rises is simple enough. These are very poor countries. Their fuel consumption is extremely low, as we saw earlier.^{3/} (See Annex A, Table (i).)

^{1/} In Niger, it also seems that the current account deficit was significantly smaller than anticipated, while the outcome in Chad is not known.

^{2/} The capital outflow arose from the introduction of exchange controls and uncertainties regarding the new monetary system which replaced the attachment to the Franc Zone.

^{3/} Per capita energy consumption for the six Sahel States is estimated to have been 48 kg. of coal equivalent in 1971, compared with 348 for the developing world as a whole, and 1,931 for the world. Consumption in 1971 ranged from a low of 13 kg. of coal equivalent in Upper Volta to 143 for Mauritania (mostly for its mining operations). Mali, Niger and Chad had 25-27 kg. consumption per capita, and Senegal 137 kg. (United Nations Energy: Outline and Analysis of Energy Sector - Sudano-Sahelian Region, ST/SSO/22, March 1974, mimeographed.)

Table 25. EXPORT PRICES OF CEREALS, 1971 TO 1975

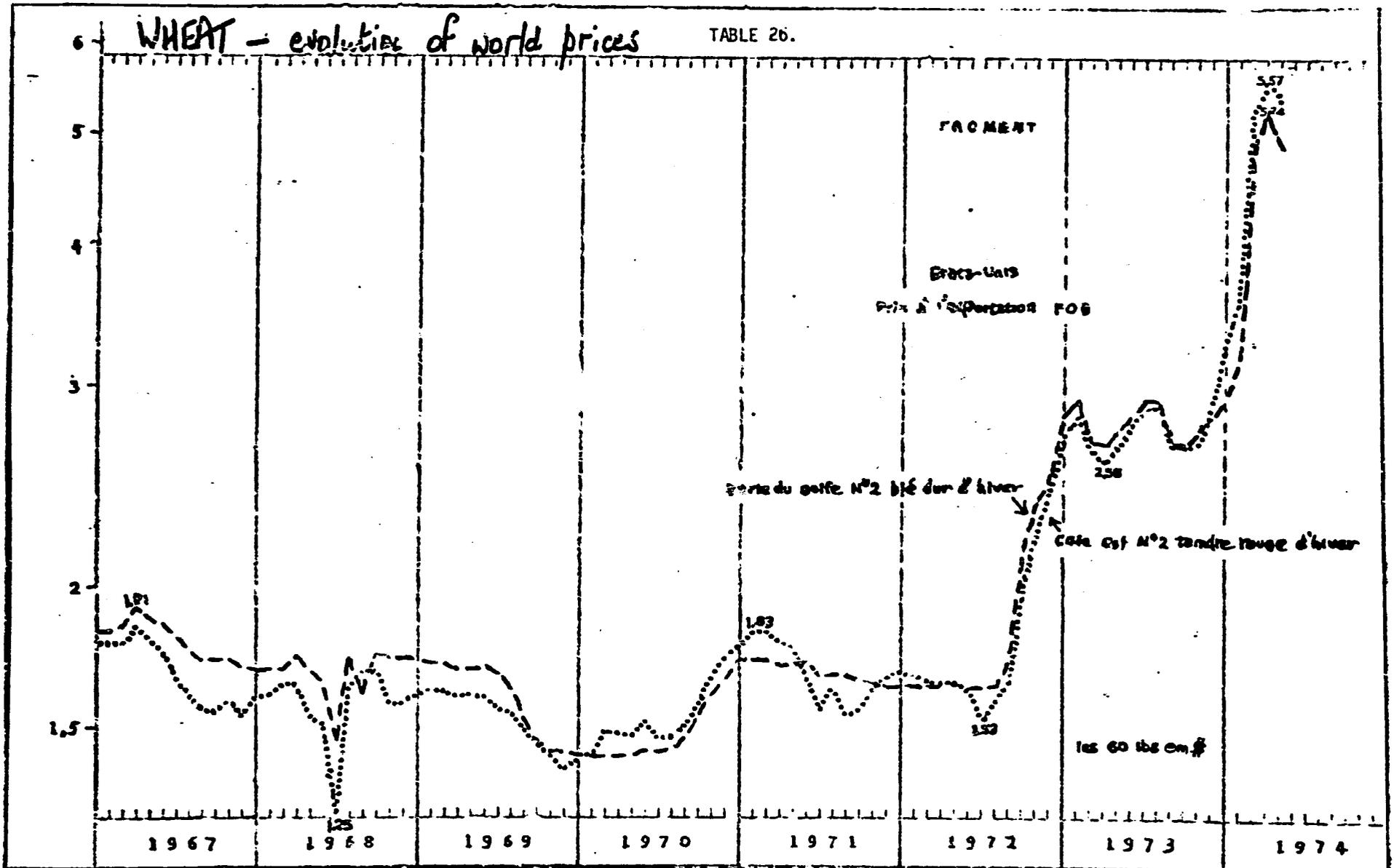


	WHEAT 1/ US No.1 H. Winter	MAIZE 1/ US No.2 Yellow	SORGHUM 1/ US No.2	RICE 2/ Thailand	SOYBEANS 1/ US No.2 Yellow
(. US \$ per metric ton)					
JULY/JUNE					
1971/72	60	52	52	133	125
1972/73	92	72	70	171 ^{3/}	208
1973/74	177	116	107	584 ^{4/}	247
1974 - Jan.	214	122	116	538	238
Feb.	220	131	121	575	244
Mar.	191	126	114	603	240
Apr.	162	114	103	630	214
May	142	114	97	625	210
June	156	117	94	596	207
July	169	132	116	519	258
Aug.	167	146	128	521	296
Sept.	170	143	129	516	291
Oct.	192	152	149	503	315
Nov.	188	144	146	453	284
Dec.	183	142	137	429	273
1975 - Jan.	164	132	119	399	241
Jan. 30	153	128	110	405	234
Feb. 6	156	126	110	n.a.	227
Feb. 13	161	127	116	n.a.	226

1/ Expert prices f.o.b. Gulf 2/ Expert price for White rice 5 percent brokens f.o.b. Bangkok
 3/ Average July 1972/Jan. 1973 4/ Average Dec. 1973/June 1974
 Source: FAO Food Outlook Quarterly, 18 February 1975.

WHEAT - evolution of world prices

TABLE 26.



Source : Bulletin Mensuel de Statistiques - Nations Unies

71.

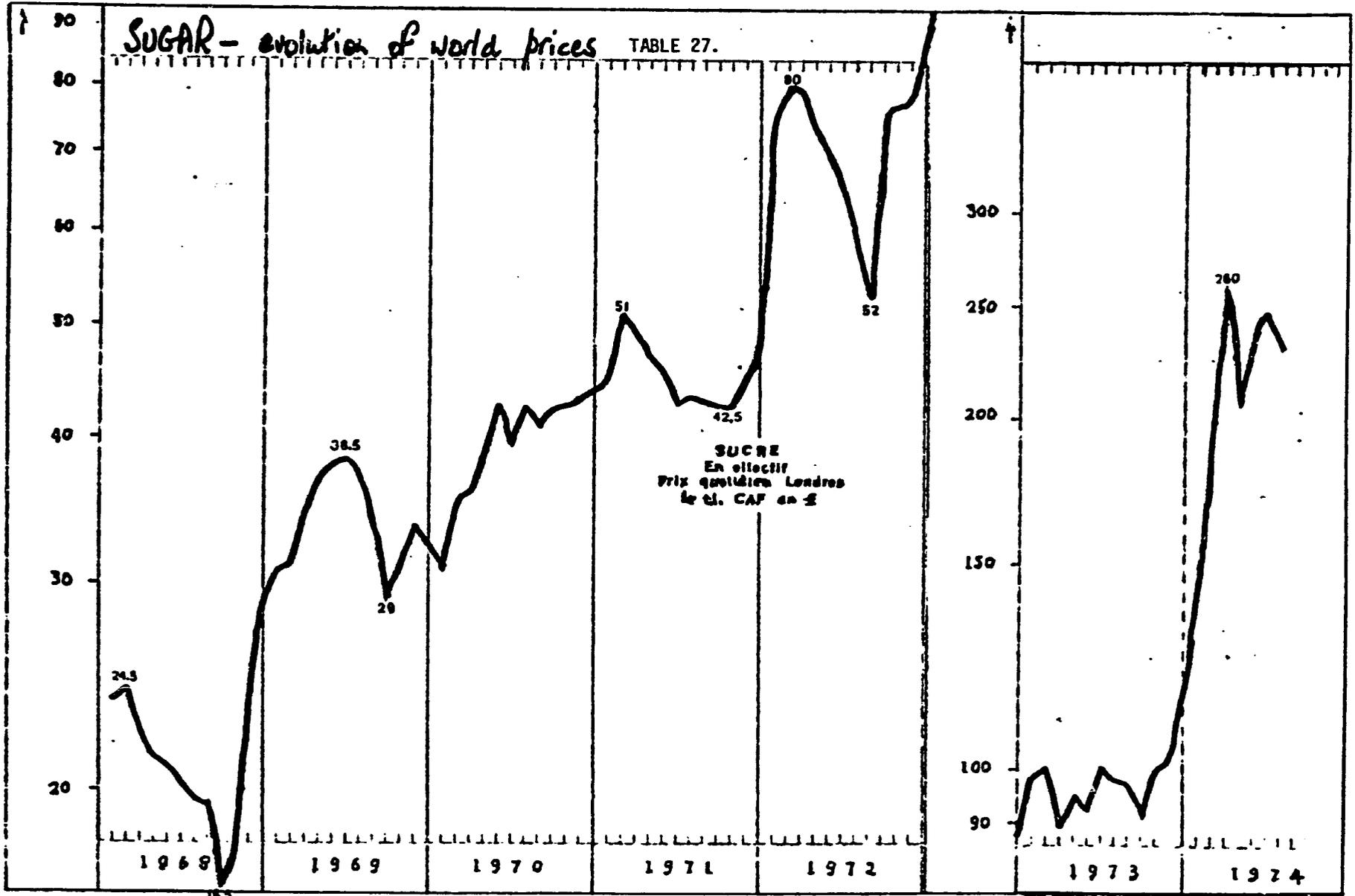


Table 28. United Nations Emergency Office Balance of Payments Projections
compared to Estimates Results, 1974
 (millions of \$ US)

	Current Account Deficit		Net Inflow of Capital		Overall Deficit		Overall Deficit as % of total imports	
	Projected	"Actual"	Projected	"Actual"	Projected	"Actual"	Projected	"Actual"
Mali	53	35.5	11	9.6	42	31.6	30.9	22
Mauritania	26	12.6	9	-3.6	17	16	9.6	8.6
Senegal	133	45	64	26	69	19	13	3.5
Upper Volta	82	143	72	135	10	6.8	7.4	4

Sources: UN General Assembly, Completion of Task Assigned to the Ad Hoc Committee ..., UN Emergency Office, Addendum to the Report of the Secretary-General, 9 September 1974.
 "Actuals" are from IMF, IBRD and BCEAO sources.
 Conversion from SDRs to \$ US at the rate of \$ 1.20 = 1 SDR; conversion from CFA francs to \$ US, at the early 1975 rate of 220 CFA franc to \$ 1.

Obviously the bigger issue was food. We saw earlier that food imports were a large and growing share of the Sahel's imports, even before the dry years: in 1970 they were 12% of Niger's imports, 18% of Upper Volta's, 19% of Chad's, 23% of Mauritania's and 27-29% of Senegal's and Mali's. The trebling of rice and wheat prices was thus a matter of much more moment to the Sahel (even in normal times) than a quintupling of oil prices.

Table 30 gives a set of much-labored but still very rough numbers aimed at describing the food import situation in the Sahel between 1972 and 1974. It has proved very difficult to find relevant figures, to reconcile those that exist and especially to sort out food aid from purchased imports.

The table indicates nonetheless a vast increase in imported (presumably purchased) food, particularly foodgrains and sugar.

The value of sugar imports more than doubled in Mali between 1972 and 1974; it rose to 12% of total imports in that year. Sugar imports more than doubled in value in Mauritania and rose by 50% in Senegal. Elsewhere the data are either unavailable or ambiguous; they show an actual decline in Niger, for example, which may reflect a real decline in nomad sugar consumption under the impact of the drought. Or there may be something wrong with the figures.

Cereals imports grew most in Mali, though here, as in all the countries, it is not always clear what is emergency aid flow and what is purchased imports. Total cereals imports in Mali rose nine-fold between 1972 and 1974, from under 4 billion MF in 1972 to 35 billion MF in 1974.^{1/} Drought emergency relief amounted to the equivalent of 20 billion MF, which covered about half the increased food import bill. In 1974, total food imports (including emergency relief) were almost 60% of Mali's total imports, and its purchased imports were 35% of the total. In 1974, Mali imported food worth some 60% more than the total volume of its exports.

In Mauritania, cereals imports doubled in value between 1972 and 1973, from 5% to 8% of total imports. Based on four-month figures (the latest data available) quantities seem to have risen more slowly in 1974, but not values; the four month value of cereals imports in 1974 exceeds the full year import

^{1/} The total quantity of cereals imported rose from 60,000 tons in 1972 to 180,000 tons in 1973 and 243,000 in 1974. Of this, it seems that 70,000 tons were purchased imports in 1973 (the rest aid-financed) and 90,000 tons were purchased in 1974.

Table 29. Imports of Petroleum Products, 1972-1974

		1972	1973	1974
<u>Mali</u>	Value, billions Malian francs	4.1	4.0	9.0
	% total imports	10%	13%	10%
<u>Mauritania</u>	Value, millions ouguiyas	230	300	900
	% total imports	6%	6%	11%
<u>Niger</u>	Value, billions CFAF	1.4	1.7	n.a.
	% total imports	8%	9%	n.a.
<u>Senegal</u>	Value, billions CFAF	4.0	4.8	14.4
	% total imports	6%	6%	13%
<u>Upper Volta</u>	Value, billions CFAF	1.2	1.6	2.8
	% total imports	5%	9%	11%

Sources: Mali: A 1974; except for 1974 petroleum imports, Central Bank of Mali.

Mauritania: B 1975.

Niger: Bulletin de Statistique.

Senegal: Bulletin Statistique et Economique Mensuelle; except for 1974 estimates based on 11 months' preliminary data, Senegalese authorities.

Upper Volta: A 1975; Annuaire Statistique; Upper Volta authorities.

Table 30. Commercial Food Imports, 1972-1974

	Chad		1972	Mali		1972	Mauritania		1974
	1972	1974		1973	1974		1973	1974	
	bns. CFAF			bns. MF			mms. ouguiya		
Food (excluding beverages) Value	2.3	2.8	14.3	25.2	51.6	790	1,660	-	
% of total imports	15%	15%	36%	49%	59%	22%	34%	-	
Total cereals Quantity	6.9	10.6	-	70 ^{1/}	90 ^{1/}	37	77	(10 ^{3/})	
Value	0.4	0.7	3.8	16.7	35.1	167	392	(174 ^{3/})	
% of total imports	3%	4%	10%	32%	40%	5%	8%		
of which:									
Rice Quantity				40	55	6	24	28 ^{4/}	
Value						76	200	482 ^{4/}	
% of total imports						2%	4%		
Wheat and wheat flour Quantity	6.9	10.6			24		30		
Value	0.4	0.7			1.9		156		
% of total imports	3%	4%					3%		
Sugar Quantity	25.7	23.8				15	18	22 ^{4/}	
Value	1.9	2.0	4.9	5.6	10.6	225	441	577 ^{4/}	
% of total imports	12%	11%	12%	11%	12%	6%	9%		
Total Recorded Imports: Value	15.5	18.2	39.7	51.7	87.0	3,600	4,900		

Table 30 (continued): Commercial Food Imports, 1972-1974
 (billions CFA francs)
 (thousands of tons)

		Niger			Senegal			Upper Volta		
		1972	1973	1974 ^{5/}	1972	1973	1974 ^{2/}	1972	1973 ^{5/}	1974 ^{5/}
Food (excluding beverages)	Value	2.0			11.7	21.0	24.8	2.8	(0.8) ^{7/}	(3.2) ^{7/}
	% of total imports	12.			25.	34.	22	19%	(5%)	(13%)
Total cereals	Quantity	14.0	16.0	6.6	(275)	(338)	(300) ^{11/}			
	Value	0.3	0.6	0.2	6.8	14.7	17.6	25	25 ^{8/}	
	% of total imports	2%	3.	0.2	10	18.	15.5.			
of which:										
Rice	Quantity				170	192	200	3	(5)	(1.1)
	Value				4.3	9.5	14.7 ^{9/}	0.01	(0.04)	(0.04)
	% of total imports				6 ^{6/}	12	13			
Wheat and wheat flour	Quantity	4.0	5.1	1.7	95 ^{6/}	105	31	25		
	Value	0.2	0.2	0.1	2.1	2.6	2.9			
	% of total imports	1%	1.	0.1	3.	3.	2.5.			
Sugar	Quantity	10.6	10.1	6.6	80	77	(40) ^{12/}	17	(3.0)	3.7
	Value	0.8	0.8	0.6	4.3	5.2	6.2 ^{10/}	0.9	(0.2)	0.3
	% of total imports	5%	4%	0.6	6%	6.5%	5%	6%		
Total Recorded Imports	Value	16.6	19.1		70.3	79.8	111.5	15	17	25.5

Table 30 (continued): Commercial Food Imports, 1972-1974

Source: Annex B, Table IV.

1/ Excluding food aid.

2/ Based on eleven month actuals, adjusted upward 9% for December. For 1973 and 1974 it is unclear whether food aid is included.

3/ First four months.

4/ Estimate (full year).

5/ Six months.

6/ Not including wheat flour.

7/ Figures in parenthesis (see Upper Volta) are derived from worksheets at the Statistical Office. They reflect more than the usual ambiguities and uncertainties, but are included here because no other 1973 or 1974 data are yet available.

8/ Forecast.

9/ Another official source estimates this at 20 billion.

10/ Alternative estimates put this figure much higher, perhaps twice as high. If Senegal imported as much sugar in 1974 as in 1973 (approximately 75,000 tons) at the world prices prevailing in 1974, these higher estimates could be closer to reality than the figures in the table.

11/ Estimate based on nine months' figures of 200,000 tons of cereal imports.

12/ Estimate based on nine months' figure of 28,000 tons.

in 1972, for a quantity one-fourth as great. It is especially rice imports which account for the cereals increase. As the table shows, we have a full year 1974 estimate for Mauritania's rice imports which shows only a 15% increase in tonnage over 1973 (but a seven-fold increase since 1972) while values have risen from 76 million ouguiyas (UM) in 1972 to 200 UM in 1973 and 482 UM in 1974. Sugar import values have also risen extraordinarily fast in Mauritania: from 225 million UM in 1972 to 577 UM in 1974, while tonnages rose from 15,000 to 22,000 between 1972 and 1974. Sugar was a bigger percentage of Mauritania's total imports (4.9%) than was rice (4%).

In Senegal the value of imports of cereals rose from 6.8 billion CFAF in 1972 to 14.7 billion in 1973 and an estimated 17.6 billion in 1974. Cereals moved from 10% of total exports to 16% during these years. Rice was the biggest item, rising from 4.3 billion CFAF in 1972 to 9.5 billion in 1973 and an estimated 14.7 billion in 1974.

Sugar imports were 4.3 billion CFAF in 1972, 5.2 in 1973 and 6.2 in 1974. They were a declining but still substantial percentage of total imports (5% in 1974).

These figures certainly indicate a tremendous increase in import costs for the Sahel. Why then did the balance of payments picture fail to turn out quite as badly as the UN Emergency Office estimates predicted, except perhaps in Mali and - less clearly - in Chad?^{1/} Put more generally, why didn't the world price inflation bring balance of payments catastrophe to the Sahel?

The first, and most important, reason was the speed and extent of the international response. Emergency food aid came on a vast scale: about 600,000 tons in 1972/73, 800,000 in 1973/74 and 300,000 in 1974/75. At the prices prevailing in 1973 and 1974, the cost of these inflows put them clearly beyond the capacity of the Sahel countries to sustain. The obvious point is that the food aid inflows greatly softened the balance of payments impact of increased food needs and higher import prices for commercial purchases.

^{1/} Not shown on the table. No full-year estimates for 1974 are available for Chad. First quarter figures show sharp worsening of the current account balance, and little compensatory aid inflow. In the Chad case, like the Mauritanian, the 1974 deficit (1st quarter) arises not from deterioration in the current account but from unusual short-term capital movements, the meaning of which is unclear.

Non-food aid inflows were also important. The total amount of aid disbursements, which had approximately doubled between 1972 and 1973 (37 to 71 billion CFA francs) remained at about their 1973 level in 1974. (See Table 24 above.) Arab lending brought new and important support to at least two of the Sahel countries - Mauritania and Chad.

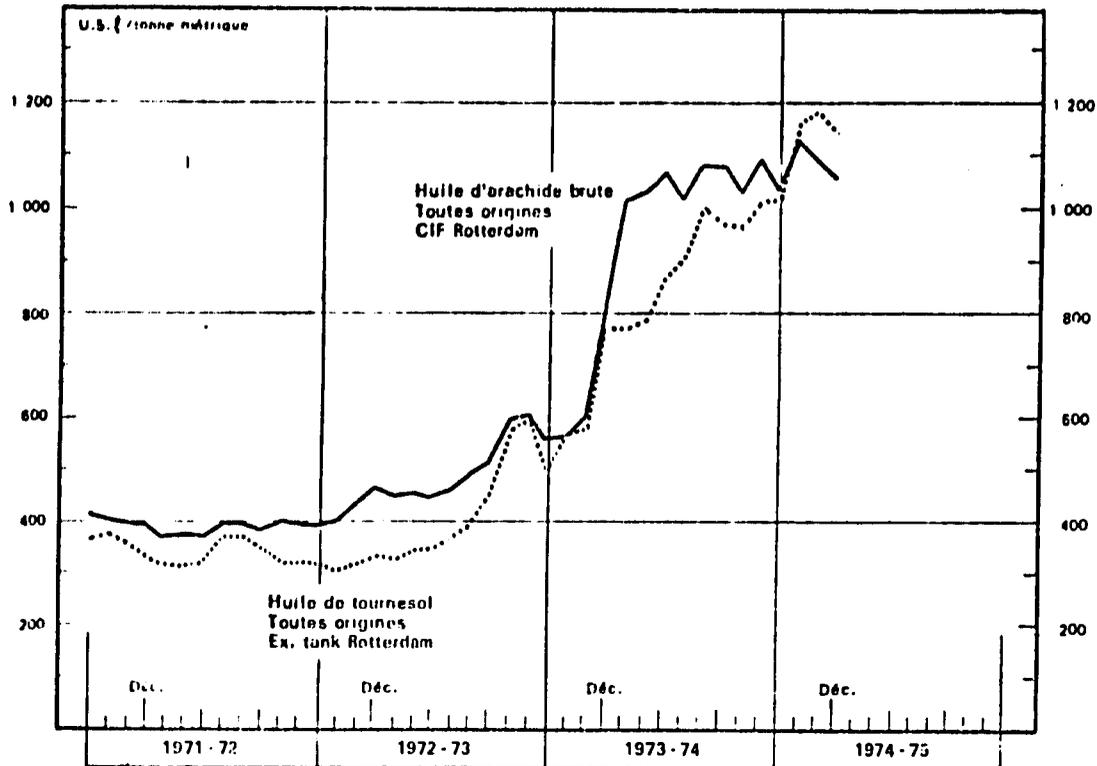
The second factor has to do with the terms of trade effects, the fact that the prices of the commodities exported by the Sahel were themselves buoyant. Tables 31 and 32 give the picture for the two main agricultural exports - groundnuts and cotton. (Plainer and longer term pictures are given in Annex A, Tables (v) to (viii). Groundnuts prices soared - from \$400 to over \$1,000 a ton. Cotton prices also rose fast, but then proceeded to slide downward during the course of the year: from a high of 76 US cents a lb. in January 1974 to 45 cents in December. Still, as the cotton graph in Annex A makes clear, cotton prices are well above their historical levels.

In any event, it was minerals that were decisive, for those of the Sahel countries lucky enough to have them. Niger's uranium exports are estimated to have risen by 30% - from 5.4 billion CFAF in 1973 to 7 billion in 1974; they were only 2.4 billion in 1972.^{1/} Mauritania's exports are estimated to have risen by 45% in 1974. But the biggest winner of all was Senegal, whose phosphate exports quintupled.^{2/}

The Senegalese balance of payments deficit in 1973, it will be recalled, was the worst in its recent history. A grimmer outcome was predicted for 1974. In fact, this did not happen. Just what did happen is the subject of some uncertainty, not about the general character of 1974's balance of payments situation, but about magnitudes. We will use here estimates made early in 1975; they differ in certain respects from earlier estimates made by the Banque Centrale in collaboration with the IMF.

^{1/} More interesting, during the early months of 1975 the Niger Government negotiated a new uranium agreement with the French Government, the negotiations reflecting Niger's dissatisfaction with the previously agreed-upon sales price for uranium concentrates. Under the new agreement France will reportedly pay 3 billion CFAF p.a. for two years into Niger's investment budget.

^{2/} In January 1973 Senegal was receiving \$13 per ton for its phosphates. Prices rose sharply at the end of 1973. In December 1973 the sales price was \$50. In December 1974 it was \$75.

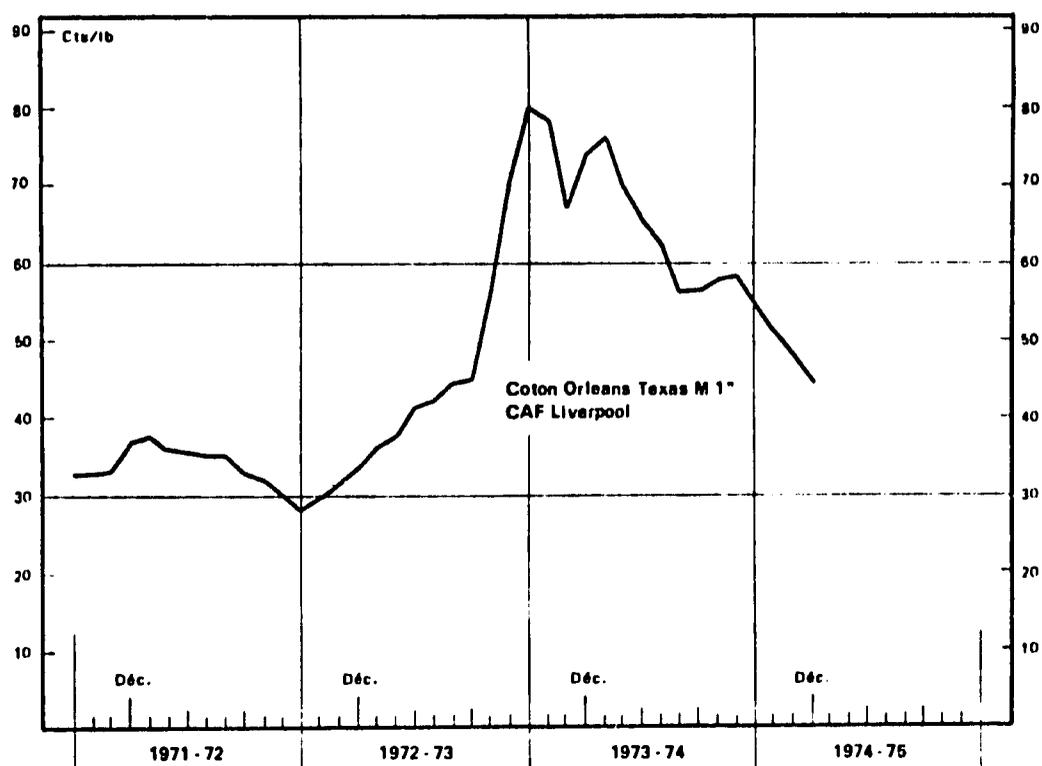
TABLE 31. Groundnut Prices (Oil)

Moyennes mensuelles	Huile d'arachide brute Toutes origines (a)			Huile de tournesol Toutes origines (b)			Tourteaux d'arachide 50% Toutes origines (c)			Tourteaux de soja 44% Etats-Unis (d)		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
	<i>U.S. dollars la tonne métrique</i>											
Octobre	395	559	1 117	303	562	1 160	143	202	196	135	207	210
Novembre	427	592	1 088	313	577	1 177	154	208	182	155	223	179
Décembre	459	791	1 057	329	763	1 146	201	245	173	198	243	184
Janvier	449	1 012		326	764		217	229		215	221	
Février	452	1 030		339	780		229	187		247	203	
Mars	443	1 065		344	850		209	172		244	200	
Avril	456	1 019		363	897		192	157		256	172	
Mai	485	1 079		395	997		287	164		364	157	
Juin	510	1 076		446	970		366	146		497	142	
Juillet	590	1 032		567	965		475	144		582	163	
Août	602	1 089		591	1 009		325	179		330	197	
Septembre	552	1 035		498	1 011		234	173		218	184	
Moyenne	455	945		401	845		253	183		287	193	

Source: Oil World.

Source: BCEAO, Bulletin, January 1975.

TABLE 32. Cotton Prices



Moyennes mensuelles	Orleans Texas M 1* CAF Liverpool			Cameroun - Allen Standard 1 - 1" 1/32					
	CAF Liverpool			FOB Afrique			CAF Europe		
	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75	1972-73	1973-74	1974-75
	<i>U.S. cents/lb</i>			<i>Francs français/100 kg</i>					
Octobre	29,70	78,25	51,50	316	774	505	338	798	535
Novembre	31,50	67,00	48,50	348	683	460	370	705	490
Décembre	33,50	74,00	45,00	368	748	430	390	770	460
Janvier	36,00	76,00		393	950		415	980	
Février	37,70	69,50		378	820		400	850	
Mars	41,25	65,00		393	720		415	750	
Avril	42,25	62,50		413	710		435	740	
Mai	44,50	50,25		443	650		465	680	
Juin	45,00	56,25		453	615		475	645	
Juillet	55,30	57,75		520	695		542	625	
Août	70,05	58,00		696	605		718	635	
Septembre	79,70	55,00		771	685		793	615	
Moyenne	45,54	64,63		458			480	733	

Source : Compagnie cotonnière.

Source : BCEAO, Bulletin, January 1975.

In 1974, Senegal's merchandise imports rose again - to a level, in fact, twice as high as in 1971 and 85% above their 1973 level. Petroleum and food were the causes: oil import costs tripled, from 4.8 billion CFA francs to 14.4 billion; food imports rose from 14.6 to 24.8 billion CFA francs.

Nevertheless, Senegal's 1974 trade balance improved compared to 1973 - from a deficit of some 37 billion CFA francs to about 22 billion. The main reason was phosphates; a few more tons than 1973 brought in over five times the export earnings - 26 billion CFA francs in 1974 instead of 5 billion in 1973. Groundnut proceeds also more than doubled, despite the bad crop, because of the much higher prices. So recorded exports in 1974 were 90 billion CFA francs, or over twice as much as in 1973. This explains the halving of the trade balance deficit.

Usually Senegal's services account is positive, and 1974 was much better than 1973 in this regard, mainly because of higher tourism receipts. Also, Senegalese worker remittances increased from some 0.7 billion CFA francs in 1970 to 1.3 billion in 1974. As a result the current account in 1974 was in deficit of 7 billion CFA francs instead of 38 billion in 1973.

One final element brought Senegal into a likely overall surplus - a large (12 billion CFA francs) inflow of private long-term capital. This more than balanced a halving of public transfers from 15 to 7 billion CFA francs.

The outcome is that in the year following its worst balance of payments situation and in the face of inflation and greater food needs, Senegal nonetheless was able to realize a surplus in its external accounts. During the course of the year Senegal drew a \$19 million (15.5 million SDRs) loan at the IMF's Oil Facility, so it was no longer necessary to borrow in the high-interest Eurocurrency market. Its reserves, which had dropped precipitously in 1973, reached a low point in the spring of 1974 (0.3 million SDRs), but these were up to 5 million SDRs by October 1974.^{1/}

In Upper Volta the effects of drought and inflation combined to make the 1974 deficit on goods and services account the largest on record: 32 billion CFA francs compared to 20 billion in 1973. Stagnation in merchandise exports (estimated at

^{1/} Actually, the sharp fall in reserves in 1973, and the abrupt rise in debt service due to the high interest rates on Eurocurrency loans, were not related, except perhaps remotely, to either drought or inflation. The external borrowing was necessary to finance two extraordinary ventures - the Dakar Fair and the purchase of Taiba phosphate company ownership.

6 billion CFA francs, only slightly above their 1968-1970 level) combined with a nearly 20% increase in imports, largely explains the size of the deficit. Petroleum import costs rose from 1.6 billion CFAF to 2.8 billion between 1972 and 1974. But petroleum still held a small share of total imports - about 11%. The value of food imports in 1974 appears to have quadrupled - at least judging from six month figures.

However, public and private transfers more or less balanced this deficit, as they have generally done in recent years. Unrequited transfers grew from 21 billion in 1973 to 28 billion in 1974. The biggest increases were in wage remittances (from 7 billion CFAF in 1973 to 9 billion in 1974) and aid inflows (from 13 billion CFAF in 1973 to 17 billion in 1974). The 1974 Upper Volta balance of payments is in equilibrium, with either a surplus or a deficit of one billion CFAF being possible. In this case the explanation is the remittances increase, combined with the aid response; some 5 billion CFAF in emergency relief funded needed food imports. By mid-1974 the Upper Volta had suffered no decline in external reserves.

Of the six Sahel states then, four seem to have so far coped successfully with the threat to economic equilibrium which came out of accelerating inflation. Mali and Chad were less successful.

Too little recent information is available to say much more than has already been said about Chad. Few countries could be expected to cope with drought, inflation and civil war, all at once - particularly countries so poorly endowed as Chad. The greatest source of balance of payments disruption in Chad was the increase in the negative balance in invisibles in the current account, (notably transport charges) along with short-term capital movements of uncertain meaning. At the end of 1974 Chad drew on the IMF's Special Oil Facility and utilized its regular drawing rights at the Fund as well. Some additional support came from the Arab countries, which provided a \$4.4 million credit in November 1974.

For Mali, the 1974 inflation intensified the basic disequilibrium situation which has characterized the economy for many years. Most of the details have already been noted in the discussion of the impact of the drought. The basic difficulty is a very large growth in Mali's imports while export earnings rose by only 2% in 1974, because of declining volumes of cotton and groundnut exports

(cotton from 23,000 tons in 1972 to some 15,000 in 1974, and groundnuts from 18,000 to 11,000 tons), declines which were slightly more than compensated by higher export prices.

Imports, however, soared, with the volume of food imports growing from 60,000 tons in 1971/72 to 178,000 tons in 1973 and 243,000 in 1974. Some of these massive imports were financed by emergency relief assistance. Between 1973 and 1974, for example, the value of food imports rose from 25 billion Malian Francs to 52 billion. Of these amounts, cereals imports were 17 billion MF in 1973 and 35 billion in 1974,^{1/} and of these cereals imports, 40% in 1973 and over 60% in 1974 were provided by emergency drought relief funds.

Despite this substantial assistance, the trade balance deteriorated very sharply. Oil price rises also contributed to this deterioration. The volume of oil imports increased by 8% in 1974 (half the recent rate of increase), whereas values rose by 125% - by some 5 billion Malian Francs.

Added to the 1974 trade deficit of 40 billion Malian Francs were the rising cost of other services - notably transport payments, which rose from 9 to 17 billion MF, and payments of interest on debt in the French Operations Account, which was mainly responsible for a rise in investment income payments from 6 to 9 million MF.

The compensatory effects of unrequited transfers noted for the other Sahel countries appeared also in Mali. Remittances increased significantly; the Central Bank estimates their rise to be from 9 to 18 billion MF between 1973 and 1974, partly from increased worker remittances, partly from repatriation of the drought-induced proceeds from sales of animals in the coastal countries.

Aid inflows, as already noted, were also substantial: the total grew from some 22 billion MF in 1973 (11 billion MF in 1972) to 38 billion in 1974. But the overall deficit nonetheless grew from 8 billion MF in 1973 (1.5 billion in 1972) to 15 billion in 1974. This was financed largely by an increase in Mali's deficit at the Operations Account amounting to some 16 billion MF. This raised Mali's cumulative deficit in the Operations Account to 55 billion MF. As already noted, service payments on Mali's huge foreign debt (\$280 million) proved impossible to meet in 1974, and a general rescheduling took place.

^{1/} Sugar was the other main food import, growing from 5.6 billion MF in 1973 to 10.6 billion in 1974.

One question nags as the Mali story unfolds: why Mali? Why is it that only Mali seems to have been knocked into an economic tailspin by drought and inflation, whereas the others (Chad apart) have maintained or regained their balance?

Some of the crisis-compensating effects everywhere present were also present in Mali: aid inflows were substantial- in fact aid to Mali rose two and a half times between 1972 and 1974 whereas Sahel assistance in the aggregate only grew by 85%. Substantial remittances and private transfers also flowed northward.

One problem clearly is the sluggish performance of traditional exports. But Mali lacks something else, which we mentioned earlier as conditioning successful economic response to the drought - i.e. a modern non-agricultural sector, notably minerals.

In addition, the magnitude and nature of the import response raises some questions: why, for example, was 55,000 tons of rice imported in 1974 and paid for out of local resources, at a time when astronomical rice prices prevailed, and coarser grains might have been bought (or given) at much lower cost?

But this question suggests others, equally difficult to answer. Why does Mali, alone in the Sahel except for Chad, have such a large budget deficit? For Chad the civil war and high defense expenditure are obvious parts of the explanation; Chad's current revenues also have declined in absolute terms. Neither of these factors has been at work in Mali. A conventional local answer to this question is to fault the employment policy of the Malian Government, whereby new high school and university graduates are given jobs in the public sector.^{1/} But this is only to push the question one step back, since this kind of employment policy does not appear to be so common elsewhere in the Sahel, and where new hiring does occur, it does not lead to budget deficit on the Malian scale.

More generally, why have Mali's public expenditures risen so much more markedly than in neighboring states? It is after all interesting to note that

^{1/} The permanent civil service establishment has apparently increased by 6,000 since 1970 - or by 5-6% annually; out of total wage employment of about 87,000 (1973 estimate), some 30,000 were employed by the Central Government. In the Upper Volta, by way of comparison, there were 14,000 agents of the state employed in 1972. Between 1964 and 1970 total employment declined slightly as Government reduced its temporary staff. Since the late 1960's, however, the Upper Volta civil service has - like Mali's - grown by over 6% p.a. It remains much smaller than in Mali, nonetheless.

in Niger and Upper Volta - where military regimes also prevailed in the late 1960's, fiscal austerity has been the rule, and current expenditures have risen much more slowly in those countries than in Mali - approximately 5% annually in Upper Volta, and 6% in Niger between 1966 and 1973, as compared to about 14% in Mali. Upper Volta is a particularly relevant comparison, since the mismanagement of the pre-1966 period had results resembling the Malian situation before 1968. But while austerity policies in Upper Volta turned a persistent budget deficit into substantial surpluses, and maintained in the Upper Volta a relatively small public payroll, Mali's situation only worsened.

There is no simple way to explain these differences. Some general considerations perhaps give part of the answer. Mali, first of all, has the worst of all worlds. She has a stagnant traditional export sector, and no non-agricultural source of export earnings. She grows insufficient food grains in general, and in particular has a peculiar disharmony in rice: relatively little rice is domestically produced and marketed, yet consumption of rice is common, especially in urban areas. This preference for rice consumption without an adequate local production makes Mali unique in the Sahel, except for Senegal (which is only partly Sahelian anyway). Millet is the typical staple grain of the Sahel, not rice.

This attachment to rice has structural or long-term implications. It also helps in explaining the events of 1974.

There is a second factor, also structural in nature. Mali, perhaps more than most Sahel states, is informally embedded in the economies of neighboring states. Ethnic ties, historical links, recent economic interpenetration - all have made of Mali the archetypal open continental State. It has economic, ethnic and physical links westward with Senegal, southward with the Ivory Coast particularly, but also with Ghana and with Guinea; to the east it has intensive relations with Upper Volta and Niger. It has 7,000 km. of open frontiers.

These environmental facts, these ties of various sorts, create a set of basic constraints to which economic policies must conform. Mali, more than any other Sahel State, has not recognized these constraints in its economic policies. Marketing arrangements and price policies are made as though the frontiers were real, and smugglers a bad dream. In effect, Mali's development has been crippled by its inability to work out marketing and pricing arrangements which are in tune with the constraints of its environment.

This is best seen in Mali's food price policy. It was clear from the late 1960's that the food importing (or "deficit") regions of the country (Gao, Bamako, Kayes) - which imported some 40,000 tons annually - were not being supplied adequately from surplus regions. In a very good year (e.g. 1967-68) total cereals production might reach 1 million tons, and some 100,000 tons would be marketed. But in 1969-70, cereals marketings were only 26,000 tons and in 1970-71, only 12,000 tons. Extensive reliance on food aid imports began in that year - with a US food grant of 25,000 tons of sorghum (1971), followed by total foreign food aid of 27,000 tons in 1972.

One reason for this was the bad weather. But there were other factors, the main one being price policy. Prices paid for millet and other food staples were too low to encourage production, and too low to prevent massive smuggling of foodstuffs into neighboring countries. Thus in 1972 the food marketing agency (OPAM) was paying 18 MF per kg. for millet at Segou, while over the nearby Mauritanian frontier it could fetch 100 MF - over five times as much. Government tried to stop the heavy movement of grain to foreign buyers by re-establishing the obstacles to cereals movement which had existed before the 1968 coup, and by returning to OPAM its previously-held monopoly on trade in foodgrains. But this didn't work in 1972, any better than it had worked earlier. According to semi-official estimates, some 50% of marketed cereals output was smuggled out of Mali in 1972. The rationale for all of this was that Government couldn't allow millet prices to rise without upsetting its wage freeze policy.

All of this suggests another factor of a general type which might help explain Mali's economic policies and performance, and in particular its unenviable record as the weakest responder to drought and inflation. This has to do with the political sensitivity of the Mali administration. The Mali Government has tended to be more anxious than other Sahel governments to avoid imposing reductions in income and economic welfare on its urbanized population. This proposition is certainly consistent with its employment policies, its wage responses in the past few years, its price policies for basic staples, its import policies during 1973 and 1974. It is not without irony that the Ivory Coast, under civilian rule and widely presumed to be in especially delicate political equilibrium, raised the retail price of rice to 110 CFA francs per kg. in 1974, twice as high as the price in Mali.

The final factor is less intangible. The Malians have a friendly banker, who has allowed them in effect an open line of credit. The banker of course is France, the line of credit Mali's drawing rights in the Operations Account. The French have so far been willing to allow Mali these abundant credits.^{1/} So in a sense, the Malians have not had to bear the direct and full financial consequences of their economic policies. So long as this continues, Mali can operate as in the past, though presumably countervailing pressures exist in Paris and will increase as the size of Mali's deficit grows.^{2/}

2. World Inflation and Domestic Prices

The 1960's were years of relative price stability in the Sahel as in much of the world. Internal price levels rose at a rate of 3-6% a year in most places, though consumer price indices in some countries show a somewhat lower rate of increase.

Beginning in the early 1970's the pace of increase rose, along with world prices, and in response to drought-related changes in prices of locally-produced foodstuffs. Consumer price indices do not exist everywhere; neither Chad nor Mauritania publishes data on prices of goods consumed by Africans. Where they exist, they are not very reliable, for well-known reasons.^{3/} But they are all we have. What they show for the years since 1967 is summarized below.

(a) Prices were relatively stable in the late 1960's, except in Mali, and even there price increases slowed in 1968 and 1969. After 1970, prices rose much more rapidly.

(b) Since 1970 food prices have risen between 30 and 50%, and general consumer prices between 15% (Upper Volta) and 94% (Mali).

The general price movements, of which these indices are a reflection, have had enormously important and diverse effects within each of the Sahel economies.

^{1/} For a price of course: in 1974 the borrowing rate was 13%. And this is not to mention the non-economic price.

^{2/} It is worth mentioning that Mali is unique in this respect. Access to the Operations Account is not so easy for regular members of the Franc Zone. Franc Zone deficit countries must first get approval of their sister states in the monetary union, before they can draw on the Operations Account. Mali alone need not pass muster before its peers.

^{3/} (a) All these countries have officially fixed prices of staples, and price indices tend to incorporate these official prices;
 (b) budget and staff-poor statistical services usually cannot afford to take many price quotes, or to actually buy goods, or to exercise close supervision of statistical assistants. For this reason, problems of weight and quality change become virtually insoluble for many goods.

Table 33. Consumer Price Indices, 1967-1974
(African-Consumed Goods)
(1967-1969 = 100)

	1967	1968	1969	1970	1971	1972	1973	1974
<u>Mauritania</u>								
(Unofficial Index) ^{1/}	-	-	-	-	-	-	-	-
(Jan. 1973 = 100)	-	-	-	-	-	-	-	-
<u>Mali</u>								
Retail Prices Basic Foodstuffs, Bamako, Free Market.	85	89	94	112	135	146	179	218
<u>Niger</u>								
General Index	97	98	106	106	112	122	137	139
Food Price Index	97	92	112	108	113	134	160	161
<u>Senegal</u>								
General Index	99	100	102	106	110	113	121	139
Food Price Index	99	100	102	106	110	115	124	139
<u>Upper Volta</u>								
General Index	98	98	105	109	111	108	116	126
Food Price Index	98	92	111	118	124	122	149	169

^{1/} Based on price quotations gathered by Government statistical bureaux.
African foodstuffs: January of each year; index January 1975 was 149.

Table 34. Producer Prices, 1970-1975
Groundnuts and Cotton in CFAF/kg.

	1970/71	1971/72	1972/73	1973/74	1974/75
<u>Cotton</u> ^{1/}					
Chad	26	28	29	31	43
Mali ^{2/}	25	25	25	25	37.5
Niger	29.6	30	32	32	47 ^{3/}
Senegal	37.8	31	34	37	47
Upper Volta	32	32	32	35	40
<u>Groundnuts</u> ^{4/}					
Mali ^{2/}	24	24	24	24	32 ^{6/}
Niger	20	21	24	28	55 ^{3/}
Senegal	19.44	23.10	23.10	25.50	41.5
Upper Volta ^{5/}	25.7	25.7	27.1	29.2	34

Source: Annex B, Table I.

1/ Allen - 1st quality.

2/ Malian Francs converted using official exchange rate of 2 MF = 1 CFAF.

3/ Overestimates - groundnuts prices changed over the season from 40 to 55 CFAF/kg.; cotton from 35 to 40 to 47.

4/ Shelled groundnuts except in Senegal where they are unshelled.

5/ Figure subject to considerable margin of error.

See footnotes of production table I in Appendix B.

6/ Estimate based on unshelled price.

They led to a generalized unfreezing of wages - which will be described and discussed later. They also led - along with the direct influence of higher world market prices - to an unblocking of prices received by producers of cash crops. As can be seen in Table 34 (and in Annex B, Table I), producer prices remained extraordinarily stable in most countries until 1973/74, or 1974/75. In the latter year, producer prices rose on a broad front, to an extent without precedent in the past - in many cases by 50% or more (cotton in Mali and Niger, groundnuts in Mali, Niger and Senegal.) As noted in Table 6, (and in Table 46 below) wage rates also rose abruptly in 1972 or 1973. Compared with 1972, statutory minimum wages for unskilled workers in towns more than doubled in Mali, Mauritania and Senegal, and rose by 60% in Niger and Upper Volta.

We will consider at a later stage the income distribution aspects of these wage and producer price changes. Here it is enough to note the unusually rapid upward movement in money returns to the main groups in the money economy.

It is not only returns to factors of production that have been affected by the recent inflationary burst - virtually all prices have changed, and especially some which are critical from the point of view of Sahelian economic development.

(a) Petroleum Prices

Following directly from the crude oil price rises at the end of 1973, local petroleum product prices have all increased. The proportion has varied between products. Kerosene, a widely used home lighting fuel, rose in price by 20% in Ouagadougou, by 46% in Niamey and by 53% in Dakar.

The rise in gasoline prices is shown in Table 35. Prices were raised between 25% and 50% (except in Nouakchott) between 1973 and 1975, with the most common rise being about 35%.

(b) Transport Costs

The rise in fuel prices could be expected to reverberate through the economy, with particular impact in transport. The importance of transport in the Sahel economies needs no stressing. These are vast areas, poorly served with roads. To get from the capital of Mauritania to Nema, in the south-east corner of the country, is a 1,400 km. journey, taking 9 days and costing (for freight) 10 cents US a ton-kilometer. In Chad, transport costs are estimated to be 15% of the FOB price of cotton fiber, 35% of the pump price of gasoline, 55% of the cost of

Table 35. Changes in Pump Prices of Petroleum,
"Regular", Capital Cities, 1971-1975
 CFAF/liter

	1/1/71	1/1/72	1/1/73	9/1/73	10/1/73	10/8/73	12/1/73	1/1/74	2/1/74	3/1975	% increase 1975/1973
Bamako	n.a.	n.a.	n.a.	50				55(12/3)	60(1/7)	68	36
Dakar	55.50	57.10	56.70	58.70 ^{1/} (6/26)				63.70 (12/4)	73.40 (1.89)	73.4	25
Ndjamena	n.a.	n.a.	56	n.a.	n.a.	n.a.	n.a.	65	72	83	48
Niamey	56.60	57.70	57.80	58.50 (7.1)		59.50		66.50 (1/19)	74.5	74.5	36
Nouakchott	50.50	58.1	58.5	61.50				68	n.a.	n.a.	11
Ouagadougou	53.40		55.60				57 (11/12)	64 (1/14)	75.00 (1/31)	75	35

Sources: Gasoline stations and BCEAO, "Les Produits Pétroliers dans l'Economie de l'Union Monétaire Ouest Africain", Bulletin, No. 218, June 1974. This report cites the following prices for regular gas in other countries (CFAF per liter): Accra (March 1974) 48 francs; Lagos: 31 francs.

^{1/} Prices rose to 57.40 on 3/26/1973 and again on 6/26/1973.

chemical (imported) fertilizer and 70% of the price of cement. Transport costs are somewhat less onerous in the other Sahel states, but all the interior states have to bear a heavy burden in transport cost.

Fuel prices do not make up a big share of the total costs of road or rail transport, but they are a significant share of operating costs - a commonly-cited rule of thumb is that costs of gas and tires are about one-third of the operating costs of vehicles in Sahel conditions.

It is in any event not only fuel but the whole range of transport and transport-related costs which has been pushed up in recent months. The following table, for example, gives changes in list price for various vehicles in Ouagadougou. The common increase of about one-third since 1973 is probably representative of prices of similar items in the other landlocked countries.^{1/}

		Table 36. Prices of Selected Vehicles, 1972-1975			
		Ouagadougou			
		1972	1973	1974	1975 ^{1/}
Berliet Trucks	(millions				
GLR, Benne 160 (10 ton)	CFAF)	5.5	6.2	-	8.6
L62 (7 ton)		3.8	4.1	-	5.4
Peugeot 404		1.1	1.1	1.2	1.5
Pick-up					
Renault "Milkilo"		1.4	1.7	-	1.9
(Passenger Transport)					
Donkey Cart	(thousands CFAF)	21.5	23.5	25.5	29.9

Source: Commercial enterprises, Ouagadougou.

^{1/} January.

^{2/} In Ndjamena a Berliet L64, without taxes, sold for 5.5 million CFA francs in 1973; its early 1975 quoted price was 6.9 million. Some vehicles seem to have risen more sharply in price. For example, a Land Rover with standard equipment cost 2.2 million CFA francs delivered in Niamey in early 1973. In March 1975 the cost was 3.2 million.

Railway rates have everywhere moved up, though in general not so much as costs, an issue to which we return below. Passenger fares have risen as illustrated below.

 Table 37. Railway Passenger Fare Changes, 1973-1974

	<u>Second Class Passenger Fare</u>	
	1973	1974
Dakar-Niger Railway (Senegal) CFAF/km.	4.35	4.62
Dakar-Niger Railway (Mali) CFAF/km.	3.65	5.60
Abidjan-Niger Railway (Ouagadougou)		
Voyage Ouagadougou to Abidjan (CFAF)	2,400 ^{1/}	3,200 ^{2/}

Sources: Railway officials in each country.

^{1/} 1972. No rate for 1973 available; probably unchanged in 1973.

^{2/} 1975 rate: 3,840. Price rise even greater than these figures suggest since 3rd class fares have been eliminated since 1972.

Railway freight rates and road transport costs have also risen, though generally by less than other prices.

Internal rates on the Senegalese railway system (Chemin de Fer Dakar-Niger) have gone up by 30-40% since 1973 (see Annex A, Table (ix)). Rates have risen by an average of about 25% on goods moving to Bamako from Abidjan, and somewhat more on shipments to Bamako from Dakar. These rate increases are similar to those imposed in Upper Volta. Road transport charges have moved up less: only 12-32% in Upper Volta and Mali, for example.^{1/}

3. Inflation and Administration.

(a) Budget Effects.

Inflation has many complex effects on the administration of government. Government revenues have tended to rise less significantly than the general level of prices in Sahel countries since 1972, creating obvious budget stresses. Even where revenues have managed to keep pace with price rises, the pressures on government and the priority-setting system is such that wage and salary demands tend to get first attention.

We saw some of the budgetary consequences of this process earlier, in discussing changes in public expenditure patterns. One general phenomenon was noted, which is of particular relevance to the inflationary impact: wages and

^{1/} The average rate per ton-kilometer fixed by the Comité Malien de Transport Routier was raised to 26.40 francs malien in 1974, from the previous average of 20 francs - a rise of about one-third. The 20 franc rate dated from September 1970.

salaries almost invariably rose faster since 1970 than materials and supplies. This declining "coefficient of effectiveness" symbolizes a genuine reality: in inflationary situations accompanied by budget constraints of the kind existing in the Sahel countries, the operating efficiency of administration tends to decline markedly. This is true even where money wages keep pace with the rise of consumer prices. People at work in government offices and shops find themselves without the most rudimentary supplies, without gasoline for vehicles, without the slightest leeway in meeting needs for maintenance and repair of government offices, vehicles, equipment, buildings. Appropriations for supplies almost never rise as fast as other items, if they rise at all. So each inflationary year brings greater need and a smaller volume of real resources to meet these needs.

One Sahel government document, prepared for the 1974 mid-year budget review, summarized its situation as follows:

"Numerous expenditure items have had massive increases since the beginning of the fiscal year because of the worldwide inflation and the rise in the price of petroleum. But Government has not been able to increase appropriations in line with the increased costs. Thus the allocations of gasoline have been reduced in accord with the price rises, so that agencies will remain within their appropriations. The budget appropriation to ... (the Government's electricity corporation) have not been increased despite the rate increase of 12.5% which was imposed at the beginning of the year. The utilization of electricity is difficult to control, so over-expenditure on electricity is highly likely ...".

The same forces are at work on maintenance expenditure. The costs of road maintenance are rising very fast, given the increases in wage and material costs. But appropriations either stagnate or are cut; and even if appropriations remain unchanged, actual allocations for maintenance are often cut, since such appropriations are the first "easy" targets of mid-year or end-of-year budget-cutters. In Upper Volta, in any case, the appropriations for road maintenance was 630 million CFA francs in 1970. It was raised to 679 million in 1971, then cut to 583 million, 400 million and 420 million in 1972, 1973 and 1974. In the 1975 budget it remained some 15% below its 1970 level. Yet during these six years, Public Works Department officials estimate that the unit costs of maintaining roads have tripled.^{1/}

^{1/} The Ministry of Public Works in Niger made a study of changes in road maintenance costs in 1974, which looked at major maintenance inputs - diesel fuel, asphalt, gasoline spare parts, labor. Their estimate is that these costs rose by 25-30% in 1974.

(b) Public Enterprise Price Lags.

In all inflationary situations, prices of public enterprises tend to lag behind those in the private sector, for obvious and well-known reasons. The public enterprises are more directly subject to political control; they deal in mass consumption goods and services, and they are normally unweaned from the Public Treasury anyway.

Public corporations have begun to experience this pattern of events in the Sahel, though it is too soon to see (or know about) an abundance of examples. It appears most clearly in state transport enterprises, particularly airlines and railways. In Mali, the four major state transport organizations have had over 1.6 billion MF in deficits during the period 1970-1974, and the rate of loss seems to be increasing; between them Air Mali and the Malian Railway are responsible for most of the losses.

The same phenomenon is appearing in Senegal. The Senegalese Railway has been running an increasing deficit; in 1971-72 its losses were 300 million CFAF on a volume of receipts of 2.5 billion, while in 1972-73, the losses amounted to 500 million, on receipts of 3.6 billion.^{1/}

A glance at the rate charges on the railways shows why this is so. Table (ix) in Annex A shows the infrequency of rate changes and their smallness. Between 1967 and 1975, rates on the Dakar-Niger Railway, linking Dakar and Bamako, changed only twice, and have risen only about 20% in that period.^{2/} Railway freight rates between Abidjan and Bamako rose at about the same rates. Internal rates in Senegal increased by about one-third for petroleum products between 1972 and 1975, but they actually fell for agricultural goods.

Table 38 gives details of another example - electricity production in Senegal. Between 1973 and 1975, imported input costs rose by 50%, fuel costs by 300%, expatriate supervisory labor costs by some 40% and African supervisory labor costs by 100%. The average cost of generating electricity in Senegal has thus increased by 80 to 120%. Yet consumer rates remained constant (at 39-40 francs per kw) for a representative volume of usage in 1972, rising to 41.6 CFAF at the end of 1973,

^{1/} Senegal 1971-1972, Dossiers d'Information Economique, July 1973; Rapport d'Activité, 1973, Chemin de Fer Dakar-Niger.

^{2/} Actually, rates in 1970 were lower than in 1967, and the rate of increase between 1970 and 1975 consequently higher - 25% to 50% for most commodities.

and then in mid-1974 rising to 63 CFAF kw. - an increase of under 60%. This is certainly better than the Brazilian public utilities used to do, but the pressure against further price rises is immense, and costs are still rising, particularly labor costs.^{1/}

4. The Costs of Development Projects

Price effects have of course ramified through the Sahel economies, affecting costs of development projects and programs. Many different input prices are affected.

One critical set of prices is that of off-farm inputs - fertilizers, pesticides, farm implements, etc. Every Sahel country has extensive data on the recent evolution of these prices. All tell much the same kind of story: fertilizer prices up 100% to 200% in the last two years, reflecting skyrocketing world prices of fertilizers;^{2/} pesticides and herbicides up strongly, but less; and farm implements (hoes, spreaders, etc.) also rising faster in cost than at any time in memory.^{3/}

These are not of overriding significance. Fertilizers, the most volatile of the input items, is consumed in very small quantities (under 10,000 tons),^{4/} and prices to farmers are heavily subsidized. Other chemical inputs are not yet widely used. So the immediate impact on villagers has been slight or non-existent. From the point of view of the economics of certain important development programs, however, these price rises raise doubts about viability. This is true of Chad's cotton productivity program, for example, which involves heavy subsidization and uncertain social returns, even at pre-1974 prices of fertilizers.

A recent study of the evolution of project costs has been made in Upper Volta, for the large Tambao project, which involves the mining and transport of manganese ore. The project has been studied a number of times over the past few years, so it provides a rare and interesting case of project cost changes.

1/ In Upper Volta the cost of fuel used in thermal generating stations rose about 80% between September 1973 and January 1974. The VOLTELEC was able to pass on this increase more or less integrally, since it won a 25% use in basic electricity rates as of March 1974. (BCEAO, "Conséquences prévisibles de la crise pétrolière sur l'économie de la Haute Volta", 1974, mimeo.)

2/ Urea prices rose from \$62 a ton in 1968 to \$225 in early 1974.

3/ See Dossiers Economiques, Niger, 1971-72; Inflation et Sécheresse en Haute Volta; Annuaire Statistique, Sénégal 1973.

4/ Except in Senegal, where some 50,000 tons annually have been used in recent years. All except a few thousand tons, however, are locally-produced phosphates.

Table 38. Index of Production Cost of Electricity,
and Costs of Components, Senegal, 1971-1975
(first quarters)

Base year 1962 = 100

Year	Dakar						Index ^{7/} in other centers
	M ^{1/}	F ^{2/}	So ^{3/}	S ^{4/}	BT ^{5/}	HT ^{6/}	
1971	130.8	4,149	56,489	19,680	1,048	1,076	n.a.
1972	131.0	5,165	56,489	19,680	1,055	1,085	1,061
1973	140.0	5,165	57,084	19,886	1,055	1,079	1,060
1974	158.6	7,707	57,860	21,625	1,240	1,351	1,232
1975	214.9	16,729	76,608	38,185	1,844	2,214	1,667

Source: SENELEC, Dakar.

1/ Index of imported items based on Paris Price Index.

2/ Price of fuel per ton excluding direct taxes (in CFAF).

3/ Monthly base salary for "un agent de maitrise 13^{ème} catégorie" (foreman, presumably expatriate) in CFAF.

4/ Monthly base salary for "un agent de maitrise 5^{ème} catégorie" (foreman, presumably African) in CFAF.

5/ Low Tension = .22 + .19 F/Fo + .10 S/So + .31 S/So + .18 M/Mo.

6/ High Tension = .14 + .32 F/Fo + .07 S/So + .22 S/So + .25 M/Mo.

7/ Index for all centers except Tambacounda.

Table 39. Unit Price Rises, 1970-1974
for Inputs to TAMBAO Project, Upper Volta

Changes in Unit Prices, 1970-1974

Concrete, high quality	+ 25%
Cement	+ 52%
Iron Bars	+ 40%
Rolled Steel (laminés)	+ 48.5% in February; (+93% in June according to Railroad Company - RAN)
Iron Rods	+ 37% in February; (+111% in June, according to RAN)
Steel Rails (366 km)	+ 53% in February 1974; + 78.5% in June 1974.
RR Ties (Traverses)	+ 55.7% in February; (+ 162% in June, according to RAN)
Excavating Equipment	+ 40% in June.
Gas-oil	+ 33%
Fuel Oil (delivered Ouagadougou)	+ 99%

Changes in Prices, January 1972 to June 1974.

RR Locomotive (3,600 Horsepower)	+ 36%
RR Cars (ore)	+ 42%

Source: I.S. 1974.

Between January 1972, when the project was first costed, and February 1974, its estimated cost rose by 16%, and between beginning and mid-1974, it rose another 15%. So the total cost rose by above one-third between 1972 and mid-1974. Since the price of manganese almost doubled in the same period, relative price changes of inputs and outputs have not compromised this project, but the risks are obvious.

Of the many goods and services important in development projects, cement is obviously strategic. Chad presents an interesting example of cement price changes, partly because it also illustrates the impact of higher transport cost in these vast and remote countries. Between September 1973 and February 1974, cement prices in Ndjamena rose an astonishing 50%. This rise reflected higher ex-mill prices and higher transport charges, as well as increased import duties.^{1/} By

^{1/} P. Willaert & R.P. Neeteson, La Formation des Prix des Produits Importés en République du Tchad; Rapport Préliminaire. (Ministère d'Etat Chargé de l'Economie Moderne, du Plan du Commerce et de la Coopération Internationale, Août 1974, p. 26.

January 1975 the delivered price of this standard quality cement in Ndjamena had risen another 50%; between 1973 and 1975 its price had gone from 25,000 CFA francs per ton to 51,000 francs. In Chad, iron bars rose by 66% in the same period, and electricity costs by more than 55% in 1974 alone.

A more general indicator of the pace of construction cost increases is found in Senegal. This is a detailed, carefully worked out construction cost index published by the Ministry of Public Works. It shows the following cost increases for general construction in Senegal (June 1972 = 100): June 1973, 106; December 1973, 116; June 1974, 136; November 1974, 176.^{1/} This is a rise of 60% between mid-1973 and the end of 1974, a rise of over 50% in 1974 alone.

^{1/} République du Sénégal, Direction des Travaux Publics, Commission d'Officialisation des Prix de Gros des Matériaux de la Ville de Dakar. Récapitulatif de l'Index Pondéré d'après la Facturation du Bâtiment type "Perception cerf volant". (miméo. 1975).

CHAPTER V. THE FOOD SUBSIDY CATASTROPHE

The inflation of world food prices had one set of effects that merits separate attention: it led to extraordinary, and extraordinarily costly attempts by Sahel governments to shield their consumers from the higher prices.

This is a story of high drama. Men of power threw as many of the State's resources as they could muster into a struggle aimed at isolating the domestic economy from the price changes occurring outside. In the end they were forced to surrender, after pouring vast amounts of money and energy into the battle.

Great issues of economic and social policy were involved in this struggle. In the end, internal prices came to reflect more accurately world prices and local import costs, and the result was a big increase in consumer price levels, rises in producer prices of cash crops, and a generalized round of large wage increases, and a heavy new burden on government expenditures.

In all the Sahel countries, three commodities weigh heavily in consumer budgets: foodgrains, sugar and cooking oil. The staple foodgrain in most of the region is millet. But in Senegal, Mali and Mauritania, rice is also very important. Sugar is perhaps the single most essential staple for nomads. The place of cooking oil - groundnut oil in the Sahel - needs no comment.

It has long been the customary policy of Sahel Governments, like so many other governments, to keep the retail prices of basic consumer goods at low levels. Until the 1970's, sugar presented no problem; its price was generally depressed on international markets. Nor was groundnut oil troublesome in the 1960's; indeed, removal of special protection for groundnuts by France meant lower prices in West Africa after 1967 - until 1970 in any event.

Cereals were different. Most governments operated schemes whereby imported cereals prices (notably rice) were somewhat above import prices when international prices were relatively low, somewhat below it when prices were high. In rice-growing countries (Senegal and Mali particularly) the aim was to keep the rice price low to consumers without destroying the local producer's incentive for expansion of local production.

When things fell apart in cereals and sugar, and prices of fats and oils also began to soar, delicate issues arose. In the 1960's the Sahel governments had based existing policies of wage restraint on their relatively stable consumer prices. If local prices were to rise in line with world prices, the cost of living, at least in towns, would rise sharply and political and social grievances might be generated or exacerbated. With respect to sugar, the real incomes of the poorest section of the population (the nomads) would be seriously undermined if local prices were set free.

There were risks and disadvantages, of course. If prices stayed high or - heaven forbid - went higher, the resources of government would not be up to the task. Moreover, keeping prices low had the effect of stimulating consumption and increasing imports, hardly a desirable result. Low prices for imported grain discouraged local foodgrain production.^{1/} And smuggling was stimulated by differentials in national price levels. Despite these and other obvious disadvantages, subsidization was continued at high rates.

1. Mauritania

Here's the way the struggle unfolded in Mauritania. The Societe Nationale d'Importation et d'Exportation (SONIMEX) is a State corporation which since the mid-sixties has had a monopoly over the wholesale trade in essential imports - sugar, tea and rice. Sonimex until 1973 was mainly concerned with keeping wholesale prices of staples uniform throughout the country. This policy was much appreciated by consumers distant from the coast - not only in Mauritania but on the other side of Mauritania's frontiers (especially the distant eastern frontiers).^{2/}

When world rice and sugar prices began to move sharply upward in 1973, Sonimex tried to prevent the passing on to consumers of the full increase. Late in 1973, Sonimex's selling price of sugar (wholesale) was 28 ouguiyas (UM) per kg., a rise of 57% over the year. But the cost of a kg. of sugar to Sonimex was considerably higher - about 38 UM. Similarly, Sonimex was selling rice at wholesale for only 40% more in December 1973 than in January 1973. But import costs of rice had

^{1/} It is unlikely that these ideas and objections received much hearing. In Francophone Africa, even more than in most parts of the world, there is relatively little appreciation of the broad "signalling" (or allocative) effects of prices.

^{2/} Because of the smuggling it encouraged, the "one-price" policy was abandoned and modified several times, only to be re-introduced.

doubled during that period. So in 1973 Sonimex was subsidizing rice prices to the tune of 50% of their full cost. The aggregate cost for sugar and rice subsidization was 88 million UM. Sonimex had the good judgment (and good fortune) to make large purchases for inventory in 1973, so it was partially shielded from the world price rises of 1974. Nonetheless its policy of maintaining low domestic prices cost at least 500 million UM in subsidies in 1974 - approximately 18% of Mauritania's 1973 current budget expenditures. And all to no avail. In his Report to the Nation in November 1974, President Mouctar Ould Daddah admitted failure in the effort, after a subsidy by the State to Sonimex of 500 million UM. The continued rise of world prices made the effort impossible, he said. Sugar import costs had, for example, risen to 122 UM kg., while their retail price was fixed at 77 UM.^{1/}

The subsidization policies have led the Mauritanian Government, or at least encouraged it, to take a series of new policy initiatives in the marketing field. Sonimex in 1974 was given its old monopoly over sale of textiles, for example. And in March 1975 there was announced a new policy for trade, involving a State-induced restriction of competition.^{2/} The traders, and the trading system, have apparently borne much of the blame for the failures of the misguided policy adventure in price subsidization.

2. Senegal

In Senegal the scale of the consumer protection operation was grander than in Mauritania. In the period October 1973 to September 1974, subsidies on rice, sugar and cooking oil amounted to almost 12 billion CFAF - an amount equal to almost one-quarter of Senegal's 1973 recurrent budget, and twice as much as the budgeted development expenditure for that year. It was only under the certainty

^{1/} Actually, the Government tried to raise the retail price of sugar after the President's speech. It was raised to 109 UM a kg., but the ensuing protest was sufficient to bring it down to 77 UM within a week. In March 1975 the official price of sugar was still 77 UM a kg. in Nouakchott.

^{2/} "In order to fight against speculation in prices and break the scarcity psychosis for certain basic goods, which is encouraged by unscrupulous traders, a new selling policy has been established by Sonimex. Each region receives a quota of products to distribute to "listed traders", the list to be established by regional authorities. In order to implement this new policy, Sonimex has purchased trucks so as to remedy supply difficulties. It has also built up its stocks of rice, sugar and tea. Thus by reducing to a minimum the number of middlemen the selling price of sugar and rice were, during the year, made the same in several localities..." Government announcement, mimeo.

of most dire consequences that the Government modified this policy late in 1974; if it had continued to maintain the three main consumer goods at their October 1974 levels, the subsidy cost at prevailing (1974) world prices would have been some 27 billion CFA francs for the year 1974/75 - an amount equal to more than half the total budget! In November 1974 the Government of Senegal therefore modified its subsidy policies, announcing a new policy of "honest" or "true" prices.^{1/} Subsidies on rice were dropped altogether. Subsidies on sugar were reduced by two-thirds, and those on cooking oil by 50%. Domestic rice prices then rose by 70%, sugar prices by 88%, edible oil by 33%. If import prices of these commodities had remained at their October 1974 level, the subsidy cost for 1974/75 would have remained high - almost 7 billion CFAF - still an amount greater than the development budget. But world sugar prices have been declining, so the cost this year will probably not reach the 7 billion CFAF figure.

These subsidies, it should be noted, were mainly financed by resources generated in the groundnuts sector - i.e. by taxing groundnut growers. It is hard to find a clearer example of peasant producers financing urban consumption. Table 40 shows how this worked.

Table 40. Financial Operations of the Caisse de Stabilization des Prix (CPSP), Senegal, 1973-1975.
(billions CFA francs)

	1973/74	1974/75 (forecast)
<u>Receipts</u>	17.9	17.5
Transfers from ONCAD (of which groundnut trading)	16.8 (15.3)	16.0 (14.4)
Parafiscal	1.1	1.5
<u>Expenditure</u>	13.8	12.3
of which		
Agricultural Program	1.3	2.8
Subsidies	11.6	6.7
Rice	(5.0)	(-)
Oil	(4.5)	(2.2)
Sugar	(2.1)	(4.5)
Development Expenditure	0.7	2.0
Overall Surplus/Deficit	4.1	5.2

Source: B 1975.

^{1/} In July 1973, however, there had been the first announcement of the policy of honest prices.

3. Mali

None of the Sahel governments was immune to this unhappy disease. Mali suffered from it on the Senegalese scale. All basic consumer goods have been controlled by the Government in Bamako for many years. Government policy was straight enough: hold the line at 1972 prices. Hence retail prices were fixed at their 1972 level. But while world prices ran away, particularly in 1974, the Government made large purchases in 1973 and 1974, and sold at these derisory 1972 prices. In 1974 rice was retailing at 85 MF kg., 35% of its true import cost (235 MF kg.). Other grains were selling at 37 MF kg., when they cost 100 MF kg. to import.

As a result of these trading policies, the State trading companies, SOMIEX and OPAM (Societe Malienne d'Importation et d'Exportation, and Organisation de Produits Alimentaires Malienne), incurred huge losses. Some of these were financed by trading profits from export crops (cotton and groundnuts), but most were financed by recourse to bank credit. In 1973-74 OPAM received bank credits totalling 25 billion MF, of which more than two-thirds probably represent losses due to subsidies. The 1973-74 losses of SOMIEX, which distributes foodstuffs (OPAM does the importing) were probably 3.5-4 billion MF. Total losses due to price subsidization in 1973-74 were thus close to 20 billion MF - an amount equal to three-quarters of locally-raised budget revenues in that year.

To cut these losses, and to prevent smuggling, prices were raised in the summer of 1974. But subsidization continued, because of the continued rise of import prices.^{1/} Table 41 shows the extraordinary size of the sugar subsidies. In 1974 the subsidy on rice alone amounted to some 7 billion Malian francs, equal to 25% of Mali's estimated 1974 budget revenues! Losses on sugar sales in late 1974 were some 700,000 MF a ton (700 MF a kg.), sugar which cost 1.1 million MF per ton was retailing for 435,000 MF. The losses on an annual average consumption of 30-35,000 tons were obviously astronomical. The following table shows how this sugar subsidy evolved since 1970.

^{1/} Sorghum retailed for an average of about 50 MF in 1974, while its import cost was 90 MF. Rice import costs averaged 235 MF kg., while retail prices were 85-100; some 55,000 tons were imported. So the probable 1974 subsidy on rice amounted to some 7 billion MF. The 1974 budget revenues were 28 billion MF.

Table 41. Mali: Changes in Sugar Costs and Retail Prices,
1970-1974
(Malian Francs per metric ton)

	1st January 1970		1972		November 1974	
	Cubes	Granulated	Cubes	Granulated	Cubes	Granulated
Port Price	128,000	87,500	158,065	118,525	830,000	758,000
Transport	34,349	34,188	33,669	28,786	40,780	35,170
Insurance and Marketing Costs	18,592	13,179	28,186	21,143	123,460	112,730
Total Cost	180,941	134,867	219,920	168,454	994,240	905,900
Profit Margin (13%)	18,777	13,385	26,057	20,055	127,130	115,940
Delivered Cost, Retail	199,718	148,252	245,977	188,509	1,121,370	1,021,840
Retail Selling Price	125,000	90,000	250,000	190,000	435,000	300,000
Subsidy Required (per ton)	74,718	58,252	-	-	686,370	721,840

Source: Office de Surveillance des Prix.

One result of all this was, of course, the stimulation of smuggling. If the tonnage figures in Mali's 1971 Annuaire Statistique are to be believed, only in 1968/69 and 1971/72 were so much as 30,000 tons of sugar imported into Mali. But the unofficial estimates for 1973 and 1974 were 30-35,000 tons, which suggests some subsidization of smuggled exports. It also suggests how price distortions can confuse social priorities.

In March 1975 the landed price of rice was about 210 MF kg. Transport costs from Dakar to Bamako added 40 MF kg. Total cost was thus about 250 MF kg. The retail price in Bamako was fixed at 115 MF kg. So even in the Spring of 1975 rice consumption was being subsidized to the tune of 130-135 Malian francs per kg.

What is particularly revealing is that until February 1975 the price had averaged 87 MF per kg., i.e. Mali held out longer than Senegal or Mauritania in the struggle to contain rice price rises. Indeed it appears that Malian policy-makers remained unreconstructed to the end, as it were. They allowed a price rise in February 1975, not because they had decided that it was unwise to subsidize rice prices at such extraordinary levels, but because prices paid to local rice

producers had been raised. The Council of Ministers had decided in August 1974 - when the decision to raise producer prices had been taken - to allow retail rice prices to rise to 115 francs per kg. But they did not apply this decision until February 1975. They ultimately did so because they were unwilling to take "losses" on locally produced rice, as they were on imported rice.

4. Upper Volta and Niger

The food price policies of the other Sahel states seem to have been much like those of Mauritania, Senegal and Mali. But they had fewer resources to throw into the struggle, they did not consume much rice and hence were spared the most expensive subsidy demand, and they seem to have relied more on imported food aid than on purchased imports, so that their domestic resource cost was much more limited.

The Upper Volta normally imports negligible quantities of rice - e.g. 3,000 tons in 1972. Her wheat imports, however, are more substantial - about the same as Mali's (25,000 tons in 1972), and Upper Volta's sugar imports are also important - about 13,000 tons annually in recent years.

Bread and sugar are therefore the two main imported staples of the Upper Volta, as they are in Niger. In Upper Volta there has existed since the mid-1960's a stabilization fund for each of these commodities - the Fonds de Régularisation du Prix du Pain and the Fonds de Régularisation du Prix du Sucre. In Niger, there is an Office de Produits Vivriers du Niger, charged with marketing basic foodstuffs.

The Upper Volta Government apparently decided, when wheat prices began their ascent on world markets, that extensive subsidization of local prices of bread could not be afforded. Thus no action was taken and local prices of bread rose substantially over the years 1972-1974. In Ouagadougou, the price of bread rose from 84 CFA francs per kg. in 1972 to 100 in 1973 and 125 in 1974. (In Niger, however, the retail price remained constant over the period in question.)

With respect to sugar the Upper Volta Government did attempt, at least in 1974, to moderate consumer price increases. The wholesale cost of sugar delivered in Ouagadougou rose from about 100 francs CFA per kg. in mid-1973 to 172 francs in mid-1974. The retail price should have risen from its July 1973 price of 110 francs CFA to about 200 francs. Instead, the official price was set at 150 francs CFA. The probable cost of this subsidy operation was 400-500 million CFA francs in 1974,

equivalent to about 5% of the 1974 recurrent budget. Though this is a great deal of money, obviously much less was lost by the Upper Volta in pursuit of sugar price containment than Senegal and Mali lost in their attempt to keep down local rice prices. The Upper Volta Government let the price of sugar rise to 250 francs CFA per kg. in January 1975, but as Table 41 suggests, this price also involved massive subsidy.

The general confusion in local markets, the rapidity of price rises, and the enjoyment of windfall profits by some private traders, spurred the Upper Volta Government, like the Mauritanian Government, to action against private traders. In October 1974 the Government gave to the Regional Development Organizations ORDs, a monopoly on purchase of all marketed agricultural output. While not fully effective, it has nonetheless created a malaise within the distribution sector and has left unresolved many questions about the sharing of responsibility for trade between private and public sectors.

In Niger and Upper Volta the subsidy problem also arises in somewhat different context. Since 1971 there has been in existence in both countries a cereals project, funded by AID. The basic idea of the project was to create a stable market for foodgrains, and one that would operate at price levels remunerative for producers. The two governments, however, have from the start insisted on setting prices at politically desirable levels, not at "fair market levels". In 1971, for example, the first year of the program, the Niger Government fixed the price of PL480 sorghums at 11 CFA francs per kg., well below the market price for local sorghum. In 1972 they raised it to 13.5 francs, and in 1973 the target price was 15 francs. But this was a drought year, and the Niger and Upper Volta Governments were extremely reluctant to raise the price. In fact it was reduced to 10 francs CFA francs per kg. in Niger and 13.5 in Upper Volta. This was in the face of open market prices of 40-80 CFA francs per kg. The result in both countries was that the cereals agencies could not maintain stocks, people with access to PL 480 grain probably ate better than usual, and the market in both cases was upset, not stabilized. Unlawful kinds of operations were strongly encouraged.

In 1974 government officials in both countries admitted the mistake of setting grain prices below the market. But they still couldn't set 1974 prices

at market levels. The average 1974 market price for sorghum was in the neighborhood of 40 CFA francs per kg. in Niger. The officially imposed price in Niger was 20 CFA francs per kg., and in Upper Volta 22 francs. The reason given was the same in both countries: the fear of seeing cost of living rises spark wage demands and wage increases.

Charitably disposed observers can sympathize with the intentions of the Sahel governments in their price subsidization policies. They are certainly not the only governments - in poor or rich countries - to pursue such policies.^{1/} They thought it best to avoid unsettling wage changes. They believed the world market prices would fall back, and subsidization would not be necessary for long. But in the event they guessed wrong, and the consequences of these policies were truly catastrophic. They transferred vast sums of money from the agricultural sector to the urban sector, and from the most productive component of the agricultural sector (export crop growers) to others. They wasted potential development resources on a grand scale. The incentive effects were bad throughout. Groundnut and cotton growers were discouraged from expanding production, consumers were encouraged to consume the highly subsidized imported staples, smugglers were incited to accelerate their transfer of subsidized commodities across neighboring frontiers. And when it was all declared a failure, governments tended to blame the existing distribution system and private traders for at least part of its failure.

In one sense, nevertheless, the food subsidy adventure may have had important positive effects. Political people and officials alike, seared by the experience, may now have some greater receptiveness to new policy initiatives in the area of

^{1/}An interesting African example is Zambia, which in November 1974 also announced that it was allowing prices of staples (flour, cooking oil, soap) to rise, since controlled price levels were below costs. The price increases were cancelled after one week, because of the strong protests which ensued.

price policy and marketing. A lot of people have certainly learned some basic lessons in price behavior. Some loosening of old attitudes and policies seems to have resulted, some questioning of conventional and strongly rooted preconceptions. If this is true, it might almost make the 1974 subsidization experience worthwhile.

CHAPTER VI. WHO HAS BEEN HURT?

All events - earthquakes and peanut price increases alike - touch the lives of people and institutions in different ways. This is obviously true of drought and inflation, the Sahel's main economic events of recent years.

With respect to the impact of the drought on the Sahel and its people, the differential effects were very pronounced.

1. It is by now rather banal to observe that the drought affected some of the Sahel countries more than others, because of their different locations. Table 42 sets out the differences in question. It is obvious that Mauritania, Mali and Niger are the most "Northern", the driest, the most affected by drought. Upper Volta and Senegal, with 80-90% of their territory in areas which normally get more than 500 mm. of rain annually, are at the other extreme.
2. There is a related factor making for differential impact: the rainfall and climatic variation within each country, which makes for severe intra-country differences in rainfall, harvests, access to money income and so on.

These intra-country variations can be extremely large, as Table 43 illustrates. It shows how sparse the rains have been in the North of Senegal, even in 1974, a year of good average rainfall. In Mauritania, 1974 rainfall was generally good, but major oases, like Atar, were suffering severe drought.

This means that drought is inherently inegalitarian in its incidence, and that to a considerable degree, incidence is a function of location. Senegalese and Voltans in general were less damaged and, within each of those countries, people in some zones lost everything, while others proceeded untouched.

3. Animal-raising people were more hurt than any other socio-economic group. Herders were afflicted with hunger, increased vulnerability to disease, forced movement from traditional places of residence or transhumance. Virtually no wage earners endured this kind of privation, and relatively few farmers. Moreover, most farmers lost only current income; herders lost their capital stock.^{1/} The drought

^{1/} The same loss of capital stock would of course affect sedentary farmers who owned cattle and lost them in the drought.

Table 42. Sahel Countries - Area and Population by Agroclimatic Zone
(1970 estimate)

	Chad	Mali	Mauritania	Niger	Senegal	Upper Volta	Total
<u>Total Area</u>							
(millions km ²)	1.28	1.21	1.08	1.27	0.20	0.27	5.31
<u>Rainfall (% of area)</u>							
Saharan Zone (0-250 mm.)	51	44	71	60	-	-	52
Sahelio-Saharan Zone (200-500 mm.)	10	27	15	30	21	8	21
Sahelio-Sudanian Zone (500-900 mm.)	35	20	4	10	61	77	23
Sudano-Guinean Zone (900-1,200 mm.)	4	9	-	-	18	15	4
<u>Population</u>							
Population living north of 600 mm. isohyetal line (millions)	0.7	2.0	0.4	1.6	0.8	0.6	6.1

Source: S. Bethke, Sahel-Sudano Rainfall, 1974 (FAO/WFP, Rome, 21 October 1974, mimeographed).

Table 43. June-September Rainfall 1972-1974,
as percentage of Normal
in three Climatic Zones, Senegal

Zone	Normal	1972	1973	1974	No. of Reporting Stations
North	100	37	44	61	4
Central	100	50	53	78	3
South	100	69	92	94	4
Senegal	100	58	73	83	11

Source: S. Bethke, Sahel-Sudano Rainfall, 1974,
 FAO/WFP, Rome, 21 October 1974, mimeo.

for most farmers involved few non-reversible losses. For herders it will be years before they can reconstitute their herds, and many will not try.

4. Within the animal-raising community, the drought appears to have affected some groups more than others. Those nomadic groups which traditionally move in relatively restricted areas suffered much greater losses than more mobile groups, accustomed to long transhumances. In general, the distinction is between Tuareg (or Maures in the West) and Fulani. The Fulani are widely believed to have lost fewer animals than the Tuareg, in part because of their generally greater mobility, in part because of their wide network of kinsmen scattered throughout West Africa, including many across the frontiers of the coastal states. This proposition is asserted in the European Development Fund report, Etude sur la Situation Actuelle de l'Elevage dans le Sahel (1974), and is subscribed to - among others - by an ORSTOM geographer currently studying the matter in the Upper Volta.

Such scattered information as is available on the ethnic incidence of the drought gives some slight support to this hypothesis. Table (xi) in Annex A shows the number of herder families seriously hit by the drought in Niger by ethnic group and department. In the Departments of Dosso and Diffa, which are Fulani-populated, a smaller proportion of families were "drought victims" ("sinistrés") than in the other Departments. The two mainly Tuareg-populated Departments (Agadez and Tahoua) had much higher proportions of people affected - 80% in Agadez and 50% in Tahoua.

5. It has been suggested by some observers that the drought had a strongly egalitarian impact on all the pastoral societies of the Sahel. The argument is that cattle ownership is highly concentrated in these societies. Many men are very poor. They have no cattle of their own, but simply look after animals belonging to others. To the extent that this is true, the drought, with the new herd structure it led to in many areas, exercised a levelling influence on the nomadic societies in particular.

There appears to be little Sahel evidence on cattle ownership patterns. East African studies among the Masai do show high concentration of ownership. According to one such study, one-third of the pastoralists (heads of family) owned two-thirds

of the cattle; some individuals owned 200 beasts, others none at all.^{1/} These studies also suggest much social mobility - disease, drought and cattle theft making rich men poor overnight.

Other views have been put forward on the distribution effects of drought on pastoralists. David Dalby, for example, suggests that richer herders can recover from disaster losses more quickly because their herds are bigger.^{2/} Other observers stress the drought's impact on small farmers: since such farmers can only save by accumulation of cattle, drought-induced slaughters (at low prices) wiped out small farmer savings for the benefit - it is argued - of traders and consumers, mainly civil servants.^{3/}

Although the state of knowledge would not seem to warrant any strong position on this matter, and there are undoubtedly big differences between regions, two factors suggest that on balance the drought's impact would be of a levelling character: first, the incidence of drought is geographically-specific; given locations are affected with equal severity, so that in badly-hit areas, herds of the whole group would be decimated, those of rich and poor men alike. And secondly, cattle owned in areas of sedentary farming were less afflicted than those further north, and these cattle would also tend to be more mobile, so losses of savings in this form would probably be relatively low.

^{1/} H.E. Janke and H. Ruthenberg, "Organisational Aspects of Livestock Development in the Dry Areas of Africa" in Second International Seminar on Change in Agriculture, Reading, England, 9-19 September 1974. The authors point out that there are many redistributive mechanisms at work within pastoral society which reduce the significance of differences in property ownership: rich men employ herders, who receive payment in milk and sometimes a calf; ceremonial slaughters are plentiful; there is not much difference in patterns of consumption between rich and poor; and social mobility is great.

^{2/} David Dalby, in D. Dalby and R. Harrison Church, (editors) Symposium on Drought in Africa (London, 1973), p. 20.

^{3/} J.F. Barres, Analytic Bibliography on the Sahelian Zone, FFHC/AD, Rome, mimeographed.

6. Drought is something that happens in rural areas, to rural people, and the Sahel has provided no exception to this rule. All sorts of distinctions among the rural populations would have to be made if the drought's rural impact were to be systematically and fully appraised. The problem of classification presents some untidy problems. Agricultural activity in the Sahel is not generally so specialized as it is in the coastal or forest countries. In the Ivory Coast, Ghana and Nigeria a group of farmers can be identified who are mainly growers for the market. The same is true of parts of Senegal, with respect to groundnuts. But for most of the Sahel, the money economy is not so well developed, cash cropping not so specialized. Farmers grow some crops for marketing - usually not much - and devote most of their time and other resources to producing crops for self-consumption. Some have animals, most do not.

These three elements of rural activity can at least be distinguished: cash crop production, subsistence production, animal raising.

Taking the animal-raising activity first, it is likely that cattle-owning sedentary or semi-sedentary farmers were the least affected by animal loss. They are located south of the 500 mm. rainfall line. Their access to water and pasturage was reasonably easy. Such herders, however, are a small proportion of the total animal-raising population. In Mali, for example, about 80% of the cattle are raised by nomadic and semi-nomadic people (40% by Fulani, 30% by Tuaregs, 10% by Maures), but these groups make up only 10% of the population.

The degree to which farmers were hurt in their subsistence-oriented activities or, more precisely, the degree to which subsistence-oriented farmers (the majority of the rural population) suffered depends on two main factors: where they are located, and their ease of access to relief supplies.

If we think of a subsistence farmer as an abstract "ideal type", producing only for self-consumption, paying no taxes and purchasing no off-farm inputs or consumer goods from the outside, then clearly his loss of income from drought would be measured by the extent to which his output declines from "normal", minus such relief supplies as he would get. To the extent that drought-induced crop failure results in disappearance of the community's food reserves, the community of subsistence farmers as a whole experiences increased uncertainty and moves to a lower level of general welfare.

This simple model can obviously be made much more complex by introducing changes in the level and source of tax income, the consumption of purchased inputs and goods, etc. But it is difficult to say anything very concrete along these lines.

The main point about the economic impact of drought on the "subsistence sector" is the relatively easy reversibility of most of the negative effects. Except for the possibilities of a post-drought period of rebuilding grain stocks, during which the people will feel particularly vulnerable to rainfall failure, the arrival of good rains and a normal harvest brings the community back to its previous level of economic welfare.

What the drought may do, of course - and about this there is very little information - is persuade some villagers to abandon village life. It may be the last straw for many young men, who will stay south, or move there. Since the drought very probably did stimulate migration into paid employment in the coastal countries, particularly from Mali, Upper Volta and Niger to the Ivory Coast, this longer-term "intangible" effect may be very important.

It is possible to be more specific about the rural community in its cash crop growing aspect, about the impact of the drought on those producing for sale.

The drought, combined now with world inflation, weighed heavily on this group. Rural money incomes remained stagnant or declined, while prices of things farmers buy rose more sharply than in the pre-drought period. Many farmers reduced their commitment to cash crops and turned more land and time to food crops. The money economy regressed.

Table 44 reassembles previously given data to show the evolution of producer money returns and prices since 1970 for the two main Sahel cash crops - cotton and groundnuts. Given the considerably different prices chosen to represent producer prices, and various divergencies on estimates of marketed output, these indices may differ in detail from some made elsewhere - some IBRD estimates, for example. But there is little dispute possible about their general tendency.

The table should be interpreted with care. It shows only changes in producer proceeds and prices. It says nothing about absolute volumes. This can lead to misinterpretation. For example, the Upper Volta groundnuts income index shows considerable improvement since 1969. A glance at Table I Annex B shows, however, that the total revenue in question is very small; only about 10,000 tons of

Table 44. Indices of Producer Proceeds from Groundnuts and Cotton, Producer Prices and Consumer Goods Prices, 1969-1975

(1969/70 = 100)

		1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
<u>Groundnuts</u>							
Mali	Proceeds	100	129	106	88	76	153
	Prices	100	100	100	100	100	133
Niger	Proceeds	100	89	106	89	23	10
	Prices	100	112	117	133	156	306
Senegal	Proceeds	100	82	162	100	118	-
	Prices	100	100	128	128	141	229
Upper Volta	Proceeds	100	134	139	235	253	309
	Prices	-	110	110	114	112	144
<u>Cotton</u>							
Chad	Proceeds	100	80	97	93	103	137
	Prices	100	100	108	112	119	165
Mali	Proceeds	100	142	179	174	106	242
	Prices	100	111	111	111	111	167
Niger	Proceeds	100	95	63	63	13	158
	Prices	100	105	106	113	113	166
Senegal	Proceeds	100	97	103	161	188	274
	Prices	100	100	82	90	98	125
Upper Volta	Proceeds	100	60	78	89	83	101
	Prices	100	100	100	100	110	126
<u>Consumer Price Index, Capital City</u> (1970=100)							
Mali ^{1/}		100	121	130	168	194	-
Niger		100	105	115	128	137	-
Senegal		100	106	114	135	147	-
Upper Volta		100	102	99	107	116	-

Source: Annex B, Tables I, VIII.

^{1/} Foodstuffs only.

groundnuts were marketed annually between 1967 and 1972. A rise to 16,000 tons explains the jump in the index after 1972. But in terms of absolute income, it is still terribly low.

Nonetheless, indices are supposed to show changes and nothing else, so they should not be faulted for failing to show other things. The indices in Table 44 show that the growers of these important crops did very badly in terms of money income: groundnut growers in Mali, Niger and - a little less clearly - in Senegal; cotton growers in Chad, Mali, Niger and Upper Volta. Secondly, the consumer price series given at the bottom suggest that growers of these crops did even more badly in real income terms.

An assessment of trends in producer welfare should also take into account the movement of producer prices. Producer incomes only tell us what has happened to aggregate payments to growers of the crop as a group. If producer incomes rise because new growers have entered, the existing producers may not be better off at all. Prices, which tell what is being paid for a unit of land and labor devoted to the crop, help us to get at this dimension of the problem.

In this respect, the situation has been worse than with respect to proceeds for Sahel cash crop producers. The Table demonstrates the point already made frequently - that producer prices rose very little in the 1970's, or indeed in the 1960's. It is not until the 1974/75 crop year - that is, this year, that prices really rose significantly, although in a few cases (Senegal and Niger groundnuts, for example), the prices paid between 1970 and 1974 were well above their level of the late 1960's.^{1/}

Table 46 brings together proceeds from individual crops into a set of indices for total farmer incomes from main cash crops, by country. The table is on a 1967-69 base to give a little more historical depth and to show more clearly the movements of the 1970's. It shows changes in the statutory minimum wage, and consumer prices; where possible or meaningful, the Table also gives real income estimates for farmers and wage earners. Except in Mali and Upper Volta, farm incomes - even in money terms - were appreciably below their level in 1967-1969. In Senegal, during the 1970's (except for 1971-72) real farm incomes never reached much more than 80% of their 1968-69 average, and the same was true in Niger.

^{1/} These, however, were lower than they had been in the early 1960's.

Farm incomes rose most (in money terms) in Mali, but so did consumer prices, and there is no way to accurately deflate the farmer money income series. The Upper Volta series shows slight reductions in real farm incomes during the 1970's but the consumer price series there is suspiciously stable, and the retail price decline of 1973 - unique in West Africa - raises particular doubts.

The general conclusion is that cash crop producers suffered a substantial decline in real incomes in the 1970-74 period; the extent of that decline varied between crops and countries, as indicated in Tables 44 and 46. The declining real return to cash crop growing has everywhere been a strong contributory factor to the movement away from export crops to expansion of food crop production which characterizes the present agricultural situation. It is one of the factors which led to the very large producer price increases in the 1974/75 crop year - increases, as the Table on page 17 shows, bigger than anything in the past. In 1975 the Sahel's cash crop producers should enjoy money and real incomes well above anything they have known in recent years.

7. Wage earners (modern sector) as a group were hurt least of all by the drought. Table 45 assembles wage and price data found in the country tables (Annex B, Table VIII). Table 46 shows "real wage" movements, based on statutory minimum wages. The following main points emerge:

(a) Wage earners as a whole seem to have done better than producers of cash crops, at least until 1974. But they did not do all that well either. The main increases came at the end of 1974, when governments were forced to reduce their subsidization efforts with respect to food. The wage increases thus followed large food price rises, and were intended as compensation for these rises.

(b) The increase in the SMIG was by far the largest wage rate increase in the wage structure. This represents governments' attempts to protect the lowest paid workers. What is not clear, however, is the extent to which the SMIG changes in 1973-75 represent effective changes. Wage studies in the late 1950's and early 1960's indicated that most wage earners were near the minimum rate. In the private sector, however, there had probably been an upward movement in the wages of the lowest paid by 1972, since legal rates moved so little during the 1960's, and many modern sector employers, in the absence of SMIG changes,

raise wage rates voluntarily.^{1/} It is probable in any case that two main groups benefitted from the the new SMIG. One is non-established or "auxiliary" workers in the Civil Service ("auxiliaires"), many of whom have little education or skill and are clustered at the low end of the wage structure. For example, in Niger in 1973, there were some 11,000 workers employed in the public sector, of whom half were "auxiliaires". Of the auxiliaires, 10% were earning close to the minimum wage (under 6,000 CFA francs per month). About two-thirds earned less than 16,000 per month. Among established civil servants ("fonctionnaires"), only 5% earned less than 16,000 monthly.^{2/}

In the Upper Volta in 1972 there were some 14,000 public sector civilian employees, 9,500 of them "fonctionnaires", 4,500 "auxiliaires", or - as they are called in Upper Volta, "temporaires". Of the total, almost 9,000 (68%) were in the lowest (D and E) categories. These are the groups that have benefitted most from recent wage changes.^{3/}

The ^{other} beneficiary group is in the construction and transport industry, heavy employers of unskilled workers. In Niger, for example, 43% of the labor force in the construction industry was paid near the statutory minimum in 1970, and about the same proportion in transportation.

(c) Wage rates of skilled and educated people generally rose very little during this period. Civil servants at higher ranks - the majority of educated workers - have seen their living standards seriously eroded by inflation. Indeed, if we

^{1/} However, in Niger in 1970, 32% of the 8,500 recorded African wage earners in the modern sector were earning less than 6,000 CFA francs per month (exclusive of bonuses, overtime and family allowances). The minimum wage was 5,200 francs. (H. Wiesler, Emploi et Salaire dans la République du Niger (1973).)

^{2/} Wiesler, Ibid. Also, SEAE, Dossier d'Information Economique, Niger, 1971-72, Annex 12, which shows that in 1972, 57% of the auxiliaires were in the equivalent of the lowest (D and E) cadres, as compared to 17% of the "fonctionnaires".

^{3/} A.Hibon, La Fonction Publique Voltäique: ses Structures; Essai de Prospective (UN Report, 1973). It is not universally the case that the public sector employs a substantial body of low paid workers. At least it does not seem to be so in Senegal. Payroll data for 1974 in that country reveals only 3,600 employees receiving under 12,000 CFA francs per month - the lowest salary tranche - out of a total payroll of 42,000.

Table 45. Wage Changes by Skill Level, 1967-1975
(1967-1969 = 100)

	1970	1971	1972	1973	1974	1975 ^{1/}
<u>Mali</u>						
Unskilled Rate (SMIG)	100	100	100	136	193	217
Middle-level Manpower Rate ^{2/}	100	100	100	100	111	116
University Graduate ^{3/}	100	100	100	103	109	115
<u>Niger</u>						
Unskilled Rate (SMIG)	100	100	100	100	140	160
Middle-level Manpower Rate	100	100	100	100	100	112
University Graduate	100	100	100	100	100	104
<u>Senegal</u>						
Unskilled Rate (SMIG)	100	100	100	106	145	212
Middle-level Manpower Rate	100	100	100	100	120	136
University Graduate	100	100	100	100	109	121
<u>Upper Volta</u>						
Unskilled Rate (SMIG)	99	99	100	109	134	150
Middle-level Manpower Rate ^{4/}	n.a.	n.a.	100	100	108	175

1/ January.

2/ Typical rate, middle-level worker, Civil Service (except for Upper Volta, where it is private sector rate.)

3/ Starting rate, University graduate (Licence), civil service.

4/ Actual rate, one employer, private sector.

Source: Annex B, Table VIII.

take seriously the apparently unchanged wage rates for senior civil servants, then it would imply a brutal cut in real income over the past decade, and particularly in the past three years. Civil service wage structures remained basically unchanged between 1960 and 1972 in the Sahel countries. Then, with the price rises of 1973 and 1974, changes were made, but small increases were granted to those at the top of the wage ladder. As Table 39 shows, between 1972 and 1975 university graduates received increases of only 15% in Mali, 4% in Niger and 21% in Senegal,^{1/} while consumer prices rose by 50% in Mali, 15% in Niger and almost 25% in Senegal. Actually, the picture is worse if it is recognized that since the late 1960's, consumer prices have more than doubled in Senegal and Mali, and increased by some 70% in Upper Volta and by 40% in Niger. Rates of pay of civil servants remained unchanged until 1972.

One distinction should be made. Erosion of wage rates has taken place in the sense that the premium paid for education in the Civil Service has fallen drastically over the past 15 years. But this doesn't mean that individual civil servants employed in these positions have suffered a decline in real income. Civil service incremental scales favor the more highly paid workers, and these have

^{1/} The Upper Volta is omitted from Table 39 because of data uncertainties. Its wage policy history is as follows. Since the early 1960's there have been five major changes in civil service wages. (1) In January 1967, as part of the new austerity regime, wages of established (permanent) civil servants were cut 10%. Family allowances were also cut, from 1,500 CFAF per child per month to 700 CFAF, the rate prevailing in private sector employment. (2) The salary cut was restored in January 1969. (3) In December 1969 salaries were raised 2.6% across-the-board. (4) In December 1972 civil servants receiving less than 10,000 CFAF monthly received a 10% increase, those between 10,000 and 30,000 received 5%; those paid over 30,000 a month were raised 3%. (There is contradictory testimony about the 1972 wage increase which I could not sort out for lack of time. Some sources said that the December 1972 salary increase consisted of a rise in the value of an index point from 1990 to 2050, which would give a different pattern of increases than that mentioned in the text. The effect of the index point revalorisation would be to reward the highly paid (those with higher indices) much more than the lower paid.) (5) In April 1974 each civil servant received a flat rate increase of 2,083 CFAF monthly, plus 2%.

Table 46. Changes in Farmer Incomes and Urban Wage Rates, 1967 - 1975
(1967-1969 = 100)

	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
CHAD								
1. Index of farmer incomes from main cash crops _{1/}	82	118	91	72	88	85	93	124
2. Index of statutory minimum wage rate, unskilled labor _{2/}	100	100	100	119	137	137	137	-
3. Consumer Price Index _{2/3/}	-	-	-	-	-	-	-	-
4. Estimated real income indices:								
(a) Farmers	-	-	-	-	-	-	-	-
(b) Unskilled wage earners	-	-	-	-	-	-	-	-
MALI								
1. Index of farmer incomes from main cash crops _{4/}	102	98	143	204	235	198	53	269
2. Index of statutory minimum wage rate, unskilled labor _{2/}	100	100	100	100	100	100	136	194-219 ^{9/}
3. Consumer Price Index _{2/5/}	85	89	94	112	135	146	179	218
4. Estimated real income indices:								
(a) Farmers _{10/}	-	-	-	-	-	-	-	-
(b) Unskilled wage earners	118	112	106	89	74	68	76	89-100
MAURITANIA								
1. Index of farmer incomes from main cash crops.	-	-	-	-	-	-	-	-
2. Index of statutory minimum wage rate, unskilled labor _{2/} (Jan. 1973 = 100)	95	95	110	110	121	121	121	143-277 ^{9/}
3. Consumer Price Index _{6/}						(100)	(129)	(149 ^{8/})
4. Estimated real income index:								
(b) Unskilled wage earners.						(121)	(94)	(96-186 ^{11/})

Table 46. Changes in Farmer Incomes and Urban Wage Rates, 1967-1975 (continued)

	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
NIGER								
1. Index of farmer incomes from main cash crops. ^{1/}	103	97	97	86	96	84	34	114
2. Index of statutory minimum wage rate, unskilled labor. ^{2/}	99	99	102	110	110	110	110	154-176 ^{9/}
3. Consumer Price Index. ^{2/}	97	98	106	106	112	122	137	139
4. Estimated real income index:								
(a) Farmers	106	99	92	81	86	69	25	82
(b) Unskilled wage earners	102	100	96	104	98	90	80	111-127
SENEGAL								
1. Index of farmer incomes from main cash crops. ^{1/}	113	87	84	69	137	87	104	267
2. Index of statutory minimum wage rate, unskilled labor. ^{2/}	93	100	107	107	107	107	114	154-226 ^{9/}
3. Consumer Price Index. ^{2/}	99	100	102	106	110	113	121	139
4. Estimated real income index:								
(a) Farmers	114	87	82	65	125	77	86	192
(b) Unskilled wage earners	94	100	105	101	97	95	94	111-163
UPPER VOLTA								
1. Index of farmer incomes from main cash crops. ^{1/}	80	120	125	96	109	136	133	163
2. Index of statutory minimum wage rate, unskilled labor. ^{2/}	99	99	101	106	106	107	117	144
3. Consumer Price Index. ^{2/}	98	98	105	109	111	108	116	122-161 ^{9/}
4. Estimated real income index:								
(a) Farmers	82	122	119	88	98	126	115	134-101 ^{12/}
(b) Unskilled wage earners	101	101	96	97	95	99	98	118-80 ^{12/}

Table 46. Changes in Farmer Incomes and Urban Wage Rates, 1967-1975 (continued)

Source: Annex B, Table VIII; Also, text tables 5 and 29; and various Statistical Bulletins.

- 1/ Cotton.
- 2/ Calendar years 1967/68 = 1967, etc.
- 3/ No African index exists.
- 4/ Cotton, groundnuts and rice.
- 5/ The price index includes only foodstuffs.
- 6/ No African consumer price index exists for Mauritania. The index in the Table is our estimate, based on prices officially collected in Nouakchott.
- 7/ Cotton and groundnuts.
- 8/ January 1975.
- 9/ The second number is the index as of the beginning of 1975.
- 10/ Since the Mali CPI is composed only of foods, which farmers produce themselves, it is not legitimate to derive a real income index for farmers from the CPI.
- 11/ 186 = the real wage estimate as of November 1974.
- 12/ The lower figure is the index as of beginning 1975; the larger is the average for 1974.

tended to protect against real income cuts at the top. For example, the typical Category A civil servant (university graduate cadre) in Francophone Africa receives an increment in the neighborhood of 5% annually, much more than lower-paid workers. This is probably a bit higher than the average rate of price inflation between 1960 and 1972. So highly educated civil servants who have been employed for some years have probably not suffered any real income decline before 1972. Since then, however, this has changed. The price momentum built up in 1974 will undoubtedly continue into 1975, without much prospect for salary adjustments for higher income wage earners. So further reductions in real income are likely. And as noted, there is involved in all of this a devaluation of the returns to education of very substantial magnitude.

The numbers of people affected by this redistributive process, and by the shrinking of salary differentials, is relatively small. In the Upper Volta in 1972, for example, there were about 350 civil servants in the "A" cadre, out of 11,000 civil servants, or 2.7% of the total. In Senegal, the same group (those earning over 60,000 CFA francs monthly) was 3,000 in October 1974, out of a total establishment of 42,000. And in Niger there were only 157 Cadre "A" civil servants in 1972, or about 3% of the total. But it is of course a significant group in many ways - the key administrative cadres, the higher income elements of the bureaucracy, the group whose income is critical in shaping income expectations and educational decisions.

(d) Wage earners have done better than farmers. This comes out only partially in Table 46. Comparison between farmer income and wage rates in towns shows that farmers in Mali and Upper Volta have done better than wage earners in the 1970's. In Niger, Chad and Senegal (and undoubtedly in Mauritania, though the data don't exist to show it) wage rates were strongly ahead of farmer incomes. The producer price indices in Table 44 also illustrate the general tendencies. Cotton producers in particular had very small rises in money returns per unit of output; comparing the price indices with the consumer price series suggests sharp reductions in real returns to cotton growers. Groundnut prices clearly did better everywhere except Mali and Upper Volta, but it is important to recognize that the late 1960's were a period of historically low groundnut prices (as a glance at Table 4, p. 15 shows), because of the removal of French and (later) EEC special subsidies.

(e) All inflationary situations create new opportunities for realignments of wage differentials. In the Sahel countries, where trade unions have very limited presence or influence on wage determination, government and employers have been able to take advantage of these opportunities to meet public or private managerial objectives. As noted above, the main Government preoccupation has been with protecting living standards of unskilled workers, and this has led to sharp reductions in differentials for education. Private sector employers were probably more inclined to maintain differentials; the Upper Volta data (Table (VIII)) shows a greater percentage increase between 1972 and 1975 for highly skilled workers than for unskilled or lightly skilled workers. At least one government (Niger) also used the occasion of wage readjustments to eliminate what some officials felt to be unfair differentials between blue and white collar workers. During the 1960's the privately bargained collective agreements specified lower wages for manual workers than for clerical workers in equivalent categories of skill.

In most categories the differences were between 15 and 25%. In the 1975 wage changes in Niger these differences were abolished. The result was not only to bring manual and clerical parity, but to give especially big increases to manual workers, many of whom received 50-60% rises, or two to three times as much as comparable clerical workers. The details are given in Table (xii), Annex A.

(f) There have been some differences between countries in the magnitude of the wage changes of the past two years. Senegal, Mali and Mauritania have all doubled their SMIG. The others have been more restrained. It is not clear whether this reflects real differences or simply correctly perceived differences in cost of living charges.

In conclusion then, the distributive impact of drought and inflation has been partly in the direction of widening differences in income and wealth, partly in the direction of income levelling. Until 1975, rural-urban income differentials were widened, though this may not have been so in Mali and Upper Volta. Also, and this has not previously been stressed, income differentials between those in the "formal" and "informal" sectors undoubtedly widened, as in-migration increased in urban areas and returns to labor in that sector tended to become more depressed, while statutory minimum wages, applicable only in the "formal" sector, increased substantially. Finally, income differentials between countries tended to widen, as did those between agroclimatic zones within countries, as a consequence of the different geographical incidence of the drought.

The major income levelling effects have taken place within the modern sector, among wage earners. Higher income wage earners in the public sector have received substantially smaller wage increases than have those at lower skill levels. And, it is essential to stress, the unprecedented increases in producer prices in 1974-5, combined with the likelihood of bumper harvests, promises to bring huge income increases to the Sahel's cash crop growers, increases which will outstrip the wage increases of 1974, bringing significant relative gains to the rural sector.

CHAPTER VII. CONCLUSION.

This report has surveyed the economic evolution of the Sahel during the recent years of abnormally low rainfall and rapid rises in world prices. Dire consequences might have been and were predicted for these poor and presumably vulnerable, inflexible economies, dependent as they are on external sources for fuel, food, markets, men and money. In fact, most of the Sahel states have come through drought and inflation in better economic shape than anticipated. There has been much human suffering, income loss, and some impairment of national assets or capital stock. "Intangible" effects of a negative kind have also occurred. But irreversible losses appear to be few, and there have been important positive intangible effects.

Observers of Sahel economic problems, both local and foreign, have stressed five aspects of the drought's economic impact: the effect on agricultural output, the diminution of livestock herds, the fall in the general level of economic activity, budget effects, and balance of payments effects. The general expectation has always been that drastic falls in agricultural production, in livestock herd size and in general economic activity would contribute to budget deficits and balance of payments disequilibria. These expectations have been borne out only partially.

(a) The volume of aggregate agricultural output grew very slowly or not at all between the mid-1960's and the early 1970's, and then fell sharply in the peak drought years of 1972/73 and 1973/74. Agricultural production as measured in preliminary national accounts estimates fell between 13 and 21% between 1972 and 1973 and output generally remained at this low level in 1974. Mauritania's 1973 agricultural output was 40% less than in 1971, and Upper Volta's 10% less. In Mali, agricultural production in 1974 was some 25% below 1971 levels.

(b) Livestock losses seem to have been somewhat less than first feared. The Sahel cattle population is now generally believed to have been reduced by about one-third, as compared with previous estimates which were closer to one-half. This implies a rate of loss some 20% greater than "normal" - i.e. the normal mortality rate in the cattle population is about 10% per year. This lower

estimate of herd shrinkage is consistent with what might be regarded as "rational" herder behavior. Faced with a certainty that pasturage availability would be much reduced, the "rational" herder would be expected to move cattle south, where fodder could be found. The range of transhumance could be lengthened, though of course not without difficulty, risks and losses. It appears, in any event, that expanded movement south occurred frequently, particularly among the Fulani, and that this softened the incidence of drought on the cattle population.

(c) Directly and indirectly, the drought reduced the overall level of economic activity in Sahel countries. Declines in production meant lower utilisation of processing capacity in manufacturing, and declines in income meant reduced consumer demand for purchased goods. In 1973 real output (GDP) fell by 6% in Mali, 9% in Upper Volta and 19% in Senegal. Data are lacking, but it is very likely that the decline in Niger was greater, since Niger's agriculture was most severely hit. In 1972-73, its small cotton crop was one-tenth its level of the late 1960's, and the groundnut crop about a third the earlier average.

(d) Despite this weakening of general activity the drought does not appear to have had the anticipated enfeebling effects on public finance - at least not generally. Government revenues in the 1970's declined only in Chad. They were stagnant in Niger in 1973, but rose by 20% in 1974. In Mauritania and Senegal revenues rose much faster in the seventies than during the previous decade. In Mali and Upper Volta revenues expanded at about the same rate as in the 1960's. Revenues held up for two main reasons: prices of export commodities were favorable throughout the period, especially after 1972. And mining industries (in Niger, Senegal and Mauritania) provided buoyant sources of tax revenue. The main revenue loss from the drought was the suspension of the cattle tax, but this was balanced by a grant from the European Development Fund, specifically aimed at compensating for the revenue loss.

At the same time, government expenditures on items directly related to drought do not appear to have been significant, except insofar as the subsidization of imported consumer goods prices can be regarded as drought-related. Aside from Mauritania's expenditure on resettlement, most of the drought-induced expenditure seems to have been externally-financed, though it may be that these expenditures are simply not clearly shown in the budget documents.

The countries that have suffered the worst budget effects are Chad and Mali. But drought has had relatively little to do with this. In the Chad case the main factor was the budget drain due to rising security expenditures, and in Mali employment, wage and price policies were the basic causes. Neither Chad nor Mali have the fiscal sustenance provided by a mineral exporting sector, nor did they pursue the kind of severe austerity policy required for fiscal balance in the absence of a mining industry - as did the Upper Volta.

(e) The negative effects of the drought on the balance of payments of the Sahel countries were most severe in Senegal (in 1973), in Mali and in Chad. In Niger, where the output effects of the 1972-73 drought were especially devastating, export earnings were maintained because of the rising production of uranium concentrates. And phosphates had even more potent equalizing effects on Senegal's balance of payments, rising 500% in price in little more than a year. In general, Sahel export prices have stood up well, except for cotton, the price of which fell back during the year 1974, after large rises in 1973. But firm prices for groundnut products, phosphates, iron ore, and uranium have been primary factors in preventing generalized balance of payments disaster. The other major factor is foreign aid. Aid disbursements doubled in 1973 and stayed at this relatively high level of about \$300 million in 1974. Food aid was particularly critical, given the magnitude of the drought-needs and the high prices of foodgrains on world markets. An additional balancing element - though of less weight - was remittances from emigrant workers and from herders who moved south to escape the drought. In Upper Volta and Mali 1973 and 1974 remittances were double their level of a few years earlier, and they were probably important in the other countries as well.

Associated with the short-term or "reversible" economic effects of drought are certain income distribution effects. Drought is inegalitarian. It hits some regions, some countries, some people, some occupations much harder than others. And in responding to the pressures of drought public policies also have differential effects on different segments of society.

The Sahel drought had some widening impact on the geographical distribution of income within the region: those countries most fully in the Sahel agroclimatic zone (Niger, Mauritania, Mali) suffered more than those more Sudanic in location (Senegal and Upper Volta). Within countries, northerners were more damaged than

southerners, townsmen suffered less than rural people, and wage-earners in general less than farmers. But these are transient effects. It is more accurate to think of them as differences in the incidence of drought loss and/or suffering rather than as alterations in income distribution.

Some less ephemeral effects on income distribution were nonetheless present. The drought dealt much more harshly with nomads than with other groups, since they occupy the most vulnerable physical space and their capital stock (as well as their income) was reduced by drought-induced animal deaths or forced sales. Rich herders were probably hurt more than poor, since there seems to be no reason to believe that larger herd size offered much protection against risk and loss. And Tuareg and Maures suffered greater losses than the more cosmopolitan and mobile Fulani.

On balance, the drought has had a levelling effect on Sahel society, which is probably of considerable longer-term significance. Not only has levelling occurred within nomadic societies, but between pastoralists and sedentary farmers as well. The pastoralists, traditionally socially dominant, have lost ground to cultivators. Moreover, levelling effects have occurred in towns, not because of drought but because of price inflation and government wage policies. The compression of skill differentials which has occurred at least in government employment in the past few years, is the most important change in the remuneration structure since independence.

All of the "losses" or "costs" of the drought mentioned thus far - with the exception of cattle loss - are reversible in the short-run. Suppose that the good rains of 1974 usher in a cycle of fine weather for the Sahel. Can we say that better rains will simply wash away the economic effects of the drought? This is to say, a good series of rains presumably moves each of the Sahel economies back to its pre-drought path of development. The economic "losses" or "costs" of the drought might therefore be simply defined as the fall in physical outputs associated with the drought, and measured by the money value of this lost output. More precisely, the costs would be defined as the differences between actual output during these years and potential output with "normal" rain. With the weather and the economy back to "normal", "losses" disappear and the effects of the drought are erased.

This of course is not quite right. There is first of all the matter of debt burden left by the drought, which is significant at least in Mali, and of some importance in Senegal. Secondly, there are the capital loss items - livestock and trees notably. These losses imply a lowered future output stream of meat and milk and of gum arabic. With respect to cattle, off-take will remain at relatively low levels until the early 1980's, when herds will be fully recovered and will have achieved a more normal structure. Thirdly, there were the irreversible effects mentioned in Chapter II: increased human mortality, physiological damage, ecological damage such as soil destruction. The first two of these effects do not seem to have been substantial, because of the relatively limited duration of acute food scarcity, the relatively quick and effective relief operation, and the tendency for stricken groups to congregate in accessible areas. And the permanent ecological damage, such as the commonly-cited "southward advance of the desert" is probably related more to longer-term matters like the basic imbalance between men, animals and environment (over-grazing, cultivation of excessively dry and fragile areas) than to relatively short-run phenomena such as the 1968-73 drought. But we were unable to explore these irreversible effects in any depth, so judgment must be highly tentative.

Finally, there are the intangible effects, both negative and positive. These are not washed away by rain, though time and events dissipate and alter them. The most basic intangible effect of the drought was of course the human suffering it caused, not only the physical pain and discomfort associated with hunger, but the psychological and social disturbances flowing from the uncertainty of the future of one's family and society, forced movement into camps or towns, removal from the familiar routines of life. In addition to these primordial costs in terms of human unhappiness, the drought generated political stresses, as was mentioned earlier. Movement of drought victims across frontiers caused political tensions, notably in the Mali-Upper Volta case, which has led to closing of the frontier, build-up of armies, diversion of energies and attention and other resources from drought rehabilitation and development to military activities.

But it is the drought's positive effects of an intangible kind which are certainly the most extensive and will hopefully be the most durable: new pressures to regional collaboration; wider local and world awareness of the potential crises -

human and ecological - simmering in the Sahel; more international contacts, translated by a deepening and a diversification of aid relationships; social learning, in the sense that economic agents and institutions have learned something about dealing with crisis or disaster; the restoration of ecological balance; the stimulation of innovative behavior; and the heightened awareness of the need for agricultural change and more suitable price policies.

The rapid rise in world prices which came in tandem with the 1972 and 1973 drought years did not, as did the drought, directly threaten human life. Nor did it generate the same kind of costs in human uprooting and suffering. But in pedestrian economic terms inflation carried the potential of plenty of harm. The balance of payments was the first source of danger, since export volumes were sure to be affected by the drought, and oil and food prices were soaring. The government budget was a second problem area: revenues might fall, or rise only modestly because of the drought-related slow-down in overall economic activity, while the real cost of government activities rose enormously. Moreover, the state sector is relatively large in all these countries, and state enterprises have a notoriously hard time in winning approval of price rises for their outputs in inflationary times. The rising food prices coupled with government price stabilization policies created another problem: should government let local food prices rise, in which case wage stability would have to be abandoned and social unrest encouraged, or should subsidization (heavy if necessary) be the rule? Finally, the cost of all development-related inputs - transport, power, fertilizer, fuel - were particularly vulnerable and rises in their levels would pose new obstacles to growth.

As shown in Chapter III, the balance of payments threat posted by world inflation has so far proved manageable in most Sahel countries. Senegal made a spectacular comeback in 1974, moving from the worst deficit in its history and a total depletion of its external reserves to balance of payments equilibrium - and this during a year of quintupled oil prices and record grain and sugar costs. The performance of Mauritania, Niger and Upper Volta was less sensational, but

all of them maintained their payments equilibrium under the extraordinary stresses presented in 1974. Only Mali and - less clearly - Chad, were in trouble.

The reasons for this rather unexpected economic outcome have been mentioned frequently in the report. Balance of payments stability was maintained and some improvement even registered in the face of the drought and the pressures generated by inflation, for three basic reasons. First, and quantitatively most important, was the terms of trade effect, the fact that Sahelian export prices were generally very high throughout this period. Thus while crude oil prices rose by five times since 1973, so did phosphates from Senegal, and groundnut products almost tripled. Since petroleum products are only a small share of total imports (less than 15, even in 1975) while the Sahel is heavily specialized in groundnut (and cotton) exports, the balance of payments outcome was not unfavorable to the Sahel.

The second major factor was the international aid response. Aid disbursements to the region as a whole doubled between 1972 and 1973 - from about \$150 million to \$300 million, and stayed at this level in 1974. And the overall aid role was much more significant and diverse. The French, for example, cancelled their old FIDES debts, significantly relieving the debt burden of the Sahel states. They also extended the large line of credit in the Operations Account which allowed Mali to continue its massive imports of grains in 1974. The Arab oil producers began to play a significant aid role, with known credits to Mauritania and Chad, and probably to other Sahel states as well. Also, the IMF's Special Oil Facility was utilized by Chad and Senegal and perhaps others. The communist countries which hold two-thirds of Mali's external debt (not counting the Operations Account credits), gave major assistance to that country by either rescheduling or abandoning their claims. So the effort to help the Sahel was genuinely international, cutting across old ideological lines, bringing in new donors such as the Arab states and the Chinese, and bringing in more fully other donors, such as the IBRD and particularly the United States, which had before been only marginally concerned with the Sahel region.

There was, finally, an array of smaller factors of a compensatory or counter-vailing kind. Because of distress in affected areas, outmigration increased and those already abroad sent home more money. Remittance inflows thus increased very substantially. Tourism, which had been slowly gathering steam in Senegal, began

to really advance, and growth in tourist receipts was an important balancing element in Senegal in 1973 and 1974. In Niger, uranium mining came on stream after 1973, bringing important revenue increases for the budget and important foreign exchange inflows for the balance of payments.

Two countries consistently fail to fit the general Sahel model of adjustment to drought and inflation: Chad and Mali. The disequilibria in Chad's balance of payments (and budget) situations seem to derive from the especially difficult circumstances of that country, from its location and poor resource endowments, and from its civil war. The economic problems there are not in any event of the same order of magnitude as those in Mali. Mali in fact stands alone in the depth of its difficulties. We earlier set out some of the possible reasons for Mali's unique status as the sick man of the Sahel: public sector employment policies, lack of a mineral industry, relatively heavy consumption of rice, political reticence to cut further into urban living standards, French willingness to finance the budget and balance of payment deficits, bad marketing and price policies. In some of these respects, Mali is not much different from its neighbors. In several of them, however, she is different. Her lack of a significant export-oriented non-agricultural sector - notably mining - which could provide growth and stability in budget revenues and export earnings, has been repeatedly mentioned. She consumes uncommonly large quantities of rice, uncommon that is in Sahel terms, for Sahel people are basically millet eaters. Her state sector is relatively bigger than the other Sahel states, so public wage, price and marketing policies have relatively greater impact. Her employment policy has been more generous, and hence public consumption expenditures have risen faster than any other Sahel state. And France seems to be willing to pay. In this combination of factors surely lies much of the explanation for Mali's peculiar difficulties.

While the balance of payments effects of inflation have proved generally less onerous than anticipated, the Sahel states have not escaped altogether the negative consequences of inflation: budget distortions, sharp increases in the costs of development-related inputs, stresses in marketing organization and in general public administration.

Revenues for most Sahel governments have held up relatively well during the period 1968-1974. But when price levels are rising by 20% or more annually,

recurrent budgets can in few countries keep up with price rises. Salaries in any event invariably have first priority. Allotments for maintenance, for materials and supplies, for items such as research and studies all rise sluggishly, while the real unit cost of maintenance, materials and research rises. So the real output of government declines, its general efficacy falls, and the public capital stock wastes away under persistent budgetary neglect. Subsidy-generating pressures are also generated in inflationary times, and we have seen this in the Sahel. Public enterprises deficits grow, and vast resources have been thrown into the effort to keep domestic food prices from rising in line with imported food costs.

The large increases in development-related input prices obviously imply smaller real development expenditure per franc available for development spending. Already handicapped by distance and hence high transport costs, the Sahel economies must bear the cost of the high prices of fuel, petroleum-based commodities (e.g. asphalt) and transport equipment, all of which have risen in price relatively more than have average prices. Since fuel costs are a substantial proportion of the costs of power generation (approximately one-third) 1974 has seen rising power costs and tariffs throughout the region. Fertilizer prices have also risen more rapidly than the average level of prices, raising special problems for some agricultural programs.

Probably the most essential point in considering the implications of rising development costs is how substantially and quickly it shrinks the real value of aid inflows. The behavior of the index of general construction costs in Senegal is perhaps most indicative - it rose 66% between June 1973 and November 1974. To maintain anything like the 1973 and 1974 real volume of Sahel aid in the coming years, therefore, will require a very considerable increase in donor money commitments.^{1/}

A second negative effect of inflation is in the marketing area. Food shortages and government price policies put private traders in a highly

^{1/} It is true of course that this negative implication of inflation is to some extent balanced by the inflation's positive effect in reducing the real burden of indebtedness. The Sahel states, however, have relatively small external debts, except for Senegal and Mali, and as noted above, most of Mali's debt might have been written off last year; it is certainly not now being serviced. Except in the case of Senegal, then, not much Sahel debt is available for inflationary erosion.

vulnerable position these past few years. Big profits were possible via black marketing or smuggling, and many traders took advantage of these opportunities. Government's response has commonly been to confirm existing propensities toward curtailment or strict regulation of private trading activity, and to push for an expanding role for the state distribution system. Since the resources and capacities of the public sector in this area are extremely limited, there is a real danger that snarls in the distribution sector will seriously hamper the post-drought agricultural development effort.

General public administration is similarly under stress. Already sapped by long years of austerity - i.e. sparseness of supplies and transport and tiny maintenance allotments - the public sector must now absorb the large wage increases of late 1974 and 1975, at a time when the real costs of government activities have risen so substantially. There is also the danger that wage settlements which have compressed skill differentials and reduced real incomes of higher level civil servants might exacerbate propensities toward demoralization already evident in the civil service of most Sahel states.

Because of the limited objectives of this study, we have been unable to give adequate attention to many interesting and important questions. The "irreversible" effects of the drought, for example, have obviously been slighted, despite their importance. In part this is a reflection of disciplinary bias; the economist is not particularly well-armed to assess the evidence on such issues as the impact of drought on mortality, the extent of clinical malnutrition, the effect of the 1968-73 rainfall deficiencies on encroachment of the Sahara. But it is also true that firm evidence is very scarce on all these questions.

Methodological issues have also been skirted, though there are many interesting issues here too. We have made in this report few attempts to measure the money cost of the drought losses; we restricted the analysis to crude physical measures like reduced agricultural production, tree and livestock losses, and to very gross money measures like reductions in aggregate GDP generated in agriculture. Part of this reticence derives from lack of good numbers. It's hard to see how meaningful value measurements can be made on the basis of such production data as exist. And it would be extremely difficult to disentangle the variables which affect particular outputs, even if the numbers were better: how much of the decline of recorded groundnut production is due to drought, how much to price policy, and how much is fictional anyway because output really hasn't changed as much as the volume of smuggling?

Conceptual issues also abound. The notion underlying the analysis here has been that tangible losses of the drought can be defined and measured by differences between "normal" output and drought-year output, with adjustments for population change, changes in relative prices, and other relevant variables. We mentioned in passing the problem of deriving an analytically acceptable definition of "normal" output when long-term variations in rainfall are taken into account, but have done no more than mention it. We have also mentioned, but again without much comment, the fact that definition and measurement of "losses" or "costs" in the livestock sector presents special problems because assets as well as present income are involved. In such a case, the loss due to drought would normally be measured by the differences between the discounted present values of two future income (i.e. milk and meat) streams: that which would have been generated by a herd of size and structure consistent with pre-drought conditions, and that income stream expected to be generated by the post-drought herd. Such an approach presents enormous measurement difficulties. One problem is the fact that meat and milk prices over the relevant future are changed because of the drought, as estimates would have to be made of the extent of these changes, and elasticities of demand and supply. And there also arises a fundamental issue related to ecological "externalities" which result in differences between private costs and social costs. Herd sizes in much of the Sahel grew during the 1960's to a point where they exceeded range-carrying capacity at existing levels of range management technique and technology. At a high price in terms of private cost, the drought restored ecological balance. From the social (ecological) perspective, this reduction of herd size is not a cost but a benefit, reducing as it does threats to the Sahel's ecological balance. There's not only a difference in magnitude here between social and private costs, but one of direction.

The Sahel experience of recent years provokes several additional and final observations related more to general trends in thinking about economic development than to the Sahel as such. The fact that the Sahel drought and the world inflation failed to wreck the economies of most of the Sahel is in a real sense a triumph for structures, institutions and mechanisms which are widely discredited in the

development-minded intellectual community: reliance on primary product exports, the functioning of the international commodity markets, enclaves, international aid itself. Economic disaster was avoided in large measure because Sahel export prices were buoyant on world markets; because foreign aid institutions responded well to the crisis in the Sahel; and because local economic agents and local economies as a whole proved far more flexible than anticipated, and not the least aspect of this flexibility was the reliance on international migration of animals and people as part of the adjustment to drought. How peculiar it is to view, from the perspective of the Sahel, the stress on reduction of "dependency" which characterizes so much of the literature nowadays. The Sahel's strength, in its crisis, was its ability to capitalize on its interdependence. How would an inward-looking Sahel cope with climatic or ecological catastrophe?

With respect to "enclaves" the Sahel experience puts their role and potential in better perspective. It illustrates the absurdity of the kind of blanket condemnation given to "enclaves" nowadays. It would be foolish or worse to believe that mining firms or other enclave-type activities will by themselves transform or modernize poor countries. But it is at least as foolish, and may even be wicked, to ignore or minimize their contribution to budget and balance of payments stability and growth. Their contribution is particularly critical in regions like the Sahel, which are vulnerable to climatic disasters. In Senegal, Mauritania, Niger, the mining industries sustained the budget and balance of payments throughout the years of agricultural decline caused by bad weather. Moreover, the countries with non-agricultural revenue sources were less pressured to tax their rural sectors. Enclaves act as protectors of the peasants in this respect, with consequences for equity as well as production.

The Sahel experience of recent years suggests another general observation relevant to enclaves: LDC governments can always renegotiate the terms on which mining firms operate, and these renegotiations usually allow reconsideration of the relationship, the righting of old wrongs, the generation of new benefits for local governments. Thus Senegal was able to buy out the private interest in its major phosphate enterprise, just as phosphate prices began to climb to the sky, and Mauritania took over its iron and copper companies in 1974. Niger was able in 1975 to renegotiate with the French Government the arrangements governing the selling price of uranium, as a result of which Niger's Development Budget (FNI)

will receive 6 billion CFA francs between 1975 and 1977. If the Niger Government manages to use this for development purposes, which is what is intended, it will represent a tripling of expenditure on development from local sources, as compared with the late 1960's and early 1970's.

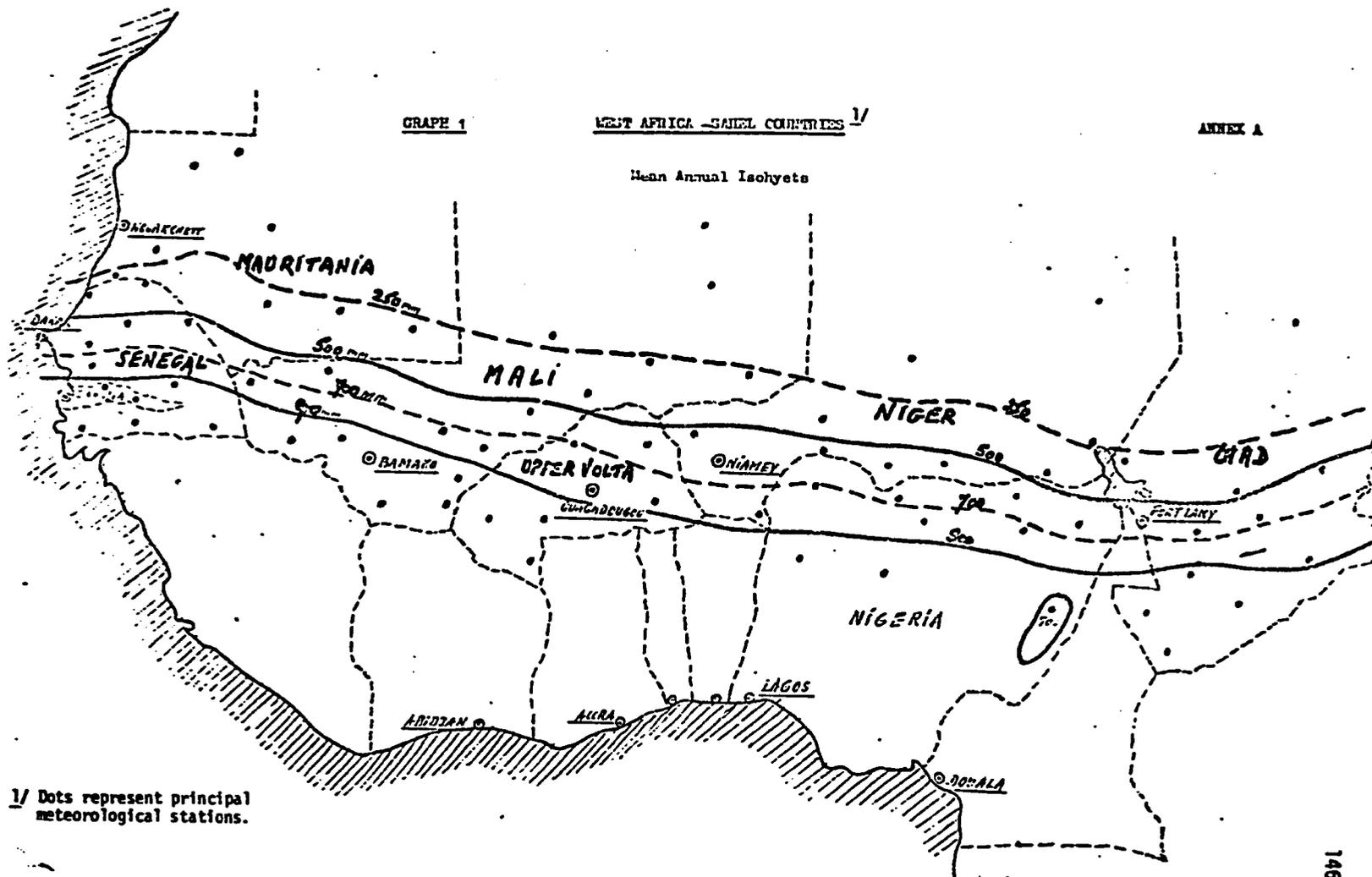
None of this is to say that inter-dependence, enclaves, faith in primary product exports and reliance on international aid will continue to protect the Sahel - or any place else - against the ruder shocks of natural disaster. They certainly worked this time in the Sahel, however, and it is not easy to see better adaptive mechanisms or institutions.

ANNEX A

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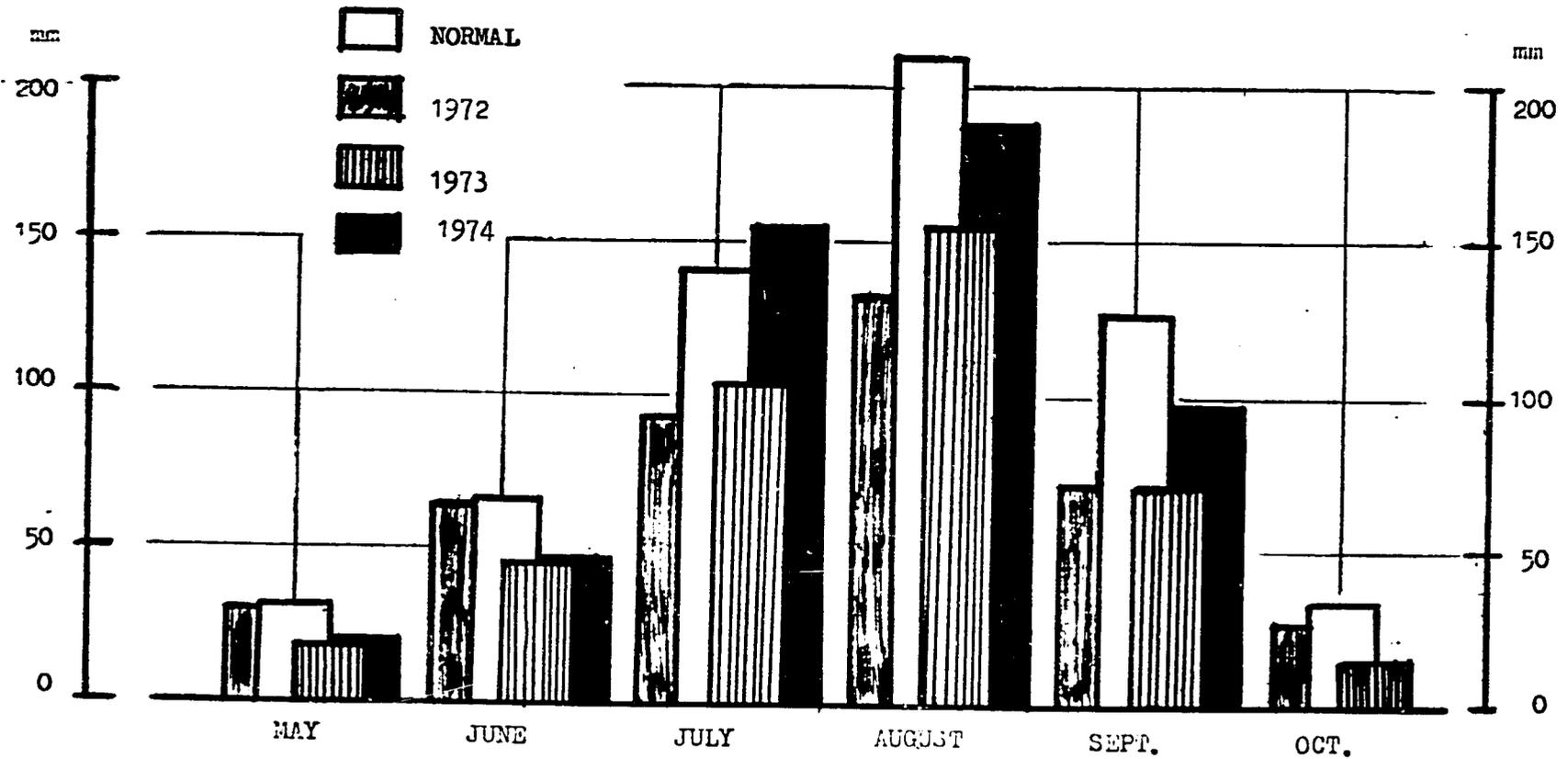
Mean Annual Isohyets



GRAPH 2

SAHEL-SUDANO RAINFALL

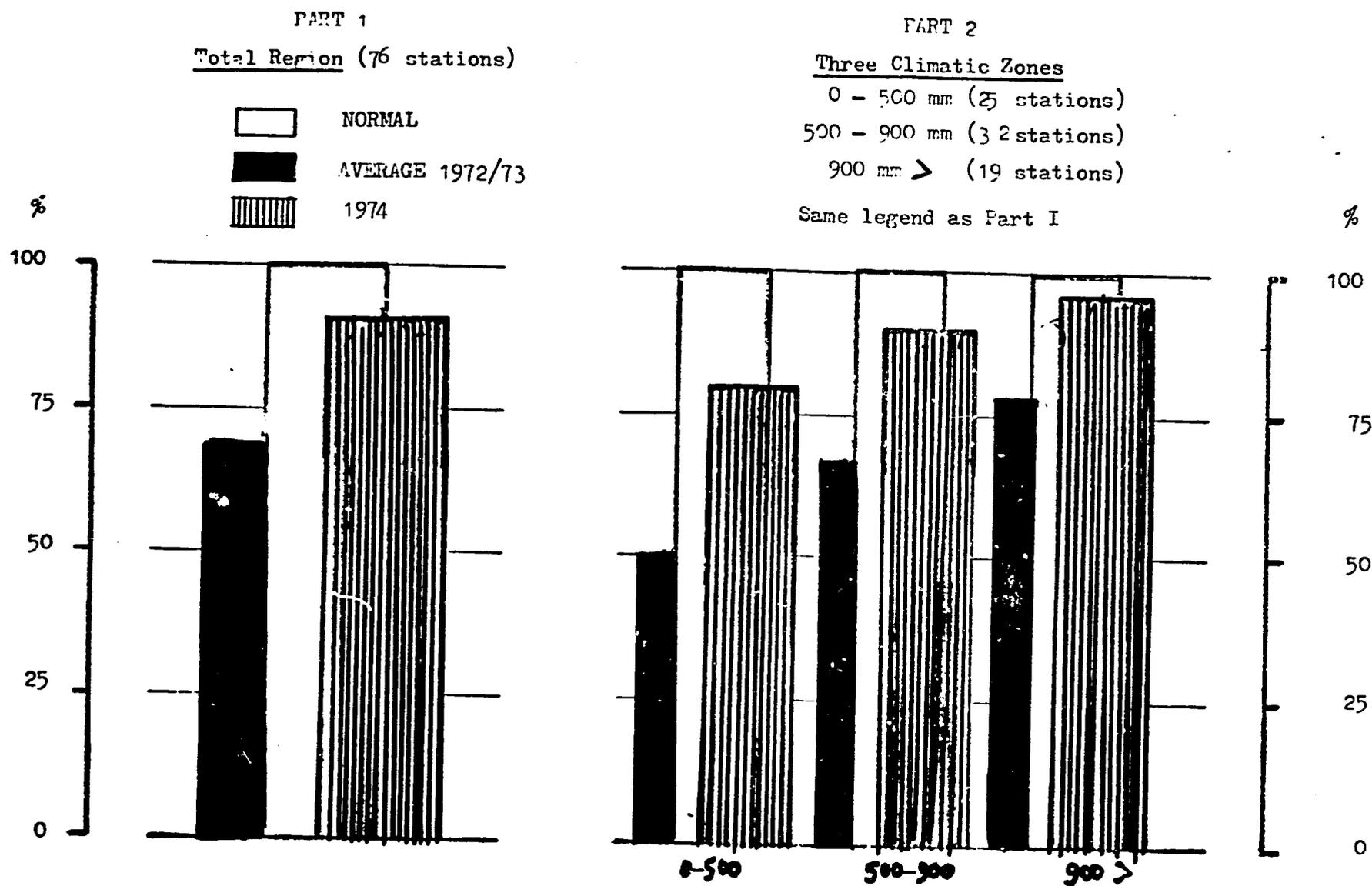
(Average of 76 Stations, by Months in Millimetres)



GRAPH 3

SAHEL-SUDANO RAINFALL 1974 (JUNE/SEPT. RAINS)*

compared with NORMAL June-Sept. rains (=100) and the average of 1972/73.



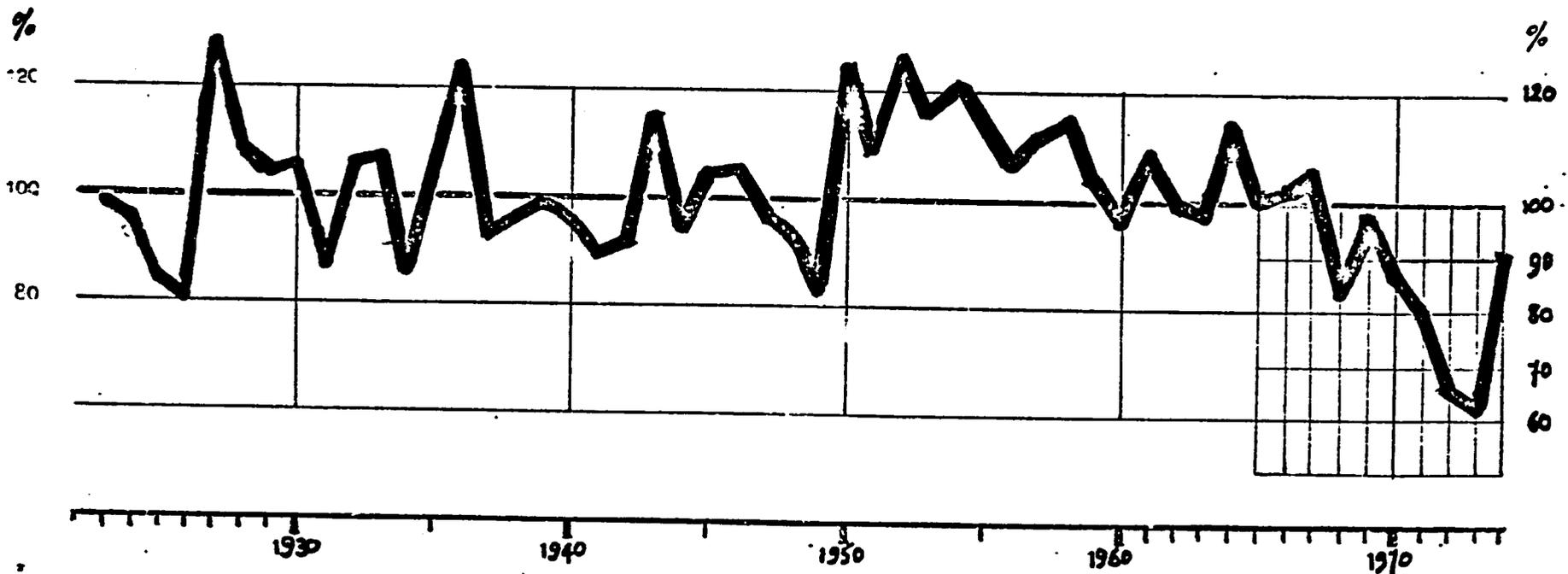
* During June/Sept. about 85% of normal total annual rains are falling on an average of the 76 stations observed.

GRAPH 4

SAHEL-SOUDANO RAINFALL (AVERAGES OF ANNUAL RAINS)*

1923 - 1974

(Average of the 3 time-periods indicated below = 100 each)



* 1923 - 1932 average 14 stations
 1933 - 1940 " 26 stations
 1941 - 1973 " 43 stations
 1974 estimated

NOTE: Only stations between 100-1100 mm of normal annual rainfall were included in calculation of averages.

ANNEX A

Table (1): Selected Indicators of the Level of Development for 82 Developing Countries

	Share of Population in GDP 1966	Share of Consumption per capita 1966	Share of Non-Ferrous Products Exports 1966	Employment ratio in Communism Level of Education 1966, % of population aged 15-19 years	Students in Higher Education 1966, per 10,000 inhabitants	Literacy %	Life expectancy of the population in 1966, Yrs.	Infant Survival per 1,000 live births	Calorie Supply 1966, per capita per day		Protein supply 1966, per capita per day	Labour force in agriculture as a percentage of total economically active population	GDP per capita Value 1967	
									Cal.	Gr.			Actual	Projected
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Israel	28.2	2,240	1.0	60	702	90	72	978	2,800	87	12	1,200	860	
Venezuela	18.1	2,460	1.0	36	471	80	66	752	2,230	70	29	700	775	
Argentina	34.4	1,518	1.0	40	1,225	71	66	940	3,420	88	16	800	715	
Trinidad & Tobago	14.2	4,110	10.1	33	73	80	62	765	2,410	(60)	19	700	1,036	
Cyprus	12.3	1,644	15.7	43	15	76	67	973	2,630	(85)	39	790	552	
Libya	11.3	317	0.1	21	105	22	33	230	2,214	62	35	720	334	
Greece	19.4	831	17.3	54	643	37	67	914	2,700	98	33	520	415	
Spain	20.5	1,114	46.9	55	355	(83)	(86)	(750)	(1,400)	95	34	680	563	
Uruguay	24.6	1,043	(5.3)	44	424	31	69	750	2,330	104	17	370	620	
Uruguay	15.5	1,183	6.3	39	537	78	62	755	2,370	64	43	550	475	
Yugoslavia	17.9	1,207	15.2	34	804	(83)	(66)	(170)	(2,500)	92	33	330	943	
Laos	16.4	654	55.4	43	75.1	21	62	(140)	2,730	79	53	520	415	
Mexico	26.0	317	23.7	21	294	71	63	735	2,540	75	32	490	472	
Chile	23.6	1,113	1.0	40	430	53	53	56	2,610	55	26	470	549	
Jamaica	15.4	344	7.1	30	51	84	70	663	2,270	36	34	460	461	
Gabon	5.4	1.0	3.5	11	12	13	32	771	(2,200)	37	34	410	96	
Costa Rica	17.6	312	10.5	30	476	94	63	914	2,520	54	40	410	326	
Burkina Faso	(40.7)	1,650	17.7	41	242	80	(65)	952	1,810	58	25	413	454	
Moldavia Dr.	(14.7)	379	4.3	79	99	89	60	631	(2,300)	(55)	20	360	204	
Nicaragua	13.3	269	5.7	13	173	50	54	944	2,130	54	59	360	267	
Peru	19.2	675	23.7	26	471	61	55	916	2,400	56	47	390	362	
Saudi Arabia	(0.0)	330	0.0	4	(0)	10	35	507	(2,200)	49	47	350	158	
Qatar	11.9	856	4.1	30	54	80	51	947	(2,200)	(55)	72	350	412	
Guatemala	15.7	213	14.0	10	163	38	49	905	1,970	62	64	310	212	
Colombia	17.7	534	5.4	25	216	62	55	717	2,250	47	47	300	335	
Malaysia	14.5	325	4.8	30	113	35	57	(945)	2,400	54	55	230	287	
Turkey	14.8	393	7.0	20	293	47	(63)	(750)	1,110	39	22	270	420	
Iran	21.2	405	5.7	19	108	18	(40)	(370)	2,090	61	48	260	286	
El Salvador	10.0	163	23.0	18	103	44	60	921	2,000	38	39	270	311	
Dominican Rep.	4.4	201	2.3	20	164	58	58	919	2,040	53	57	260	227	
China (Taiwan)	15.4	706	51.0	58	510	72	64	978	2,480	62	47	250	404	
Brazil	27.1	419	7.4	27	182	41	55	921	2,470	71	41	250	184	
Jordan	6.1	300	7.0	46	67	38	(50)	(330)	4,370	3	33	350	346	
Algeria	14.2	374	(10.3)	9	54	25	45	952	2,340	(55)	60	240	239	
Honduras	14.2	170	1.5	9	101	45	46	755	2,330	53	65	240	208	
Iraq	7.3	573	(4.2)	79	352	20	(40)	(700)	(2,100)	50	42	230	310	
Lebanon	14.2	317	1.0	16	170	20	35	2,130	2,130	51	86	230	124	
Qatar	17.4	419	1.1	20	259	68	53	916	2,100	44	12	210	224	
Yemen	13.2	231	14.0	20	104	30	(50)	710	2,100	(55)	60	210	243	
China	13.2	65	3.0	44	51	23	33	844	2,480	49	36	200	217	
General	13.7	145	5.6	9	75	8	37	977	2,405	(60)	74	190	191	
Algeria	15.0	206	0.4	57	10	10	56	960	2,430	(60)	10	130	217	
Paraguay	14.7	174	7.1	11	71	13	21	71	2,170	54	24	190	228	
Comoros	17.0	169	44.0	15	13	23	37	63	(1,300)	(55)	64	170	203	
China	13.0	26.7	9.5	34	656	35	35	(500)	2,500	73	36	180	315	
Philippines	14.7	207	3.1	33	1,107	32	55	927	2,430	47	53	180	226	
Malaysia	14.7	373	5.0	30	300	32	50	709	2,010	49	63	170	185	
U.A.A. (Egypt)	16.1	314	23.2	29	350	30	(50)	(300)	2,930	80	55	160	384	
Ceylon	14.4	174	1.1	73	114	75	62	947	2,070	45	53	160	230	
Sierra Leone	10.4	310	11.5	39	536	70	32	(930)	2,140	71	24	160	322	
Niger	11.1	30	0.3	6	27	10	(33)	551	(2,100)	(40)	53	110	116	
Guinea	11.1	103	1.4	18	175	70	50	962	2,120	(45)	75	110	136	
Mauritania	1.4	53	0.9	2	11	3	40	410	1,920	(40)	89	130	158	
Guinea	10.3	73	21.5	9	23	13	60	390	2,470	72	34	150	181	
Cambodia	18.6	53	0.5	17	70	30	44	(750)	2,000	(50)	80	130	103	
Central African Rep.	10.0	33	0.8	4	2	19	34	310	2,200	(45)	90	120	99	
Vietnam N.	11.2	76	1.1	21	149	23	35	(740)	(2,200)	(45)	53	120	171	
Laos	11.4	124	10.9	6	30	23	43	710	2,240	64	38	120	141	
Madagascar	10.0	51	6.5	7	2	35	(40)	714	2,400	52	64	100	130	
Yemen	4.5	54	3.0	4	2	6	35	73	2,315	(50)	71	100	121	
Malawi	7.7	65	4.1	1	15	10	(10)	61	(2,100)	50	69	100	69	
Indonesia	11.7	60	0.0	1	27	10	43	75	2,160	51	66	100	124	
East Timor	11.7	60	0.0	1	27	10	43	75	2,160	51	66	100	124	
Yemen	5.0	7	0.1	7	45	13	40	947	2,100	64	71	90	136	
China	11.0	60	(3.0)	17	17	10	43	75	2,100	(43)	55	60	89	
India	11.0	174	40.4	14	274	10	28	60	2,410	45	70	60	156	
Laos	(1.0)	49	(4.0)	3	7	15	30	(10)	2,100	(45)	61	70	60	
Mauritania	4.7	32	8.3	2	14	33	(40)	932	2,440	59	30	100	136	
Mali	4.4	62	13.7	6	1	18	38	392	2,440	58	36	80	165	
Morocco	21.0	24	12.0	4	2	8	17	890	2,325	(55)	84	30	116	
Malawi	7.0	9	1.6	5	8	9	26	877	2,125	64	64	80	88	
Yemen	11.0	9	(0.5)	7	6	13	33	(750)	(2,200)	(45)	60	70	31	
Tanzania	(0.0)	6	0.6	1	6	10	10	60	(4,000)	(50)	49	70	100	
Afghanistan	10.2	26	13.4	3	3	8	50	(707)	1,650	55	87	70	100	
Niger	11.0	14	4.3	1	(2)	3	37	600	2,440	(55)	76	70	92	
Chad	(5.0)	12	3.0	2	(2)	8	51	640	(2,300)	(55)	62	70	78	
Mali	12.2	33	(0.0)	7	37	10	43	530	1,700	(60)	73	70	103	
Guinea	14.4	54	0.4	23	62	60	42	904	2,170	(50)	82	70	173	
Ethiopia	7.6	36	0.4	2	7	6	35	634	2,120	72	88	60	132	
Senegal	(5.0)	26	13.7	3	3	8	(33)	(400)	2,355	52	89	50	93	
Upper Volta	7.0	12	4.0	2	2	8	32	816	1,340	45	87	50	32	

Notes: Figures in brackets are Secretariat estimates.

Source: Col. (1) - Development Centre, "National Accounts of Less-Developed Countries 1950-66", July 1968; I.B.D. World Tables; A.I.D. Economic Data Book.
 Col. (2) - U.N. Statistical Yearbook, 1972, Table 14.
 Col. (3) - U.N. Yearbook of International Trade Statistics, 1966. (As "non-primary products", S.I.P.C. groups 5 to 9 have been taken.)
 Col. (4) - UNCTAD, Statistical Yearbook, 1966, Table 2.5.
 Col. (5) - UNCTAD, Statistical Yearbook, 1966, Table 2.10.
 Col. (6) - (1), (2) - A.I.D. Economic Data Book.
 Col. (7) - P.A.O., The State of Food and Agriculture, 1967, Table 8.
 Col. (8) - P.A.O., Production Yearbook, 1967, Vol. 24. Figures relate to mid-year 1965.
 Col. (9) - World Bank Atlas, I.B.D. 1967.

Source: OECD, Performance Compendium - Consolidated Results of Analytic Work on Economic and Social Performance of Developing Countries (Paris, 1973).

Table (ii). Recorded and Unrecorded Merchandise Trade, 1964-1974

	Average 1964-66	1967	1968	1969	1970	1971	1972	1973	1974
Chad (billions CFAF)									
Recorded Exports	12.5 ^{1/}	7.5	7.6	8.0	8.2	7.8	9.0	8.5	-
Estimated Unrecorded Exports	-	1.0	1.8	1.1	0.7	-	-	-	-
Recorded Imports	7.85 ^{1/}	14.5	13.45	14.0	17.2	17.2	17.2	15.5	18.2
Estimated Unrecorded Imports	-	0.500	0.500	1.400	2.790	-	-	-	-
Mali (billions Malian francs)									
Recorded Exports	8.6	9.7	8.8	13.3	17.8	21.5	22.7	25.3	(28.6)
Unrecorded Exports	-	-	9.7	8.7	8.4	10.5	-	-	-
Recorded Imports	-	12.8	19.9	25.3	29.3	33.7	39.7	51.7	86.0
Unrecorded Imports	-	-	3.7	4.0	-	-	-	-	-
Mauritania (billions ouguiyas)									
Recorded Exports	3.1	3.7	3.7	4.4	5.4	5.7	5.8	5.9	9.0
Unrecorded Exports	-	-	-	-	-	-	-	-	-
Recorded Imports	1.2 ^{1/}	1.8	1.7	2.3	2.6	3.2	3.6	4.9	8.1
Unrecorded Imports	-	-	1.8	2.0	2.2	1.6	1.9	1.5	0.5
Niger (billions CFAF)									
Recorded Exports	6.65	8.6	7.1	6.3	8.8	10.7	13.7	13.8	(12.0)
Unrecorded Exports	-	-	1.9	2.4	1.9	1.9	1.7	-	-
Recorded Imports	9.7 ^{2/}	-	10.2	12.6	16.2	15.0	16.6	19.1	-
Unrecorded Imports	-	-	2.0	2.8	2.6	2.5	2.6	-	-
Senegal (billions CFAF)									
Recorded Exports	33.0	34.3	37.9	31.9	42.2	34.7 ^{3/}	54.4 ^{3/}	43.2 ^{3/}	89.9
Unrecorded Exports	6.9	8.0	7.1	7.6	6.6	6.6 ^{3/}	10.3 ^{3/}	8.2 ^{3/}	-
Recorded Imports	39.8 ^{1/}	38.9	44.5	51.3	53.6	6.6	70.3	79.8	-
Unrecorded Imports	5.2 ^{1/}	5.3	6.3	6.0	5.5	-	-	-	-
Upper Volta (billions CFAF)									
Recorded Exports	3.46	4.4	5.3	5.3	5.1	4.5	5.1	5.5	6.0
Unrecorded Exports	-	-	-	-	-	-	-	-	-
Recorded Imports	9.33	9.0	10.1	12.5	13.0	14.0	15.0	17.0	-
Unrecorded Imports	-	-	-	-	2.1	4.9	7.2	-	-

Source: Statistical Appendix, Tables III and IV. ^{1/} 1965 and 1966 only. ^{2/} 1964 and 1966 only. ^{3/} Estimated.

Table (iii): Exports and Export Performance, 1963-1970

ANNEX A

CHAD				MALI			MAURITANIA				
Exports (Average 1968-70) Total Value SUS (mns)	Per Capita SUS	% of Total Exports	Rate of growth (Volume) 1963/5- 1968/70 in %	Exports (Average 1968-70) Total Value SUS (mns)	Per Capita SUS	% of Total Exports	Rate of growth (Volume) 1963/5- 1968/70 in %	Exports (Average 1968-70) Total Value SUS (mns)	Per Capita SUS	% of Total Exports	Rate of growth (Volume) 1963/5- 1968/70 in %
27.8	8			21.2	4			80.3	68		
Groundnuts and Groundnut Products		-	-			21	-8			-	-
Cotton		79	4			21	8			-	-
Live Animals (recorded)		2	-25			35	21			-	-
Meat		11	52			-	-			-	-
Fish		-	-			-	-			6	17
Iron Ore		-	-			-	-			88	16
Phosphates		-	-			-	-			-	-
NIGER				SENEGAL			UPPER VOLTA				
28.2	7			152.2	38			20.1	4		
Groundnuts and Groundnut Products		60	7			58	-13			19	22
Cotton		-	-			-	-			24	38 ^{2/}
Live Animals (recorded)		14	3			-	-			39	2
Meat		-	-			-	-			-	-
Fish		-	-			6	183			-	-
Iron Ore		-	-			-	-			-	-
Phosphates		-	-			9	0.8			-	-

Table (iii): Exports and Export Performance, 1963-1970
(continued)

ANNEX A

Sources: Six drought-affected African countries, June 1973; UNCTAD, Selected Statistical Tables in the Bulletin de Statistique, Senegal, various issues.

1/ 1964 and '65 only.

2/ Cotton exports began in 1964. The averaged 10,000 tons in 1967-70.

Table (iv): Flow of the Large Rivers of the Sahel

ANNEX A

	Senegal River at Bakel		Niger River				Chari River at Ndjamena	
	60 years' observation		at Bamako-Koulikoro 60 years' observation		at Niamey 38 years' observation		37 years' observation	
	m ³ /sec.	% of normal	m ³ /sec.	% of normal	m ³ /sec.	% of normal	m ³ /sec.	% of normal
Average Annual Flow:	770	100	1,540	100	1,016	100	1,280	100
1970-71	542	70	-	-	691	68	-	-
1971-72	500	78	-	-	785	77	-	-
1972-73	264	44	1,080	70	728	72	578	45
Maximum Flow (Flood):								
Average	4,900	100	6,250	100	1,860	100	3,540	100
1973-74	2,550	52	4,150	66	-	-	2,130	60

Source: FED: Situation de l'élevage dans le Sahel, 1974.

GROUNDNUTS - evolution of world prices

TABLE (V)

ARACHIDES Graines

ANNEX A

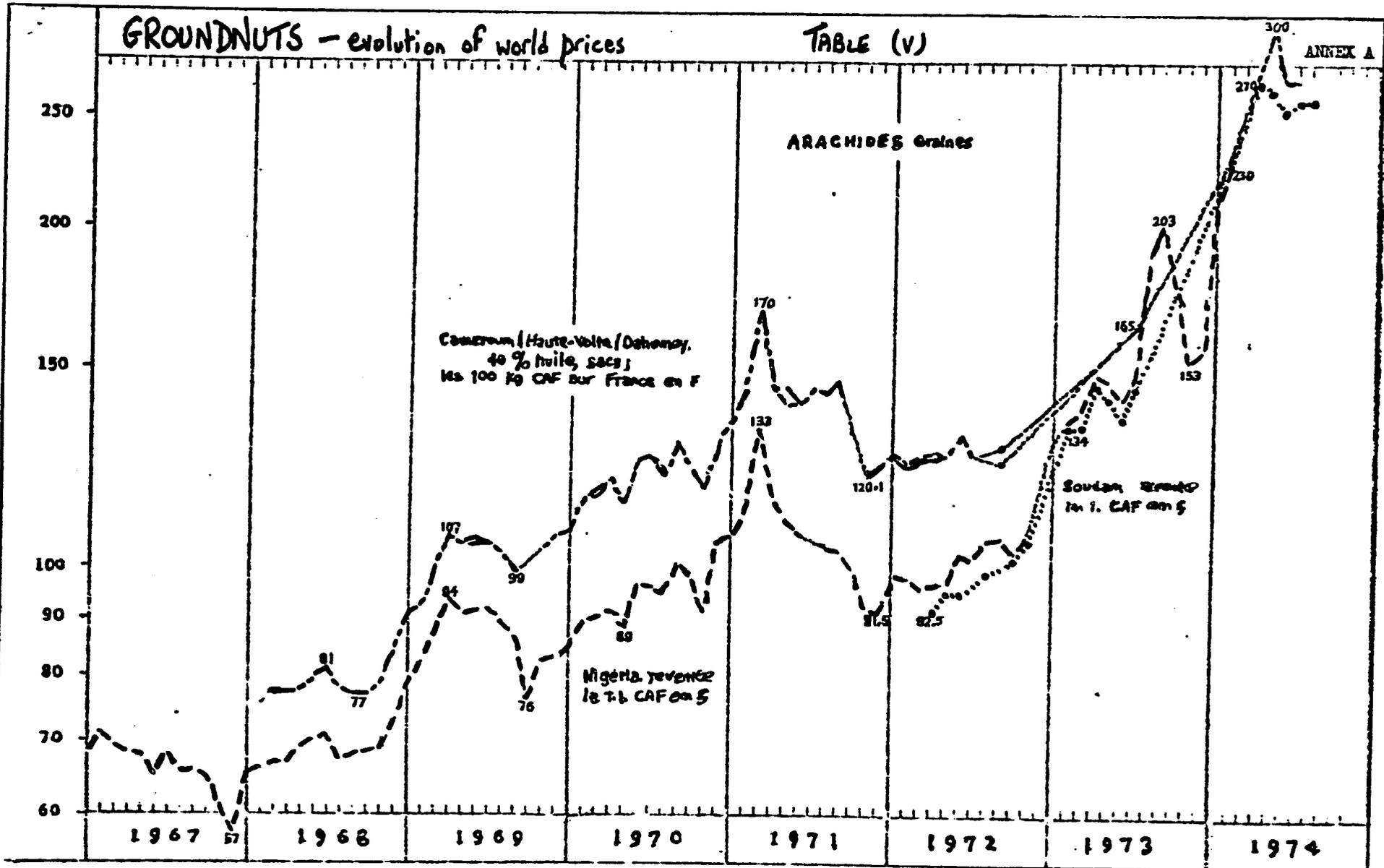
Cameroun (Haute-Volta/Dahomey)
40 % huile, sacs;
165 100 Fg CAF sur France en F

Nigeria, rendement
12 T.t. CAF en S

Soudan, rendement
10 T.t. CAF en S

250
200
150
100
90
80
70
60

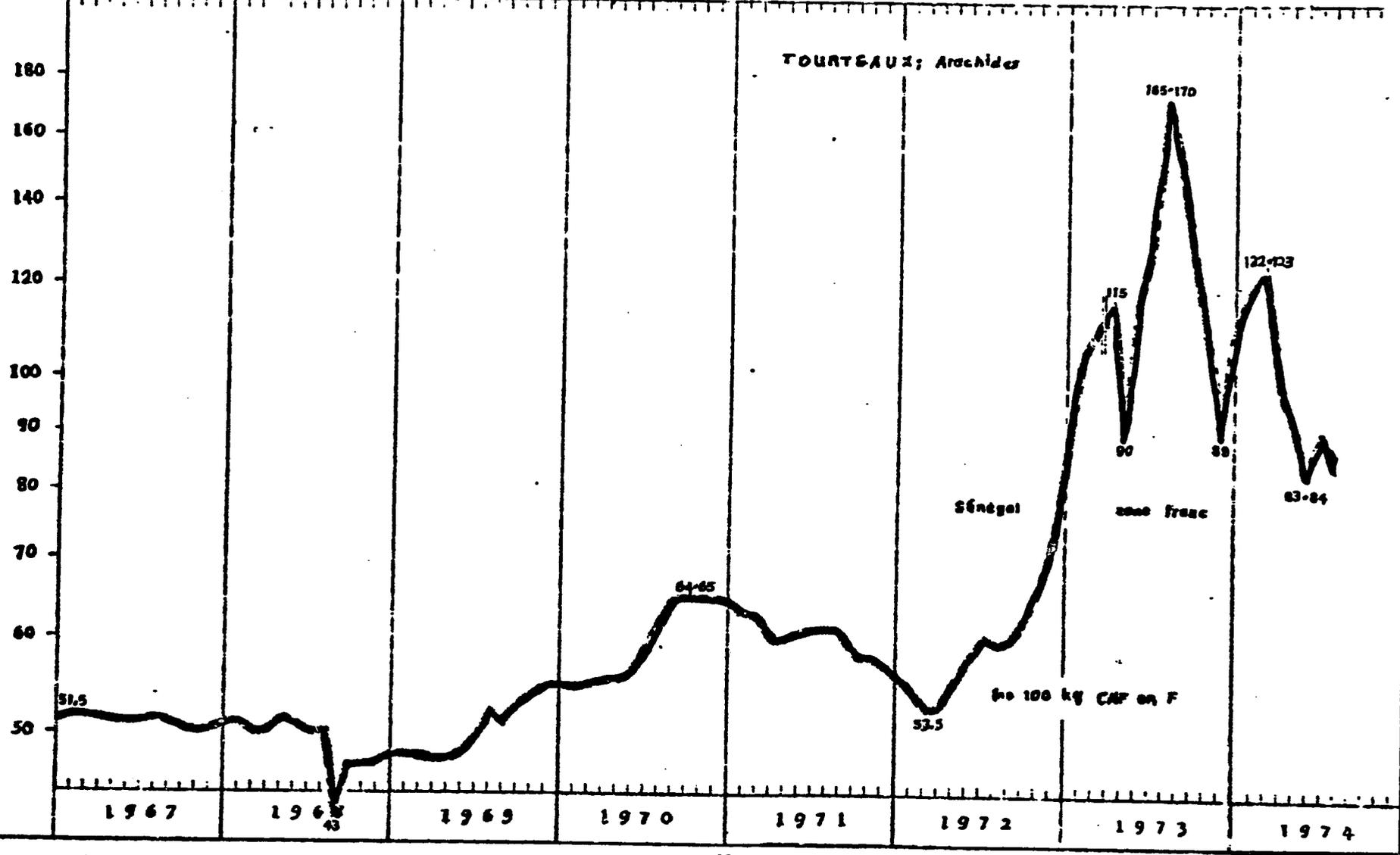
1967 57 1968 77 1969 90 1970 80 1971 120.1 1972 82.5 1973 153 1974 270 300



GROUNDNUT CAKE - evolution of world prices

TABLE (vi)

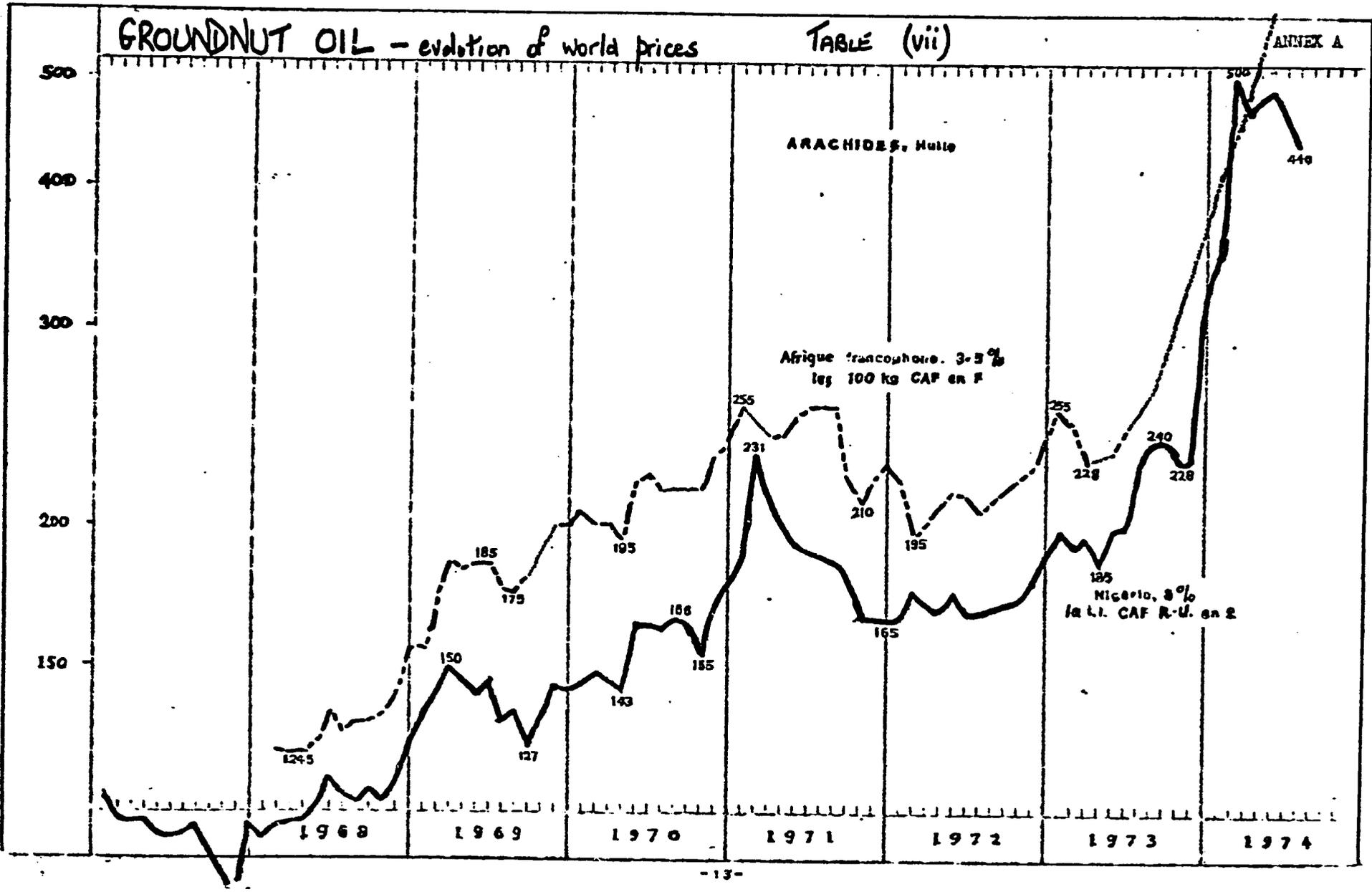
ANNEX A



GROUNDNUT OIL - evolution of world prices

TABLE (vii)

ANNEX A



COTTON - evolution of world prices

TABLE (viii)

ANNEXE A

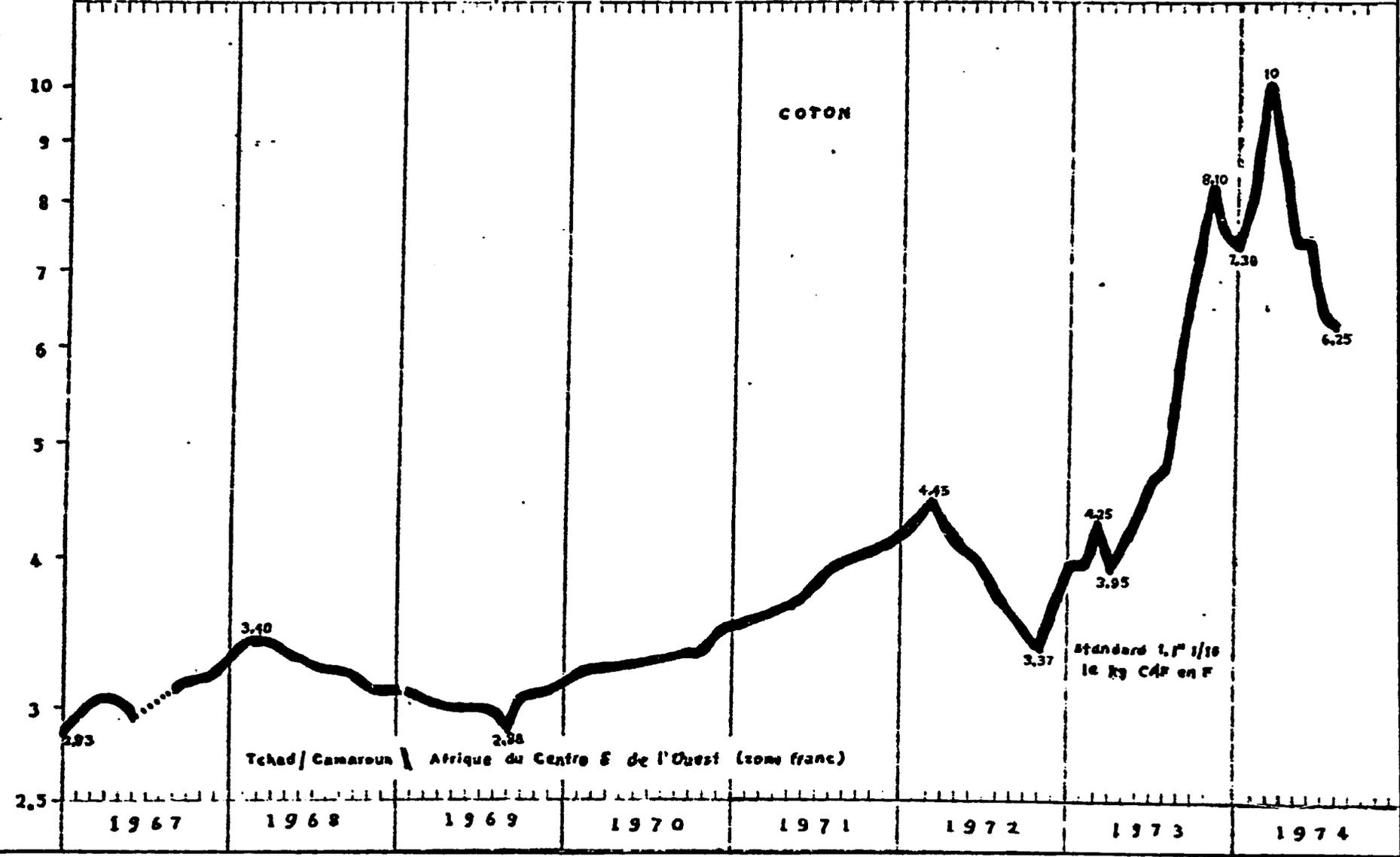


Table (ix): Examples of Railroad Freight Rate Changes
(CFAF ton/km.)

ANNEX A

I. SENEGAL 1972-75 (INTERNAL RATES)

<u>Freight over 30 tons</u>	<u>April 1972</u>		<u>March 1975</u>	
	<u>0-200 km.</u>	<u>400 km. and over</u>	<u>0-200 km.</u>	<u>400 km. and over</u>
Agricultural Products, Basic Staples	8.1	9.9	7.3	9.7
Petroleum Products	9.0	10.8	12.2	14.6
Firewood	5.0	7.0	7.2	10.0

Source: Chemin de Fer Dakar-Niger, Bureau Commerciale, Dakar.

II. ABIDJAN TO BAMAKO, 1/ RATES FOR SELECTED COMMODITIES, 1967-75 (Mali francs, ton)

<u>Applicable in:</u>	<u>Salt</u>	<u>Wheat Flour</u>	<u>Sugar</u>	<u>Agricultural Equipment (per unit)</u>	<u>Fertilizers</u>	<u>Cement</u>	<u>Petroleum (200 litres)</u>
January 1975	30,204	30,124	33,030	-	30,251	27,561	36,076
September 1970	22,858	-	-	30,027	25,492	22,462	27,646
May 1967	24,290	24,290	26,309	33,357	26,952	22,994	-

Source: Office National du Transport, Bamako.

1/ Via Ouagadougou.

III. DAKAR TO BAMAKO, AS ABOVE

January 1975	21,392	23,764	24,890	39,217	20,637	23,592	29,289
September 1970	16,143	19,139	-	38,240	17,492	15,839	22,977
May 1967	19,347	19,612	20,953	20,603	18,629	39,272	-

Source: Office National du Transport, Bamako.

Table (x): Changes in Monthly Wage Rates, 1970-1975

ANNEX A

	1970	1971	1972	1973	1974	1975 (January)
CHAD (CFA francs)						
Legal minimum urban wage, unskilled worker	4,507	5,200	5,200	5,200		
MALI (Mali francs)						
Legal minimum urban wage, unskilled worker	5,547	5,547	5,547	7,547	10,713	12,047
Typical rate, middle-level worker	36,750	36,750	36,750	36,750	40,750	42,750
University graduate	63,000	63,000	63,000	65,000	68,583	72,200
MAURITANIA (ouguiyas)						
Legal minimum urban wage, unskilled worker	1,404	1,404	1,404	1,404	1,650	3,082
NIGER (CFA francs)						
Legal minimum urban wage, unskilled worker	5,199	5,199	5,199	5,199	7,279	8,318
Typical rate, middle-level worker	38,317	38,317	38,317	38,317	38,317	42,849
University graduate	52,250	52,250	52,250	52,250	52,250	54,475
SENEGAL (CFA francs)						
Legal minimum urban wage, unskilled worker	8,771	8,771	8,771	9,319	12,674	18,557
Typical rate, middle-level worker	37,239	37,239	37,239	37,239	41,684	50,475
University graduate	64,598	64,598	64,598	64,598	70,433	78,324
UPPER VOLTA (CFA francs)						
Legal minimum urban wage, unskilled worker	5,372	5,372	5,416	5,892	7,279	8,145

Sources: See Annex B, Table VIII.

Definitions: (for further details, see Annex table for each country)

Legal minimum urban wage: salaire minimum interprofessionnel garantie (SMIG), converted to a monthly equivalent by multiplying the hourly rate times $40 \times 52/12$.

Middle-level worker: entry-level civil service salary for clerical/technical worker, high school graduate (2eme bac.), except Upper Volta, as specified in table.

University graduate: entry rate, civil service for university graduate.

Table (xi). Number of Herders' Families
Victims of Drought
by Department and Ethnic Group, 1973
 (thousands)

	Fulani	Tuareg	Other	Total Number of Herders	Number of Families	Herder Families "Sinistres"
Niamey	50	100	-	150	30	12
Dosso	55	-	-	55	10	2
Tahouha	40	160	-	200	36	18
Maradi	70	5	-	75	14	8
Agadez	5	50	-	55	10	8
Zinder	150	60	5	215	40	24
Diffa	40	-	10	50	10	4
TOTAL	410	375	15	800	150	76

Source: Niger Authorities.

Table (xii). Changes in Salaries of Clerical and Manual Workers
in Public and Private^{1/} Employment, Niger

ANNEX A

<u>Employment^{2/}</u> <u>Category</u>	<u>1962-1974</u>			<u>As of 1 January 1975</u>			
	<u>Monthly Salaries</u> <u>Clerical</u>	<u>Manual</u> (CFAF)	<u>%</u> <u>Difference</u>	<u>Clerical</u> (CFAF)	<u>%</u> <u>Increase</u>	<u>Manual</u> (CFAF)	<u>%</u> <u>Increase</u>
1A	5,200	5,200	0	8,320	+ 60	8,320	+ 60
1B	5,410	5,410	0	8,670	+ 60	8,670	+ 60
2	8,500	7,055	-17	9,010	+ 6	9,010	+ 28
3	10,500	9,795	-6.7	12,600	+ 20	12,600	+ 29
4A(1st echelon)	13,500	10,954	-18.8	16,200	+ 20	16,200	+ 48
4B(2nd echelon)	-	11,510	-	-	-	-	-
5A(1st echelon)	17,600	13,155	-25.2	21,120	+ 20	21,120	+ 61
5B(2nd echelon)	-	13,815	-	-	-	-	-
6	20,900	16,295	-22	25,080	+ 20	25,080	+ 54
7A	27,000	-	-	31,050	+ 15	31,050	-
7B	30,000	-	-	34,500	-	34,500	+ 17
Superscale	-	29,595	-	-	-	-	-

1/ The salaries are minima in the single collective agreement covering modern sector employees in Niger and "auxiliary" workers in the public sector.

2/ Categories 1A to 3 cover semi-skilled workers; 4-5 are "specialized workers", and 6-7 "qualified workers".

Sources: République du Niger, Ministère de la Fonction Publique et du Travail, Rapport sur les Salaires minima hiérarchisés des travailleurs manuels et non-manuels, 20 mars 1974 (mimeo.); and République du Niger, Conseil Militaire Suprême, Decret No. 74-317/PCMS/MF/MFP/T, du 6 décembre 1974.

Table (xiii). Cotton Price Structure, Senegal, 1969-1974

	1969/70	1970/71	1971/72	1972/73	1973/74 ^{1/}
PRODUCTION					
Unginned (thousand tons)	10,825	11,130	21,170	23,283	32,854
Ginned	3,904	4,170	7,700	8,513	11,894
PRICE STRUCTURE					
			(CFAF per kg.)		
1. Average Producer Price, Unginned cotton	27.9	27.9	31.02 ^{2/}	29.9	33.9 ^{3/}
2. Costs of fertilizers, etc. provided to growers	7.9	13.7	10.8	11.8	10.6
3. "True" Producer Price, Unginned cotton	35.8	41.6	41.8	41.7	44.3
4. Total cost of ginned cotton at Dakar	146	142	155	160	177
5. Selling price to local textile mills	144	156	193	175	200
6. Cost Price, CIF	161	157	170	173	196
7. Average Export Price, CIF	154	179	206	200-205	345
8. Profit or Loss (-) on Exports	-7.5	23	36	27.32	149

Source: B 1975.

^{1/} Preliminary.^{2/} Includes special premium of 1 CFAF per kg.^{3/} Includes special premium of 4 CFAF per kg.

ANNEX B

COUNTRY STATISTICAL TABLES

- I. Production of Principal Crops, Producer Prices, Marketed Production and Producer Revenues.
- II. Livestock: Herd Size and Slaughter.
- III. Exports: Totals and Selected Commodities.
- IV. Imports.
- V. Government Revenues.
- VIA. Government Budget Expenditure by Function.
- VIB. Recurrent Government Expenditure by Object.
- VII. Balance of Payments.
- VIII. Wages and Consumer Prices.

Table I. Chad: Production of principal crops,
producer prices, marketed production and producer revenues
(in thousand metric tons, CFA francs per kilo and billion CFA francs)

ANNEX B

	1964/65	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75 ^{1/}
Cotton									
Total production	99.1	102.0	148.8	117.0	95.0	108.8	104.2	114.5	121.0
Marketed production	99.1	102.0	148.8	117.0	95.0	108.8	104.2	114.5	121.0
Producer prices	26	26	26	26	26	28/26 ^{4/}	29/24 ^{4/}	31/24 ^{4/}	43/25 ^{4/}
Producer revenues	2.6	2.7	3.9	3.0	2.4	2.9 ^{4/}	2.8 ^{4/}	3.1 ^{4/}	4.1 ^{4/}
Millet and Sorghum									
Production	800	711	700	651	610	631	590		
Groundnuts									
Production		88	110	115	96	75	75	76	80
Rice (paddy)^{2/}									
Production		32	35	37	39	51	25 ^{3/}	30	35
Wheat									
Production		8	6	8	10	10	7	8	8

Sources: Direction de la Statistique; Bulletin de l'Afrique Noire.

^{1/} Estimated.

^{2/} ECA Yearbook.

^{3/} Document (untitled and undated) presented by Chadian Government to the "Secrétariat Technique" of unspecified organisation (probably the Comité Inter-Etat de Lutte contre la Sécheresse) in Ouagadougou, p.4.

^{4/} When two prices appear the average of the two has been used to compute revenues. The cotton prices here, as throughout the report, refer to Allen cotton, 1st and 2nd quality.

Table I. Mali: Production of principal crops,
producer prices, marketed production and producer revenues
(in thousand metric tons, CFA francs per kilo and million Malian francs)

ANNEX B

	1963/64	1964/65	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73 ^{1/}	1973/74 ^{1/}	1974/75 ^{2/}
Millet and Sorghum										
Production	863	651	830	556	700	715	715	474	530	910
Marketed production	75	48	68	7	26	12	29	11	10	33
Producer price	10	11	16	16	18	18	18	20	20	32
Producer revenues	752	537	1,088	112	468	216	522	220	200	1,056
Rice										
Production	-	-	103	80	96	98	117	60	48	120
Paddy equivalent	189	192	(192)	(134)	(161)	(163)	(195)	(100)	(81)	(229)
Marketed (paddy)	31	27	36	1	-	1.4	4.5	0.2	-	-
Office du Niger			18	12	22	18.5	24	20	24	24 ⁵⁰
Producer price	14.5	12.5	18	18	25	25	25	25	25	40
Producer revenues	354	341	655	234	550	500	738	500	600	2,000
Cotton (unginned)										
Production	Data unusable		39	50	51	59	74	72	58	67
Marketed	25	29	33	41	42	53	68	66	52	61
Producer price ^{3/}	34	34	40	40	45	50	50	50	50	75
Producer revenues	850	986	1,320	1,640	1,890	2,650	3,400	3,300	2,000	4,575
Groundnuts (unshelled)										
Production	-	148	119	96	136	158	152	134	120	145
Marketed	75	49	29	33	56	74	60	50	43	65
Producer price										
Unshelled	14	13	24	24	30	30	30	30	30	40
Shelled	-	-	(40-42)	(52-54)	(48-50)	(48-50)	(48-50)	(48-50)	(48-50)	-
Producer revenues	1,050	637	696	790	1,680	2,200	1,800	1,500	1,290	2,600

Sources: B 1975; Dossiers Economiques, 1972-3; Data provided by Malian authorities.

1/ Preliminary.

2/ Forecast.

3/ Allen, 1st quality.

Table I. Mauritania: Total production of main crops
in thousand tons

ANNEX B

	1965	1966	1967	1968	1969	1970	1971	1972	1973
Rice	(20) ^{3/}	(20) ^{3/}	(20) ^{3/}						
Millet	110	90	110	50	110	81	80	50	25
Cow peas	10	11	15	10	10	15	15	-	-
Dates	20	15	13	14	15	15	15	15	15
Gum Arabic Production Producer Price (in UM/kg)						7.3 21.8	5.5 20.9	5.7 18.9	1.0 30.0

Source: ECA, RIM, Annuaire Statistiques 1972, and B 1975.

1/ Estimates of agricultural production for Mauritania are so sparse and uncertain that even the international organisations, which are normally agreeably tolerant of data deficiencies, do not use the official series on agricultural production and have thus far refrained from producing one of their own in their reports. Mauritania is the only Sahel country for which this is true.

2/ Includes 3-4,000 tons of maize.

3/ Estimated normal production by "traditional" methods.

Table I. Niger: Production of principal crops,
producer prices, marketed production and producer revenues
(in thousand metric tons, CFA francs per kilo and billion CFA francs)

ANNEX B

	1964 ^{4/}	1967	1968	1969	1970	1971	1972	1973	1974
Millet^{1/}									
Total Production									
Marketed Production	1,013	1,000	733	1,095	871	958	919	648	896
Producer Price ^{2/}									
Producer Revenue						13/20	25	25/30	25
Sorghum^{1/}									
Total Production									
Marketed Production	315	350	215	289	230	267	208	128	238
Producer Price ^{2/}									
Producer Revenue									
Rice^{1/}									
Total Production									
Marketed Production	12	33	39	38	37	27	32	23	28
Producer Price									
Producer Revenue									
Cassava									
Total Production									
Marketed Production	149	169	198	197	182	166	95	-	-
Producer Price									
Producer Revenue									
Groundnuts									
Total Production (shelled)	184	298	252	207	205	257	(200)	75	120
(unshelled)	129	209	177	145	144	171	140	50	84
Marketed Production (unshelled)	106	183	164	165	130	146	110	25	60
Producer Price	23	18	18	18	20	21	24	28	55 ^{3/}
Producer Revenue	2.4	3.3	3.0	2.9	2.6	3.1	2.6	0.7	3.3
Cotton									
Total Production									
Marketed Production ^{1/}	6.8	6.2	7	10.5	9.6	8.3	5.2	1.3	11
Producer Price ^{5/}	32.6	28.5	28.5	28.5	29.6	30	32	32	47 ^{3/}
Producer Revenue	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.04	0.5

Sources: A 1974; BCEAO, January 1975. MER, La Situation de l'Agriculture Nigérienne après la Sécheresse, 1975; Niger authorities.

1/ Estimates 1967-72 from A 1974; 1973 from MER, Situation de l'Agriculture Nigérienne après la Sécheresse (Niamey, 1975).
Estimates 1962-72 from BCEAO, January 1975; 1972-74 estimates from Niger authorities. The figure for 1973 is a downward revision of an earlier official estimate. 1974 is a forecast.

2/ Price offered by OPVN.

3/ Overestimate. Groundnut prices changed over the season from 40 to 55 CFAF per kg.
Cotton changed from 35 to 40 to 47.

4/ Years represent beginning of actual crop years, e.g. 1964 means October 1964 - September 1965.

5/ First quality.

Table I. Senegal.

ANNEX B

Sources: Production: 1960/61 to 1968/69: A 1974; 1969/70 to 1972/73: Situation économique du Sénégal 1973, p.74; 1973/74: B 1975, p. 67; 1974/75: Multi-Donor Mission Report, 1975. Peanuts Production from BCEAO Bulletin #223, "Senegal" p. 2.
Marketing: BCEAO Bulletin #224, p. 5. Producer prices for peanuts: ibid. #223, p. 2. Producer prices for cotton: 1970/71: A 1974, p. 277. 1971/72: B 1975, p. 70. Since 1972/73: BCEAO Bulletin #224, p. 2. Other producer prices: to 1970/71: A 1974, p. 275; since 1971: B 1975, p. 11.

1/ Preliminary.

2/ Estimated.

3/ Prix Nu-bascule Kaolak.

4/ Producer revenue equals marketed output times producer price.

5/ Cotton producer prices come from three sources, which are seriously inconsistent. Breaks between series occurred in 1971 and 1972.

6/ 35.0 prior to 1 November 1974.

7/ Source: Séminaire Régional sur la Planification et l'Organisation du Développement et l'Emploi d'Engrais en Afrique, Dakar, 9-21 September 1974.

Table I. Upper Volta.

ANNEX B

Sources: 1974 Cereals harvest estimates, Directorate of Agricultural Services, Upper Volta.
 1972/73, 1973/74, 1974/75 producer prices, Caisse de Stabilization des Prix des produits agricoles,
exercice 1974/75, Upper Volta.
 1970 Agricultural production estimates, A 1975.
 1968/69 to 1973/74, Sheanuts Producer Prices, IS 1974, Annex 6.
 1967/68 to 1972/73, Ministry of Plans and Ministry of Agriculture, Upper Volta.

1/ Production by grade as percentage of marketed production.

Grade	1961/62	1965/66	1970/71
1	92%	67%	71%
2	5	23	} 29
3	3	10	

2/ Producer prices given here are official prices. In fact, the market price of millet amounted to 59 CFAF/kg in 1972, 76 CFAF/kg in 1973 and 79 CFAF/kg in 1974.

3/ Another official source gives a much lower estimate for 1972/73 millet and sorghum production: 266,000 tons as against the 765,000 in the table.

4/ This estimate must be looked upon with caution. The 1973-74 estimate of production in one Ministry is 744,000 tons as against the "actual" given in this table (1,138,000 tons).

Table II. Chad: Livestock: Herd Size and Slaughter
(in thousands of heads and thousands of tons)

ANNEX B

	1964	1968	1969	1970	1971	1972	1973
Cattle							
Thousands of head ^{1/}		4,500	4,500	4,500	4,600	4,700	2,970
Annual slaughter ^{2/} (tons)	6,675 ^{4/}	11,288	13,941	15,382	15,568	9,121	7,752
Sheep and Goats							
Thousands of head		3,800	4,000	4,100	4,200	4,200	
Annual slaughter ^{3/}	.509	.463	.426	.430	.499	.536	.611
Horses and Donkeys							
Thousands of head		450	450	435	421	430	
Total Livestock							
Thousands of head		8,750	8,950	9,035	9,221	9,330	

Sources: UN Economic Commission for Africa, Yearbook 1973.

1/ Source: ECA Yearbook 1973.

2/ Direction de la Statistique.

3/ UN Statistical Abstract figures for Mutton and Lamb multiplied by two.

4/ Source: Direction de l'Elevage - slaughter at the Abattoir de Farcha only.

Table II. Mali: Livestock: Herd Size and Slaughter
(in thousands of heads and thousands of tons)

ANNEX B

	1964	1965	1968	1969	1970	1971	1972	1973
Cattle								
Thousands of head		4,600	4,900	5,000	5,400	5,300	5,000	3,300 ^{1/}
Annual slaughter	78	73	63	79	80	83	87	100
Sheep and Goats								
Thousands of head		10,200	10,300	10,300	11,200	11,100	10,000	
Annual slaughter	131	86	75	74	140	173	179	200
Horses and Donkeys								
Thousands of head		638	702	700	646	630	630	

Source: B 1975; Dossiers Economiques, 1972-73; ECA Statistical Yearbook.

^{1/} FED, Etude sur la situation actuelle de l'elevage dans le Sahel (1974). Their estimate is based on opinions prevailing in January 1974. They observe that, when nomads return, loss will probably be found to be about 25%.

Table II. Mauritania: Livestock: Herd Size and Slaughter
(in thousands of head and thousands of tons)

ANNEX B

	1965	1968	1969	1970	1971	1972	1973
Cattle							
Thousands of head	2,340	2,490 ^{2/}	2,550	2,560 ^{2/}	2,450 ^{2/}	2,300 ^{2/}	1,600 ^{1/}
Annual slaughter		(2,300) ^{2/}		(2,000) ^{2/}	(2,250) ^{2/}	(1,460) ^{2/}	800 ^{2/}
Registered				21	20	26	25
Unregistered				119	120	114	135
Sheep and Goats							
Thousands of head	4,640	4,800 ^{2/}	5,000	6,850 ^{2/}	6,946 ^{2/}	6,850 ^{2/}	1,950 ^{2/}
Annual slaughter		(8,000) ^{2/}		(7,000) ^{2/}	(2,300) ^{2/}	(2,000) ^{2/}	
Registered				27	24	31	22
Unregistered				1,178	1,176	1,169	1,278
Horses and Donkeys	147	231	241	248	254	260	260

Source: Mauritanian authorities, and citations listed.

1/ République Islamique de Mauritanie, Bilan de la Sécheresse (1974).

2/ Fonds Européen de Développement, Etude sur la situation actuelle de l'élevage dans le Sahel, 1974.

Table II. Niger: Livestock: Herd Size and Slaughter
(in thousands of head and thousands of tons)

ANNEX B

	1964	1968	1969	1970	1971	1972	1973
Cattle							
Thousands of head	3,900	4,500	4,000	4,000	4,100	4,200	2,700 ^{1/}
Annual slaughter		76	75	67	61	61	
Goats							
Thousands of head	5,500	6,100	5,700	6,000	6,200	6,300	5,400
Annual slaughter		313	385	382	398	396	
Sheep							
Thousands of head	2,100	2,400	2,100	2,700	2,800	2,900	2,100
Annual slaughter		95	97	92	89	104	
Camels							
Thousands of head	360	350	330	345	345	345	287
Donkeys and Horses							
Thousands of head	460	530	505	570	570	570	450

- ^{1/} Estimates of herd loss due to drought: (1) MER, in *Situation de l'Agriculture Nigérienne après la Sécheresse*: 50% for cattle; 35% for goats; 15% for sheep.
- (2) The European Development Fund study says that 60-80% of cattle were lost in Sahel zones, whereas only 15-30% in the sedentary zones. "It was especially in Niger that the transhumant herders were able to avoid disaster with losses of 30-40%, thanks to early departure on a long move".

Table II. Senegal: Livestock: Herd Size and Slaughter
(in thousands of head and thousands of tons)

ANNEX B*

	1964	1968	1969	1970	1971	1972	1973
Cattle							
Thousands of head	2,260	2,527	2,530	2,615	2,674	2,508	2,200
Annual slaughter		150.7	145.8	142.5	140.7	145.3	181.3
Sheep and Goats							
Thousands of head	2,234	2,521	2,607	2,700	2,804	2,698	2,500
Annual Slaughter		93.3	95.3	89.0	92.8	92.0	121.0
Horses and Donkeys							
Thousands of head	303	363	375	385	391	394	385
Camels							
Thousands of head		8	7	7	7	5	7

Sources: A 1974, p. 218; Situation Economique du Sénégal 1971; ibid., 1973.

Table II. Upper Volta: Livestock: Herd Size and Slaughter
(in thousands of head and thousands of tons)

ANNEX B

	1964	1968	1969	1970	1971	1972	1973
Cattle							
Thousands of head	-	2,448	2,500	2,700	2,492	2,600	2,174 ^{1/}
Annual slaughter	75	83	65	76	84	76	
Sheep and Goats							
Thousands of head				4,200		4,000	4,700 ^{1/}
Annual slaughter	131	158	98	138	175	207	

Sources: Upper Volta, MOA Directorate of Livestock, 1973.
Upper Volta, Dossier d'Information Economique, March 1973.

^{1/} Estimate derived from European Development Fund, Etude sur la situation actuelle de l'élevage dans le Sahel, 1974.

Table III. Chad: Exports: Totals and Selected Commodities
(thousands of tons and billions of CFA francs)

ANNEX B 4

	1966	1968	1969	1970	1971	1972	1973
Total Exports	5.8	9.4	9.1	8.9	7.8	9.0	8.5
Recorded	5.8	7.6	8.0	8.2	7.8	9.0	8.5
Unrecorded		1.8	1.1	0.7			
Cotton Lint							
Quantity	32.7	42.2	47.5	39.0	34.6	40.7	36.2
Value	4.5	5.8	6.6	5.5	5.2	6.1	5.4
Meat							
Quantity	1.8	6.4	7.2	14.3	11.8	6.2	3.8
Value	0.2	0.7	0.7	1.4	1.5	0.9	0.6
Cattle							
Quantity	83.1	21.2	20.1	21.1	37.8	50.1	59.1
Value	0.6	0.2	0.1	0.2	0.3	0.4	0.4

Source: Direction de la Statistique.

Table III. Chad: Exports: Totals and Selected Commodities
(thousands of tons and billions of CFA francs)

ANNEX B

	1966	1968	1969	1970	1971	1972	1973
Total Exports	5.8	9.4	9.1	8.9	7.8	9.0	8.5
Recorded	5.8	7.6	8.0	8.2	7.8	9.0	8.5
Unrecorded		1.8	1.1	0.7			
Cotton Lint							
Quantity	32.7	42.2	47.5	39.0	34.6	40.7	36.2
Value	4.5	5.8	6.6	5.5	5.2	6.1	5.4
Meat							
Quantity	1.8	6.4	7.2	14.3	11.8	6.2	3.8
Value	0.2	0.7	0.7	1.4	1.5	0.9	0.6
Cattle							
Quantity	83.1	21.2	20.1	21.1	37.8	50.1	59.1
Value	0.6	0.2	0.1	0.2	0.3	0.4	0.4

Source: Direction de la Statistique.

Table III. Mauritania: Exports, Totals and Selected Commodities
(billions Mauritanian ouguiyas)

ANNEX B

	1964	1966	1968	1969	1970	1971	1972	1973	1974 ^{1/}
Total exports ^{2/}	2.8	3.6	3.7	4.4	5.4	5.7	5.8	6.5 ^{3/}	9.3
Recorded						5.0	5.4	5.9	9.0
Unrecorded						0.7	0.6	0.6	300
Iron Ore									
Quantity (million tons)	5.0	7.1	7.7	8.5	9.2	8.6	8.6	10.5	11.4
Value	2.1	3.2	3.2	3.5	4.3	4.1	4.0	4.1	6.0
Copper									
Quantity (thousand tons)	-	-	-	-	-	7.6	16.8	21.8	28.0
Value	-	-	-	-	-	0.2	0.6	1.1	2.3
{ Fish Products (frozen, fresh, dried, salted)									
Value	4.6	7.3	10.7	12.2	18.0	10.25	23.3	20.0	-
{ Other Fish Products									
Value	-	-	-	-	-	12.4	10.5	7.2	-
(Total Value Fish Products	0.1	0.1	0.2	0.3	0.4	0.4	0.1	0.1	0.1
Gum Arabic									
Quantity (thousand tons)	-	3.1	4.2	4.9	5.4	5.5	4.3	0.7	0.2
Value						0.09	0.13	0.04	0.02
Cattle (head)									
Quantity (thousands)	78.0	76.0	89.0	230.0	172.0	230.0	153.0		
Value	0.2	0.2	0.2	0.4	0.3	0.4	0.2		

Sources: A 1974; B 1975; Comptes Nationaux, 1972.

1/ Estimated.

2/ A 1974.

3/ Mauritanian authorities.

Table III. Niger: Exports, Totals and Selected Commodities
(thousands of metric tons and billions of CFA francs)

ANNEX B

	1964	1966	1968	1969	1970	1971	1972	1973	1974 ^{2/}
Total exports			9.0	8.7	10.7	12.5	15.4		
Recorded	4.7	8.6	7.1	6.3	8.8	10.7	13.7	13.8	12.0
Unrecorded			1.9	2.4	1.9	1.9	1.7		
Groundnuts ^{3/}									
Quantity	98	189	172	135	150	113	137	87	
Value	3.2	6.2	4.9	4.0	5.7	4.7	6.2	3.7	
Live Animals ^{4/}									
Quantity	-	-	20	20	32	45	55	63	
Value	-	-	0.9	0.9	1.4	2.0	2.2	2.3	
Uranium Concentrates									
Quantity	-	-	-	-	-	0.4	0.4	1.4	
Value	-	-	-	-	-	2.0	2.4	5.4	(7.0)
Cotton Fiber									
Quantity	1.9	2.0	2.9	2.2	1.3	4.9	1.4	0.7	
Value	0.3	0.3	0.4	0.3	0.2	0.6	0.2	0.1	

Sources: A 1974; A 1972. Dossiers d'Information Economique 1972/73.

1/ No groundnuts exported in 1973/74; actually, 14,000 tons were imported for seed.

2/ Forecast, based on 6 month 1974 actuals of 6.1 billion CFAF (Bulletin de Statistique, 3^{ème} trimestre, 1974, p. 21) total exports, and 3.7 billion for uranium. As of June 1974 groundnut exports were only about 600,000 CFAF, as against about 2.0 billion in the first 6 months of 1973. Cotton exports were also only about 15% of 6 month 1973 exports, as of June 1974.

3/ The change in groundnut exports in 1966 is probably not due to an equivalent production or marketing increase. Marketed production estimates for 1966/67 were 190,000 tons unshelled; 1965/66 estimated production was 151,000. Variation in movements to and from Nigeria in response to price differentials is the likely explanation.

4/ Live animals (cattle) by head, varied from an average annual recorded export of about 60,000 head in 1961-63 to some 67,000 head in 1967-69. Recorded exports are estimated to be one third of total livestock exports.

Table III. Senegal: Exports, Totals and Selected Commodities
(thousands of tons and billions of CFA francs)

ANNEX B

	1964	1966	1968	1969	1970	1971	1972	1973	1974 ^{1/}
Total exports									
Recorded	37.4	44.1	45.0	39.6	48.8	41.3	64.7	51.4	107.0
Unrecorded	30.2	37.1	37.9	31.9	42.2	34.7 ^{1/}	54.4 ^{1/}	43.2 ^{1/}	89.9
	7.2	7.0	7.1	7.6	6.6	6.6 ^{1/}	10.3 ^{1/}	8.2 ^{1/}	17.1
Groundnut Products									
Quantity	527	636	690	402	405	231	558	249	
Value	23.7	28.7	27.4	17.7	20.9	12.7	29.3	15.6	28.5
Phosphates									
Quantity	721	811	810	794	956	1,207	1,426	1,416	1,550
Value	2.4	2.6	2.6	2.7	3.3	3.8	4.6	4.9	25.9

Sources: Total exports and groundnut export values:

1964-1970: A 1974, pp. 292-3.

1971-1973: BCEAO # 221 p, 9, except Total Unrecorded Exports estimated as 19% of Total Recorded Exports.

Phosphate export values:

1965-1970: A 1974, pp. 292-3.

1971-1973: BCEAO # 221, p. 9, to BCEAO figures these estimates of unrecorded groundnut exports to Gambia have been added: 1971: 0.3; 1972: 0.5; 1973: 0.3.

Quantities:

1964-1970: A 1974, p. 298.

1970-1973: BCEAO # 221, p. 9. Quantities of groundnuts, unlike values, not adjusted for unrecorded exports to Gambia in these years.

1974 (phosphates): B 1975, p. 89.

Other 1974 data: Senegalese and BCEAO authorities; CRED estimates.

^{1/} Estimated.

Table III. Upper Volta: Exports, Totals and Selected Commodities
(thousands of tons and billions of CFA francs)

ANNEX B

		1964	1966	1968	1969	1970	1971	1972	1973	1974
Total Exports										
Recorded		3.3	4.0	5.3	5.3	5.1	4.4	5.1	5.5 ^{1/}	6.0 ^{1/}
Unrecorded								1.7	(2.4) ^{2/}	(4.1) ^{2/}
Livestock:	Quantity	24.5	27.0	32.5	25.9	23.0	23.9	32.6	5.7 ^{2/}	15.0 ^{2/}
	Value	1.8	2.2	2.5	2.2	1.8	1.9	2.3	(0.5) ^{2/}	(1.6) ^{2/}
Cattle:	Quantity	-	-	23.5	16.3	13.0	13.0	18.9	-	-
	Value	-	-	1.6	1.1	0.9	0.8	1.1	-	-
Sheep and Goats:	Quantity	-	-	7.6	5.7	5.6	5.9	8.7	-	-
	Value	-	-	0.5	0.5	0.5	0.5	0.6	-	-
Cotton Fiber:	Quantity	1.8	2.4	6.3	9.4	13.4	8.0	9.0	9.0	
	Value	0.1	0.3	0.9	1.5	1.3	0.8	1.0	1.0	
Cotton Seed:	Quantity	-	-	5.7	8.3	14.6	8.5	10.0	9.0	
	Value	0.07	0.03	0.1	0.1	0.2	0.08	0.09	-	

Sources: Bulletin Annuaire d'Information Economique et Statistique, 1975; Dossier d'Information Economique 1971/72;
Upper Volta authorities.

^{1/} BCEAO forecast. These are "official" or recorded exports only. Other estimates (A 1975) of total 1974 exports are approximately 13 billion CFAF.

^{2/} Upper Volta authorities - 6 months only.

Table IV. Chad: Imports.
(in thousands of tons and billions of CFA francs)

ANNEX B

	1967	1968	1969	1970	1971	1972	1973	1974
Total Imports								
Recorded								
Quantity				171.7	169.9	49.8		
Value	14.5	13.4	14.0	17.2	17.2	15.5	18.2	
Unrecorded	0.5	0.5	1.4	2.8				
Petroleum Products								
Quantity								
Value	42.4	47.5	64.2	67.4	73.3	56.1		
Foodstuffs (excluding drinks)								
Quantity								
Value	31.6	23.2	24.9	28.8	25.7	32.6	34.4	
Cereals								
Quantity								
Value	2.2	1.5	1.4	1.6	1.7	2.3	2.8	
Rice								
Quantity				6.5	6.7	6.9	10.6	(3.0) ^{2/}
Value				0.4	0.4	0.4	0.7	
Millet and Sorghum								
Quantity								
Value								
Wheat and Wheat Flour								
Quantity	8.8	4.5	7.8	6.5 ^{1/}	6.7 ^{1/}	6.9 ^{1/}	10.6	
Value	0.6	0.3	0.5	0.4	0.4	0.4	0.7	
Sugar								
Quantity	22.8	18.7	17.1	22.3	19.0	25.7	23.8	
Value	1.6	1.2	0.9	1.2	1.2	1.9	2.0	
Fertilizers								
Quantity	1.9	2.0	0.5	1.0	1.5	2.2		
Value	-	-	-	0.1	0.2	0.2		

Table IV. Chad.

ANNEX B

Source: ECA Yearbook, Bulletin de l'Afrique Noire.

1/ Source: La Zone Franc en 1972 published by the Comité Monétaire de la Zone Franc.

2/ Estimated import requirement, full year, OSRO Sahel Progress Report No. 11.

Table IV. Mali: Imports
(in thousands of tons and billions of Malian francs)

ANNEX B

	1967	1968	1969	1970	1971	1972	1973	1974
Total imports								
Recorded		23.6	29.3					
Unrecorded	12.8	19.9 3.7	25.3 4.0	29.3	33.7	39.7	51.7	87.0
Petroleum products								
Quantity								
Value	2.7	2.4	2.7	3.0	3.4	4.1	4.0	9.0
Foodstuffs								
Quantity								
Value		5.6	8.3	11.0	10.6	14.3	25.2	51.6
Cereals								
Quantity								
Value	3.3	4.1	6.0	2.6	42.7	60	178 ^{1/}	243
Rice	0.9	0.9	2.9	1.5	2.0	3.8	16.7	35.1
Quantity								
Value							40	55
Millet and Sorghum								
Quantity								
Value								2/
Wheat and Wheat Flour								
Quantity								
Value		0.5	0.7	0.7	0.8		24.0	
Sugar							1.9	
Quantity								
Value	0.6	2.4	1.4	3.4	3.4	4.9	5.6	10.6
Fertilizers								
Quantity								
Value		4.7	5.0	3.5	5.1			
Grants in Goods		0.09	0.3	0.1	0.2			
Value				(1.4)	(2.6)	(2.1)	(10.3)	(22.5)

Table IV. Mali.

ANNEX B

Sources: A 1975; Central Bank of Mali. 1967-71 from Annuaire Statistique, 1971; later years from A 1975.

1/ 70,000 tons of this was aid.

2/ 34,000 tons of maize.

Table IV. Mauritania: Imports
(in thousands of tons and millions of ouguiyas)

ANNEX B

		1968	1969	1970	1971	1972	1973	1974 ^{1/}	1974 ^{2/}
Total imports	Value	3,500	4,280	4,860	4,800	5,460	6,400		8,640
Recorded	Value	1,742.6	2,292	2,628	3,200	3,560	4,900		8,140
Unrecorded	Value	1,757	1,988	2,232	1,600	1,900	1,500		500
Petroleum Products	Quantity	77	72.7	116.6	84.6	-	-		-
	Value	122	115.4	209.8	207.6	230	300		900 ^{3/}
							(239) ^{2/}		
Foodstuffs		441.6	512	694.2	799.4	790	1,660		
Cereals	Quantity				34.4	36.8	77.5	(10.4)	
	Value				172.3	167.5	391.8	(174.5)	
Wheat	Quantity						13.4		
	Value						43.2		
Corn	Quantity						10.0		
	Value						26.4		
Rice	Quantity	12.1	18.8	11.0	16.2	6.5	24.0	(7.6)	28.0
	Value	97.8	127.6	61.8	102.2	75.7	200.4	(126.0)	482.0
Wheat Flour	Quantity				5.5	6.0	16.3	(1.7)	
	Value				21.0	23.5	112.8	(21.6)	
Millet and Sorghum	Quantity						17.6		
	Value						91.8		
Other	Quantity						10.0		
	Value						28.4		
Sugar	Quantity	22.4	19.5	18.3	16.6	14.9	18.5	(5.1)	21.8
	Value	160.8	145.0	179.4	178.2	225.0	440.8	(97.3)	577.0
Fertilizer	Quantity	2.0	2.6	3.5	3.2	1.5 ^{4/}			
	Value	8.4	10.8	14.0	13.4	9.0			

Sources: B 1975; Bulletin Statistique.

1/ Four month actuals, Mauritanian authorities.

2/ Estimates, Mauritanian authorities.

3/ B 1975.

4/ Bulletin Statistique, November-December 1973.

Table IV. Niger: Imports
(in thousands of tons and billions of CFA francs)

ANNEX B

		1964	1966	1968	1969	1970	1971	1972	1973	1974
Total Imports										
Recorded		8.3	11.1	12.2	15.4	18.8	17.5	19.1		
Unrecorded				2.0	2.8	2.6	2.5	2.6	19.1	
Food	Value	0.7	1.1	1.1	1.3	1.6	1.4	2.0		
Wheat Flour	Quantity	1.4	3.6	2.8	3.5	4.9	3.4	4.0	5.1	1.7 ^{1/}
	Value	0.06	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1
Sugar	Quantity	6.2	8.3	3.4	7.6	9.0	6.9	10.6	10.1	6.6 ^{1/}
	Value	0.04	0.04	0.2	0.4	0.5	0.4	0.8	0.8	0.6
Petroleum	Quantity	26.5	36.6	45	41	51	57	60	73	408 ^{1/}
	Value			0.5	0.5	0.6	1.2	1.4	1.7	1.1
Cereals	Quantity							14.0	16.0	6.6 ^{1/}
	Value							0.3	0.6	0.2

Source: A 1974 and Bulletin Statistique for 1973 and 1974 estimates.

^{1/} Six months.

Table IV. Senegal: Imports
(in thousands of tons and billions of CFA francs)

ANNEX B

	1964	1968	1969	1970	1971	1972	1973	1974 ^{1/}	1974 ^{2/}
Total Imports		50.8	57.3	59.1					
Recorded	42.4	44.5	51.3	53.6	60.6	70.3	79.8	48.13	111.5
Unrecorded		6.3	6.0	5.5					
Petroleum Products ^{3/}									
Quantity	326	263	860	523	578	605	698	256	
Value		1.4	3.8	2.7	3.8	4.0	4.8	4.8	14.4
Value as % of recorded total		3%	7%	5%	6%	6%	6%	10%	13%
Foodstuffs (excl. beverages)									
Value	14.2	15.1	15.8	13.4	17.4	17.7	27.0	14.6	24.8
Value as % of recorded total	33%	34%	31%	25%	29%	25%	34%	30%	22%
Cereals									
Value (includes corn)	6.7	8.8	7.7	5.8	8.6	6.8	14.7	8.5	
Value as % of recorded total	16%	20%	15%	11%	14%	10%	18%	17.5%	
Rice									
Quantity	184	185	146	119	188	170	192	88	
Value	4.9	7.0	4.7	3.3	4.6	4.3	9.5	6.8	14.7
Value as % of recorded total	11.5%	16%	9%	6%	8%	6%	12%	14%	13%
Millet and Sorghum									
Quantity			39	0	30	10	41	4	
Value			0.6	0	0.7	0.2	0.7	0.1	
Value as % of recorded total			1%	0	1%	0.2%	0.8%	0.2%	
Wheat (not incl. flour)									
Quantity	63	62	85	112	112	95	105		31
Value	1.2	1.4	1.7	2.4	2.6	2.1	2.6	1.0	2.9
Value as % of recorded total	3%	3%	3%	4%	4%	3%	3%	2%	2.5%
Sugar									
Quantity	68	55	55	68	73	80	77	25	
Value	3.5	1.9	1.9	2.5	2.9	4.3	5.2	2.5	6.2
Value as % of recorded total	8%	4%	4%	5%	5%	6%	6.5%	5%	5%
Fertilizers									
Quantity			4	10	6	14	16	7	
Value	0.4	0.4	0.03	0.1	0.1	0.2	0.3	0.2	
Value as % of recorded total	1%	0.8%	0.06%	0.2%	0.2%	0.2%	0.3%	0.4%	

Sources: Bulletin Statistique et Economique Mensuel; Senegalese authorities and BCEAO officials.

1/ Six months.

2/ 11 months' preliminary data, adjusted then multiplied by 12/11.

3/ Widely diverse estimates have been given, depending on treatment of re-exports of refined petroleum products.

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Table IV. Upper Volta: Imports
(in thousands of tons and billions of CFA francs)

ANNEX B

		1964	1966	1968	1969	1970	1971	1972	1973 ^{1/2/}	1974 ^{1/2/}
Total Imports						15.1	18.9	22.2	-	25.5
Recorded		9.5	9.3	10.1	12.5	13.0	14.0	15.0	17.0	
Unrecorded		-	-	-	-	-	1.9	7.2		
Petroleum Products	Quantity									
	Value	.344	.545	.68 ¹	.852	1.062	1.221	1.2	1.6	2.8
	% total	3.6%	5.8%	6.7%	6.8%	8.2%	8.7%	8.0%	9.4%	11.0%
Foodstuffs	Quantity				35	49	53	60	(12)	(53.8)
	Value	2.8	2.3	1.9	2.182	2.261	2.547	2.837	(.837)	(3.2)
Cereals	Quantity			14.7	16.0	22.2	22.2	25.1	25.0	-
	Value			-	-	-	-	-	-	-
Rice	Quantity			1	2	3	1	3	(5)	(1.1)
	Value				50	94	42	91	(43)	(42)
Other grains ^{4/}	Quantity									
	Value			0.4	0.2	0.4	1.2	0.3		
Wheat and flour	Quantity				14	19	20	25	(6)	6.3
	Value				0.4	0.6	-	-	(0.09)	0.2
Sugar	Quantity				10	12	12	17	(3.0)	3.7
	Value				.543	.539	.616	.898	(.154)	.344
Fertilizers	Quantity				10.1	13.5	14.2	20.7	4.5 ^{3/}	
	Value				153	201	209	328	68 ^{3/}	
Livestock	Quantity				1	6	8	9	2.7	4.6
	Value				92	312	401	480	123	369

Sources: A 1975; Annuaire Statistique de la Haute Volta, January 1975; Upper Volta authorities.

^{1/} Figures in parenthesis were derived from worksheets at statistical office. They present more than the usual ambiguities and uncertainties, but are included here because no other 1973 and 1974 data are yet available.

^{2/} Six months only for all except total imports and petroleum imports.

^{3/} Three months.

^{4/} Millet, Sorghum and Corn.

Table V. Chad: Government Revenues
(in billions of CFA francs)

ANNEX B

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Taxes on Income and Profits	0.9	1.1	1.2	1.5	1.7	2.0	2.3	2.4		
Company	0.3	0.3	-	0.6	0.6	0.8	1.2	0.9		
Individual	0.6	0.7	1.2	0.9	1.1	1.2	1.1	1.5		
Personal Taxes	1.1	1.0	0.7	1.0	1.0	1.0	1.1	1.0		
Head Tax	0.7	0.6	0.5	0.8	0.9	0.9	0.8	0.9		
Livestock Tax	0.4	0.4	0.2	0.2	0.1	0.2	0.1	0.1		
Taxes on Property	0.7	-	0.2	0.4	0.4	0.5	0.5	0.4		
Taxes on Production and Consumption	1.9	1.5	1.5	1.4	1.4	1.6	2.1	2.1		
Consumption Tax	1.1	1.1	1.2	1.0	0.8	1.0	1.5	1.5		
Internal Turnover Tax	0.8	0.4	0.3	0.4	0.6	0.6	0.7	0.6		
Taxes on International Trade	2.0	3.5	3.8	3.4	5.2	6.1	5.9	4.1		
Import Taxes	1.3	2.8	2.7	2.7	4.2	5.3	5.1	3.3		
Export Taxes	0.7	0.7	1.1	0.7	1.0	0.8	0.8	0.8		
Other Tax Revenues	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2		
Non-Tax Revenues	1.7	2.1	2.3	1.4	1.2	1.4	1.1	1.3		
Postal Services	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5		
Government Departments	0.3	0.4	0.6	0.2	0.2	0.2	0.1	0.2		
Miscellaneous	0.2	0.1	0.2	0.2	0.5	0.7	0.4	0.7		
Solidarity Fund	0.8	1.2	1.2	0.5	-	-	-	-		
Extraordinary Revenues	0.4	0.4	0.4	-	0.3	-	-	1.3		
Total Revenues^{1/}	8.4	9.8	10.4	9.4	11.4	12.8	13.0	12.8	11.1	10.8 ^{2/}

Sources: Chad Authorities, A 1973.

^{1/} Excludes French Contribution.

^{2/} Preliminary. The relationship between budgeted receipts and actual receipts is very considerable. In 1973, for example, budgeted receipts were 17.0 billion CFAF while actual receipts were 11.1 billion CFAF. The 1974 budget was 20 billion in receipts; actuals were less than 11 billion.

Table V. Mali: Government Revenues
(in billions of Mali francs)

ANNEX B

	1966/67	1967/68	1968 ^{1/}	1969	1970 ^{2/}	1971	1972	1973	1974	1975 ^{3/}
Tax Revenues	-	-	-	-	19.4	21.3	22.1	24.2	25.9	27.6
Taxes on Income and Profits ^{4/}	2.1	2.3	0.9	1.9	1.7	2.3	2.2	2.4	3.5	
Companies	-	-	-	(0.7)	(0.8)	(1.1)	(1.2)	(1.3)	(1.8)	
Individuals	-	-	-	(1.2)	(0.8)	(1.2)	(1.0)	(1.1)	(1.2)	
Taxes Conjunctuelles	-	-	-	-	-	-	-	-	(0.5)	
Taxes on Goods and Services (Sales and Excises)	3.8	5.0	2.8	5.4	1.7	1.7	2.5	2.8	2.9	
Taxes on Internal Trade	3.0	5.9	3.3	5.3	9.6	11.1	11.8	12.3	12.8	
Import Duties and Taxes	(2.94)	(3.8)	(2.8)	(3.8)	(8.2)	(9.8)	(9.9) ^{5/}	(10.3) ^{5/}	(10.9)	
Export Taxes	(0.06)	(2.1)	(0.5)	(1.5)	(1.4)	(1.3)	(1.9) ^{5/}	(1.9) ^{5/}	(1.9)	
Other Taxes	4.5	4.5	1.6	3.9	6.3	6.2	5.5	6.6	6.6	
Poll Tax	-	-	-	-	(2.9)	(3.1)	(2.9)	(3.7)	(3.7)	
Livestock Tax	-	-	-	-	1.7	1.1	1.1	-	-	
Non-Tax Revenue	-	-	-	-	1.5	1.6	1.6	1.8	1.8	
Total Current Revenue	13.9	18.3	9.0	17.1	21.7	23.5	24.7	26.9	28.7	37.0

Sources: B 1975; A 1973.

^{1/} July-December.^{2/} New Series B 1975; previous data from B 1973. The old Series has same total revenue, but taxes or trade amount to only 5.3 billion Mali francs.^{3/} Budget.^{4/} Includes small amount of property taxes from 1966-1969.^{5/} Includes statistical tax.

Table V. Mauritania: Government Revenues
(millions of ouguiyas)

ANNEX B

	1964	1968	1970	1971	1972	1973	1974
Tax Revenues							
Direct Taxes	300	496	579	642	821	890	1,512
Indirect Taxes	380	557.2	960	1,047	1,276	1,443	1,828
Taxes on domestic production and consumption	158	362.6	133	145	203	227	268
Taxes on international trade	224	194.6	827	902	1,073	1,216	1,289
Imports	220.4	184	492	522	664	736	906
Exports	1.6	10.6	335	380	409	480	495
MIFERMA	-	-	(316)	(365)	(369)	(438)	(500)
SOMIMA	-	-	(-)	(-)	(21)	(21)	(40)
Other	-	-	(19)	(15)	(19)	(21)	(55)
Other Taxes	-	-	49	56	49	51	70
Non-Tax Revenues							
Other	70.2	87	94	92	125	161	104
Total current budget revenue	753.2	1,140.2	1,402	1,527	1,871	2,112	2,790
Price equalization tax (Tic)	-	-	45	145	82	82	110
Total current budget revenue plus Tic	753	1,140	1,447	1,672	1,953	2,194	2,900

Sources: A 1974; B 1975.

Table V. Niger: Government Revenues^{1/}
(in billions of CFA francs)

ANNEX B

	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4 ^{2/}	1973/4 ^{3/}	1974/5 ^{2/}
Tax Revenues	8.0	8.3	8.8	8.7	10.4	10.6	10.9	11.0	11.4	11.6	11.4
Direct Taxes	2.9	3.1	3.6	3.1	3.8	3.7	3.9	4.0	3.9	3.7	3.7
Income Tax	0.7	0.6	0.8	0.8	1.2	1.3	1.4	1.6	1.7	1.7	1.7
Minimum Fisale					1.8	1.7	1.9	1.9	1.9	1.7	1.9
Cattle Tax	{2.1	{2.4	{2.6	{2.2	0.7	0.7	0.6	0.4	-	0.3	0
Indirect Taxes	4.8	4.9	5.0	5.0	5.9	6.0	6.5	6.6	7.1	7.3	7.2
Turnover Tax			0.6	0.7	0.9	1.0	1.2	1.0	1.2	1.4	1.2
Excise Taxes	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.0
Import Duties	2.1	2.4	3.1	3.1	3.5	3.7	3.6	3.8	4.1		
Export Duties	0.8	0.6	0.7	0.5	0.6	0.5	0.8	0.7	0.8	{4.9	{5.0
Non-Tax Revenues	-	-	0.5	0.5	0.5	0.7	1.0	1.4	0.8	0.9	0.8
Total Current Revenues	8.5	8.6	9.3	9.1	10.9	11.3	11.8	12.3	12.3		
Transfers to Investment Fund (FNI)	-	-	-	-	-	0.2	0.3	0.3	0.4		
Total Revenues	8.5	8.6	9.3	9.1	10.9	11.5	12.1	12.6	12.6	14.1	15.1

Sources: A 1974.

^{1/} 1967-1972 are actuals.^{2/} Budget.^{3/} Actuals.

Table V. Senegal: Government Revenues
(in billions of CFA francs)

ANNEX B

	1965/6	1966/7	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5 ^{1/}
Total Receipts	35.83	35.38	35.84	36.19	40.99	40.73	45.78	46.72	51.13	65.20
Personal taxes (includes poll taxes, livestock taxes and regional taxes)	1.20	1.17	1.21	1.06	1.43	1.50	1.63	1.30	1.40	1.60
Income taxes	5.84	5.75	6.12	6.54	9.00	8.24	8.50	9.69	11.61	11.40
Taxes on real estate		0.74	0.52	0.43	0.84	0.77	0.77	0.83	0.89	1.30
Taxes on production and domestic transactions	n.a.	7.76 ^{2/}	7.77 ^{2/}	7.18	8.09	9.06	9.94	10.80	11.45	13.80
Taxes on imports	13.17 ^{2/}	14.08 ^{2/}	14.54 ^{2/}	14.77	16.03	15.88	19.29	18.33	19.03	25.00
Taxes on exports	3.21	2.86	2.68	2.58	1.84	1.61	1.83	1.85	1.04	1.60
Other taxes	n.a.	1.78	1.75	1.63	2.06	1.93	2.15	2.23	2.45	2.70
Non-tax revenue and unclassified budget revenue	2.07	1.24	1.25	1.99	1.68	1.75	1.67	1.70	3.27	7.80

Sources: 1965/66 - 1967/68: IBRD, Senegal: Tradition, Diversification and Economic Development, 1974; Senegalese authorities.
1968/69: B 1973.
1969/70 - 1973/75: B 1975.

^{1/} Provisional actuals.

^{2/} In 1966/67 and 1967/68, import taxes paid by refinery were classified under "Taxes on production and domestic transactions".

Table V. Upper Volta: Government Revenues
(in billions of CFA francs)

ANNEX B

	1966	1967	1968	1969	1970	1971	1972	1973	1974 ^{2/}	1975 ^{3/}
Tax Revenues	7.0	6.6	7.3	8.6	9.3	9.6	10.0	10.6	11.0	
Personal	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.3	1.3	
Standard tax on income	11.1	10.6	9.8	9.4	9.4	8.8	8.7	11.5	11.5	
Livestock tax	-	-	0.08	0.07	0.08	0.08	0.08	0.1	0.1	
Income taxes	0.8	1.0	1.1	1.1	1.1	1.3	1.5	1.4	1.6	
Wages and salaries	0.6	7.9	8.1	7.4	8.1	8.4	9.9	9.4	1.0	
Business profits	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	
Total Direct Taxes	1.9	2.1	2.2	2.1	2.2	2.5	2.6	2.7	2.9	2.0
Taxes on Production and domestic transaction ^{2/}	1.3	1.2	1.1	1.5	1.7	2.0	2.1	2.0	2.2	
Taxes on imports	3.2	2.3	3.7	4.6	4.9	4.9	4.8	5.3	5.6	7.2
Export taxes	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4
Other taxes	0.3	0.2	0.2	0.2	0.2	0.3	0.3			
Total Indirect Taxes										
Non-Tax Revenue	1.0	1.0	0.9	1.0	0.8	0.9	0.9	0.8	1.1	-
Unclassified	0.2	0.3	0.1	0.2	0.4	0.5	0.5	-	-	-
Total	8.3	7.8	8.4	9.7	10.5	11.0	11.4	12.2	12.7	13.6

Source: A 1975, Budget remanié de l'Etat - H.V.

1/ Cattle Tax was suspended in 1973. FED has provided compensation by granting CFAF 80 million.

2/ Budget remanié de l'Etat 1974 - H.V.

3/ 1975 estimates, A 1975.

Table VIA. Mali: Government Budget Expenditure by Function
(millions of Malian francs)

ANNEX B

	Actuals				Budget		
	1969	1970	1971	1972	1972	1973	1975
Central Government	14,832	16,162	17,118	19,834	20,365	22,723	31,900
Military Committee	30	25	25	25	24	24	40
Presidency	248	319	367	414	405	421	310
Justice	194	220	244	226	246	268	440
Interior	581	574	586	611	617	656	800
Foreign Affairs	772	675	680	729	677	739	1,000
Defense and Police	2,929	3,401	3,741	4,196	4,282	4,687	7,000
Finance and Commerce	763	859	882	1,035	1,108	1,160	1,620
Industrial Development and Public Works	494	416	439	482	509	513	800
Transport and Communications	50	58	132	161	169	200	200
Agricultural Production	945	1,169	1,006	1,101	1,175	1,321	1,300
Education	3,160	3,350	3,660	4,204	4,459	5,179	7,400
Public Health	1,929	1,913	1,834	2,054	2,153	2,306	2,700
Social Affairs	52	58	65	82	91	112	-
Information	166	173	162	200	208	221	300
Labor	57	57	65	71	74	87	20
General Administration ^{1/}	1,125	1,836	1,855	2,619	2,222	3,212 ^{2/}	3,600
Internal Contributions ^{3/}	871	806	1,180	1,107	1,240	990	1,200
Transfer Payments ^{4/}	45	253	275	517	706	627	600
Regional Governments	3,318	3,882	3,843	4,151	4,234	4,368	5,100
Total	19,150	20,044	20,961	23,985	24,599	27,091	36,993

Sources: Budget d'Etat; and data provided by Malian authorities; B 1975; 1974 budget breakdown not available.

1/ Includes official travel, building maintenance and the cost of new recruitment.

2/ Includes salary increase of MF 2,000 per month granted to all civil servants.

3/ Includes local contributions to foreign technical assistance and to international organizations.

4/ Includes subsidies and military pensions.

Table VIA. Mauritania: Government Budget Expenditure by Function
(millions of ouguiyas)

ANNEX B

	Actuals					Budget	
	1964	1968	1970	1971	1972	1973	1974
Recurrent Expenditure							
General Services	387	399.6	587	618	457	551	888
Administration			281	295	186	214	445
Defense	108.8	116.6	135	241	203	259	340
Justice			28	30	34	39	49
Police	105.2	118.8	134	182	34	39	54
Community Services			22	19	21	70	18
Airports and Waterways			9	7	2	2	2
Water supply			-	1	6	2	3
Maintenance of buildings	16.2	18.6	13	11	13	66	13
Social Services	199.8	275.6	402	404	500	533	765
Education	135	186.4	295	295	368	390	511
Health			92	95	96	110	151
Special Welfare Services			2	2	9	8	9
Other			13	12	27	45	94
Economic Services	80	90.4	95	110	54	60	98
Agriculture	41.2	39	49	58	14	15	21
Public Works	35.2	39.2	17	19	26	24	32
Manufacture and Construction			4	5	8	17	30
Trade, commerce and transportation			25	28	6	4	15
Public Debt	44	91.6	35	48	37	34	205
Transfers to capital budget and Special Funds	4	39	88	164	278	255	93
Unallocable			130	179	466	535	723
Total	824	1,075	1,350	1,542	1,813	2,058	2,790

Sources: B 1975; A 1974; Mauritanian authorities.

Note: 1 ouguiya = 5 CFA francs.

Table VIA. Niger: Government Budget Expenditure by Function
(billions of CFA francs)

ANNEX B

	Actuals							Budget		
	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
Total Recurrent Expenditure	7.5	8.6	8.4	9.4	10.1	10.6	11.2	11.3	12.3	11.8
National Assembly	-	-	-	-	-	.325	.338	.309	.276	-
Presidency	-	-	-	-	-	.493	.569	.473	.493	.458
Promotion humaine	-	-	-	-	-	-	-	-	.129	-
Information	-	-	-	-	-	.055	.067	.072	.089	.122
Foreign Affairs	.320	.363	.346	.432	.471	.550	.371	.416	.475	.643
Development and Cooperation	-	-	-	-	-	.149	.115	.178	.94	.234
Defense	.668	.835	.905	.940	1.0	1.0	1.041	1.092	1.146	1.2
Justice	-	-	-	-	-	.097	.098	.109	.114	.132
Interior	1.2	1.0	1.2	1.2	1.3	1.3	1.335	1.373	1.459	1.5
Civil Service and Labor	-	-	-	-	-	.075	.073	.074	.082	.082
Finance (includes Debt Service)	.339	.366	.489	.555	.552	1.7	2.241	1.879	1.945	1.4
Economic Affairs	-	-	-	-	-	.057	.114	.058	.062	.067
Rural Economy	.454	.643	.650	.763	.842	.674	.713	.743	.762	.841
Public Works	.453	.450	.589	.612	.807	.203	.163	.163	.163	.164
Mines, Land and Water	-	-	-	-	-	-	-	.070	.080	.090
Education and Youth	.824	.951	1.0	1.2	1.4	1.6	1.809	1.994	2.327	2.4
Health	.487	.599	.669	.777	.943	.907	.970	1.017	1.117	1.1
Other	2.7	3.3	2.6	2.9	2.6	.026	.049	.051	.052	-
Common Expenditure	-	-	-	-	-	1.3	1.172	1.172	1.444	1.2
Fonds de Concours	-	-	-	-	-	.038	.037	.018	.023	.039
Investment Expenditure ^{1/3/}					2.0 ^{1/}	1.6 ^{1/}	2.5 ^{1/}	3.1 ^{1/}	2.7 ^{2/}	2.4 ^{2/}

Sources: Budget de l'Etat, 1974; A 1974; B 1973.

1/ Excludes foreign aid; includes National Investment Fund and "Interventions Publiques" contained in recurrent budget. Fiscal year is 1 October - 30 September.

2/ Includes no "Interventions Publiques" in the budget; only National Investment Fund.

3/ The following is a more comprehensive estimate of public investment by sources of finance:

	1967/68	1968/69	1969/70	1970/71
Total	3.9	4.6	5.4	5.3
Domestically financed	.484	.625	.873	1.1
Foreign resources	3.4	4.0	4.5	4.2

Table VIA. Senegal: Government Budget Expenditure by Function
(billions of CFA francs)

ANNEX B

	Actuals				Budget					
	1963/64	1964/65	1967/68	1968/69 ^{1/}	1969/70	1970/71	1971/72	1972/73	1973/74 ^{2/}	1974/75
General Services	12.33	13.07	14.17	13.99	14.23	15.61	16.28	17.13	18.09	22.28
Administration	6.84	6.41	7.01	5.99	6.02	7.00	7.43	7.67	7.63	9.87
Defense	3.52	3.93	4.10	4.45	4.64	4.85	4.97	5.25	5.91	6.91
Justice and Police				3.56	3.57	3.76	3.88	4.21	4.55	5.50
Social Services	9.19	9.51	10.87	10.77	11.16	11.35	12.26	13.40	14.19	16.47
Education and sports	5.87	6.00	7.27	7.35	7.52	7.95	8.85	9.83	10.53	12.37
Health	2.86	3.04	3.46	3.42	3.64	3.40	3.41	3.57	3.67	4.10
Community and Economic Services	2.98	3.53	3.99	5.76	5.89	5.80	5.47	5.75	6.16	7.08
Public Works				2.76	2.68	2.78	2.79	2.80	2.87	3.06
Agriculture				2.30	2.49	2.49	2.30	2.46	2.34	2.69
Other				0.69	0.72	0.53	0.38	0.49	0.95	1.33
Unallocable (includes payments on public debt)				5.67	4.50	6.02	6.41	8.00	9.59	11.17
<u>Recurrent expenditure</u>	<u>31.82</u>	<u>32.53</u>	<u>34.21</u>	<u>36.18</u>	<u>35.78</u>	<u>38.78</u>	<u>40.42</u>	<u>44.28</u>	<u>48.03</u>	<u>57.00</u>
Studies and research			0.15	0.30	0.06	0.19	0.27	0.39	0.40	
Water supply			0.11	0.68	0.06	0.07	0.17	0.19	0.22	
Rural sector			0.57	0.81	0.44	0.63	0.78	1.11	0.84	
Energy, industry, commerce and tourism			0.05	0.12	0.02	0.09	0.24	0.30	0.06	
Transport and telecommunications			0.66	0.79	0.20	0.54	0.63	0.72	0.77	
Social projects			1.57	1.57	0.55	1.10	0.78	1.27	0.76	
Education				0.25	0.09	0.19	0.53	0.40	0.40	
Urbanism and housing				1.07	0.40	0.79	0.16	0.67	0.28	
Health				0.15		0.31	0.10	0.07	0.07	
Administrative equipment			0.33	0.32	0.01	0.05	0.28	0.30	0.61	
Participation			0.02	0.54	0.02	0.10	0.26	0.22	2.15	
Regional Development			0.42	0.76	0.30	0.52	0.38	0.22	0.0	
Unclassified			)	0.02	0.00	0.03	0.0	0.0	0.0	
<u>Total Development Expenditure</u>			<u>3.88</u>	<u>5.91</u>	<u>1.67</u>	<u>3.22</u>	<u>3.80</u>	<u>4.73</u>	<u>5.81</u>	
<u>Grand Total</u>			<u>38.09</u>	<u>42.09</u>	<u>37.45</u>	<u>42.00</u>	<u>44.22</u>	<u>49.01</u>	<u>53.84</u>	

Sources: Recurrent expenditure (lines 1-4 and A)
 1962/63 to 1967/68: Senegal: Tradition, Diversification and Economic Development, IBRD Report, 1974, p.316.
 Total recurrent expenditure is close, though not equal, to IMF figures for overlapping years (1968/69 to 1971/72). Individual classifications substantially different from IMF figures - the two series are not comparable.
 1968/69: B 1973, p. 70)
 1969/70 to 1974/75: Ibid., p. 76) overlapping data match exactly

Development expenditure (lines 5-14 and B)
 1967/68: Dossier d'information économique 1971-72, Annexe No. 37.
 1968/69 to 1971/72: B 1973, p. 71.
 1971/72 to 1973/74: B 1975, p. 77.

- 1/ For 1973/74: Recurrent expenditure data (1-4 and A) are provisional results.
 Development expenditure data (5-14 and B) include expenditure carried over from previous years' budgets.
- 2/ The probable level of expenditure.
- 3/ The probable level of current revenue in 1974/75 will be about 65 billion instead of the originally budgeted 57 billion. This means that expenditure patterns in 1974/75 will probably depart substantially from the budget breakdown given in this column.

Table VIA. Upper Volta: Government Budget Expenditure by Function
(in millions of CFA francs)

ANNEX B

	Actuals							Budget		
	1966	1967	1968	1969	1970	1971	1972	1972	1973	1974
<u>Recurrent Expenditure</u> ^{1/}	<u>7,926</u>	<u>7,008</u>	<u>7,288</u>	<u>8,054</u>	<u>8,614</u>	<u>9,156</u>	<u>9,711</u>	<u>9,876</u>	<u>10,766</u>	<u>11,732</u>
General services	3,763	3,466	3,696	4,198	4,524	4,780	4,981	4,889	5,260	
General administration	1,589	1,567	1,713	1,977	2,135	2,303	2,387	2,281	2,338	
Foreign affairs (others)	329	277	323	370	389	435	482	520	562	
Defense	976	909	931	1,046	1,157	1,196	1,247	1,279	1,393	1,499
Justice and police	869	713	729	805	843	846	865	909	967	1,012
Social services	2,451	2,219	2,244	2,636	2,867	3,118	3,429	3,500	3,881	
Education and sports	1,504	1,356	1,341	1,640	1,767	1,931	2,168	2,242	2,467	
Health	796	690	712	739	786	781	786	864(811)	959(899)	(934)
Veterans and pensions (other)	151	173	191	257	314	406	475	394	455	
Economic services	1,712	1,323	1,348	1,220	1,223	1,258	1,301	1,487	1,625	
Plan, agriculture & public works	557	456	483	523	557	584	625	704	761	
Finance & trade	534	364	390	331	354	374	405	436	472	
Post & telecommunications ^{2/} (other)	210	162	180	3	3	5	5	5	6	
Public debt service	411	341	295	363	309	295	266	342	386	456
<u>Development expenditure</u> ^{3/}	<u>484</u>	<u>587</u>	<u>706</u>	<u>1,104</u>	<u>1,137</u>	<u>890</u>	<u>924</u>	<u>946</u>	<u>960</u>	<u>1,737</u>
<u>Total</u>	<u>8,410</u>	<u>7,595</u>	<u>7,994</u>	<u>9,158</u>	<u>9,751</u>	<u>10,046</u>	<u>10,635</u>	<u>10,032</u>	<u>11,706</u>	<u>13,169</u>

Sources: A 1972; A 1975; République de Haute Volta, Ministère des Finances et du Commerce, Comptes définitifs du Budget de l'Etat; Budget de l'Etat - Exercice 1973; and data provided by the Upper Volta authorities, US Dept. of State, "Upper Volta's Budget, Cerp B-2000 9/29/74 (for 1974).

^{1/} Including payments of arrears made out of budgetary appropriations, which amounted to CFAF 472 million in 1966, CFAF 105 million in 1967, CFAF 98 million in 1968, and CFAF 202 million in 1969.

^{2/} Since 1969 the Post Office has been managed by an autonomous agency, the "Office des Postes et Télécommunications".

^{3/} Excluding expenditure financed by France.

Table VIB. Chad: Recurrent Government Budget Expenditure by Object
(billions of CFA francs)

ANNEX B

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974 ^{3/}
<u>Recurrent Expenditure</u>	<u>7.9</u>	<u>10.0</u>	<u>10.7</u>	<u>11.4</u>	<u>12.8</u>	<u>14.1</u>	<u>14.7</u>	<u>15.3</u>	<u>14.7</u>	<u>15.0</u>
Wages and Salaries	4.3	4.8	5.3	5.4	6.4	7.2	7.2	8.5	8.7	8.7
Equipment and supplies ^{1/}	2.2	2.8	2.8	2.8	3.2	4.0	4.1	3.4	2.8	3.2
Subsidies and transfers	0.9	1.4	1.5	1.9	1.6	1.7	1.8	2.1	2.5	2.0
Public debt service ^{2/}	0.2	0.5	0.4	0.4	0.4	0.6	0.9	0.5	0.5	0.5
Other recurrent expenditure	0.2	0.3	0.2	0.3	1.1	0.8	0.3	0.7	0.2	0.6
Loans and advances	0.1	-	0.5	0.6	0.1	-	-	-	-	-
<u>Investment Expenditure</u>	<u>0.7</u>	<u>0.9</u>	<u>0.2</u>	<u>0.6</u>	<u>1.1</u>	<u>0.8</u>	<u>0.9</u>	<u>1.3</u>	<u>0.5</u>	<u>0</u>
<u>Total Expenditure</u>	<u>8.5</u>	<u>10.9</u>	<u>11.0</u>	<u>12.1</u>	<u>13.9</u>	<u>14.9</u>	<u>15.6</u>	<u>16.6</u>	<u>15.2</u>	<u>15.1</u>

Source: A 1973 and Chadian authorities. Errors due to rounding.

1/ Includes maintenance and security expenditure.

2/ Includes amortization.

3/ Preliminary.

Table VIB. Mali: Recurrent Government Budget Expenditure by Object
(billions of Malian francs)

ANNEX B

	Actuals								Budget	
	1966/7	1967/8	Jul-Dec 1968	1969 ^{1/}	1970	1971	1972	1973	1974	1975
<u>Recurrent Expenditure</u>	-	<u>19.1</u>	<u>9.1</u>	<u>22.1</u>	<u>21.8</u>	<u>23.2</u>	<u>27.5</u>	<u>30.5</u>	<u>33.5</u>	<u>36.3</u>
Expenditure on goods and services					20.1	21.5	24.6	27.6	31.2	31.9
Wages and salaries	7.2	8.7	4.7	9.2	14.0	14.5	16.0	18.7	22.4	25.4
Materials and supplies	3.8	4.0	2.2	4.0	4.5	4.5	5.9	6.4	6.0	7.3
Other (official travel, building maintenance, contributions to aid projects, etc.)	-	-	-	-	2.2	2.2	2.7	2.5	2.8	4.2
Debt service payments (includes amortization)	0.5	0.9	0.8	3.2	1.2	1.2	0.6	0.5	0.9	- ^{4/}
Subsidies and other recurrent transfers	0.7 ^{2/}	2.3 ^{2/}	0.8 ^{2/}	1.7 ^{2/}	0.3	0.3	0.7	0.5	0.6	0.6
Unclassified expenditure	3.2 ^{3/}	3.3 ^{3/}	1.7 ^{3/}	3.3 ^{3/}	0.4	0.2	1.6	2.0	0.8	-
<u>Capital Expenditure</u>	-	<u>1.7</u>	<u>0.7</u>	<u>0.8</u>	<u>2.1</u>	<u>2.3</u>	<u>3.0</u>	<u>2.7</u>	<u>2.9</u>	<u>0.7^{5/}</u>
<u>Total</u>	<u>15.4</u>	<u>20.8</u>	<u>10.8</u>	<u>22.2</u>	<u>23.9</u>	<u>25.5</u>	<u>30.5</u>	<u>33.2</u>	<u>36.4</u>	<u>37.0</u>

Sources: B 1975; A 1973; Malian authorities.

1/ Series breaks after 1969.

2/ Includes miscellaneous.

3/ Regional Government Expenditure.

4/ Debt service now handled in special fund.

5/ Contribution to Budget d'Equipement.

Table VIB. Mauritania: Recurrent Government Budget Expenditure by Object
(millions of ouguiyas)

ANNEX B

	Actuals					Budget	
	1964	1968	1970	1971	1972	1973	1974
Wages and Salaries	471	576.4	710	749	827	938	1,211
Materials and Supplies	209.6	238.2	349	326	375	436	690
Maintenance	16.4	18.6	15	14	22	70	19
Subsidies and Transfers	82.2	111	172	249	237	239	207
Public Debt Servicing	44	91.4	35	47	37	34	205
Other			69	156	315	341	457
Total	823.6	1,074.8	1,350	1,541	1,813	2,058	2,789

Sources: B 1975; A 1974; Mauritanian authorities.

Note: 1 ouguiya = 5 CFA francs.

Table VIB. Niger: Recurrent Government Budget Expenditure by Object
(billions of CFA francs)

ANNEX B

	Actuals							Budget		
	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
Wages and Salaries	3.7	4.1	4.4	4.5	4.8	4.9	5.2	5.5	6.0	
Materials and Supplies	2.4	3.0	1.9	2.1	2.5	2.4	2.5	2.6	2.8	
Transport	-	-	-	-	1.1	1.4	1.2	1.2	1.4	
Housing	-	-	-	-	0.268	0.289	0.348	0.365	0.439	
Public Debt	0.263	0.263	0.176	0.298	0.634	0.670	0.742	0.439	0.380	
Internal	-	-	0.035	0.142	0.486	0.494	0.535	0.156	0.172	
External	-	-	0.141	0.156	0.148	0.176	0.207	0.283	0.208	
Other	1.1	1.2	0.375	0.405	0.894	0.986	1.2	1.2	1.3	
<u>Total Recurrent Expenditure</u>	<u>7.5</u>	<u>8.6</u>	<u>8.4</u>	<u>9.4</u>	<u>10.1</u>	<u>10.6</u>	<u>11.2</u>	<u>11.3</u>	<u>12.3</u>	<u>11.8</u>
<u>Total (including Investment)</u>	-	-	-	-	<u>12.1</u>	<u>12.2</u>	<u>13.7</u>	<u>14.4</u>	<u>15.6</u>	<u>15.3</u>

Sources: Budget de l'Etat, 1974; A 1974; B 1973.

Table VIB. Senegal: Recurrent Government Budget Expenditure by Object
(billions of CFA francs)

ANNEX B

	Actuals								Budget	
	1963/64	1964/65	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75 ^{1/}
Wages and Salaries	15.04	16.29	18.66	18.89	19.42	20.81	21.59	23.25	25.48	28.98
Materials and Supplies	7.07	6.39	6.27	6.60	6.87	7.25	7.61	7.68	8.13	9.96
Maintenance	2.58	1.55	1.49	1.54	1.66	1.69	1.72	1.52	1.75	2.21
Transfers	1.58	2.25	2.84	4.94	5.21	5.69	6.01	7.52	7.48	10.49
Other	4.68	5.03	4.22	4.21	2.62	3.34	3.49	4.31	5.19	5.36
of which interest on public debt plus repayment of principal	0.87	1.02	0.74	1.07	1.19	1.43	1.11			
Total Recurrent Expenditure	<u>31.82</u>	<u>32.53</u>	<u>34.22</u>	<u>36.18</u>	<u>35.78</u>	<u>38.78</u>	<u>40.42</u>	<u>44.28</u>	<u>48.03</u>	<u>57.00</u>

Sources: 1962/63 to 1967/68: IBRD Report, 1974, *Tradition, Diversification and Economic Development*, p. 314.
1968/69 (and for line "of which interest on public debt plus repayment of principal", through 1971/72):
B 1973, p. 70.
1969/70 to 1974/75: B 1975, p. 76.

^{1/} Actual expenditure 1974/75 will probably be close to 65 billion, so the budgeted object breakdown will be subject to change.

Table VIB. Upper Volta: Recurrent Government Budget Expenditure by Object
(billions of CFA francs)

ANNEX B

	Actuals							Budget		
	1966	1967	1968	1969	1970	1971	1972	1972	1973	1974
Wages and Salaries ^{1/}	4.7	4.2	4.4	4.8	5.5	5.8	6.3	6.5	7.1	7.6
Materials and Maintenance ^{2/}	1.4	1.4	1.5	1.7	1.7	1.9	2.0	1.8	1.9	2.0
Transfer Payments	1.4	1.1	1.1	1.2	1.2	1.1	1.2	1.3	1.4	1.7
Debt Service	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.5
<u>Total Recurrent Expenditure</u>	<u>7.9</u>	<u>7.0</u>	<u>7.3</u>	<u>8.1</u>	<u>8.6</u>	<u>9.2</u>	<u>9.7</u>	<u>9.9</u>	<u>10.8</u>	<u>11.7</u>

Sources: A 1975; B 1973; Upper Volta authorities.

^{1/} Including family allowances and pensions.

^{2/} Including unclassified expenditure.

Table VII. Chad: Balance of Payments
(billions of CFA francs)

ANNEX B

	1969	1970 ^{1/}	1971	1972	1973	1973 ^{2/}	1974 ^{2/}
A. Goods and Services							
Merchandise, FOB	-1.6	-1.8	-3.0	-4.7	-5.5	-3.1	+1.2
Services	-6.2	-5.1	-4.8	-2.9	-6.2	-2.0	-4.0
Freight and insurance on merchandise	-4.1	-5.0	-4.9	-3.9	-6.2	-2.0	-4.0
Other transportation	-0.6	-0.5	-0.4	-0.4	-0.9	-0.3	-0.1
Travel	-0.5	-0.8	-0.8	-0.5	-1.3	-0.5	-0.2
Interest, dividends and other capital revenues	-0.6	-0.5	-0.6	-0.5	-0.7	-0.2	-0.4
Wages and salaries	-1.3	-0.06	-0.02	+0.07	+0.08	+0.09	-0.03
Other services	-0.5	-0.6	-1.2	-1.4	-1.1	-0.6	-0.9
National Government	-2.8	-2.6	-2.6	-2.7	-2.9	-1.8	-1.7
Foreign Governments	+4.4	+5.2	+6.1	+6.7	+7.0	+3.3	+3.4
Total Goods and Services	-7.8	-6.9	-7.8	-7.5	-11.8	-5.1	-2.8
B. Unrequited Transfers							
Private Sector	+1.3	+0.8 ^{3/}	+0.6	+1.3	+1.0	-0.4	-0.5
Workers' Remittances	+0.02	-1.0 ^{3/}	-1.7	-1.4	-1.5	-1.3	-1.0
Other transactions	+1.3	+1.8	+2.2	+2.8	+2.5	+1.0	+0.5
Public Sector	+4.6	+6.8	+8.0	+6.1	+12.2	+6.8	+3.6
Aid grants	+4.5	+4.9	+5.3	+5.4	+8.8 ^{4/}	+3.7	+3.2
Other	+0.06	+1.9	+2.8	+0.9	+3.5 ^{4/}	+3.1	+0.3
Total unrequited transfers	+5.8	+7.6	+8.7	+7.6	+13.2	+6.4	+3.1
C. Capital Movements							
Long-term investment and capital	+0.6	+1.0	+0.2	-0.2	-2.0	-3.0	+2.0
Private Sector	+0.7	+0.3	+0.09	+0.1	+1.7	+0.2 ^{4/}	+1.9
Public Sector	-0.03	+0.7	+0.2	-0.4	-3.8	-3.3 ^{4/}	+0.08
Non-monetary short-term capital	-0.2	+0.06	+1.5	-1.9	-2.4	-0.03	-3.2
Private Sector	-0.2	+0.06	+1.5	-2.0	-0.4	-0.3	-3.2
Public Sector	-	-	-	+0.1	-2.0	+0.01	+0.02
Monetary short-term capital	-0.4	-0.8	-2.3	+1.9	+2.9	+1.7	+2.3
Liabilities of banks and post office	-0.03	+0.02	-0.4	+1.2	+1.4	+0.8	+0.5
Assets of banks and post office	+0.09	-0.03	+0.03	+0.002	-0.5	-0.2	-0.5
Liabilities of Central Bank (BEAC)	+0.005	+1.6	+0.4	+0.4	-0.3	-0.1	+0.1
Assets of Central Bank	-0.5	-2.3	-2.3	+0.3	+2.2	+2.2	+2.2
Errors and Omissions	+1.2	-0.9	-0.4	+0.2	+0.2	+0.4	-1.3

Table VII. Chad.

ANNEX B

Source: BEAC.

1/ There was a change in accounting procedure starting in 1970.

2/ Six months.

3/ Components may not add up to totals because of rounding.

4/ Includes Cancellation of FIDES Loan: 3,011 million CFA francs.

Table VII A. Mali: Balance of Payments 1964-1972
(billions of Malian francs)

ANNEX B

	1964/65	1967/68	1968	1969	1970	1971	1972
A. Goods and Services							
Exports FOB	7.2	4.5	8.8	13.3	19.2	21.5	22.7
Imports FOB	-12.1	-8.3	-15.1	-19.9	-23.5	-27.2	-32.0
Freight and Insurance for Shipment	-3.68	-3.0	-4.6	-5.4	-5.8	-6.5	-7.4
Commercial Balance	-8.9	-6.8	-10.8	-12.0	-10.1	-12.2	-16.7
Technical Assistance Service associated with supplies	-2.4	-1.7	-3.8	-4.5	-4.6	-4.0	-4.6
Other Services (Transfer, Capital returns, etc.)	-1.0	-2.1	-3.6	-3.2	-3.1	-4.9	-4.2
Other Services (Pensions, Salary Savings)	1.0	0.4	+2.5	+3.7	+3.6	+5.5	+5.5
Net Services	-2.4	-3.4	-4.9	-4.0	-4.0	-3.5	-3.3
Net Goods and Services	-11.3	-10.2	-15.8	-16.0	-14.1	-15.6	-20.0
B. Development Aid - Grants							
Equipment, Supplies and Local Costs	3.0	1.5	+2.5	+2.5	+3.5	+2.5	+4.5
Technical Assistance, net of Government Contribution	1.3	1.6	+1.4	+1.5	+1.8	+2.1	+2.5
Other Grants	-	-	-	+3.0	+3.3	+3.4	+3.4
Loans							
Equipment, Supplies and Local Costs	6.2	3.2	+4.1	+4.8	+1.2	+2.4	+2.0
Technical Assistance	-	0.3	+0.6	+0.6	+0.6	+0.6	+0.6
Other Loans	2.4	1.4	+4.7	-	-	-	-
Debt Reimbursement	-1.0	-0.4	-0.080	-3.3	-8.0	-0.6	-0.6
Net External Aid	11.8	7.6	+13.3	+9.0	+9.6	+10.4	+12.4
C. Capital Transfers							
Non-identified Capital and Capital Movements	-2.4	-2.0	-6.6	-1.5	+3.2	+2.2	+4.4
Net errors and omissions	-0.2	0.5	-0.5	-0.4	-1.4	-1.7	0.9
Special Drawing Rights	-	-	-	-	+1.6	+1.3	+1.3
Global Balance of Payment, Surplus or Deficit	-2.0	-4.1	-9.6	-8.1	-1.2	-3.4	-2.8
D. Financing of Balance							
IMF	2.5	-0.2	0.003	-0.1	-1.2	-0.6	-0.4
Commercial Banks	-	+1.2	-5.9	-0.6	-1.6	+0.7	+0.4
Central Banks	-1.6	+3.1	+15.6	+8.8	+0.7	+3.3	+2.8
Postal Debt	1.2	-	-	-	-	-	-
Net Total	+2.0	+4.1	+9.6	+8.1	+1.2	+3.4	+2.8

Source: Ministère de la Coopération, Paris; Dossier d'Informations Economiques, Mali, 1972-73; March 1974.

Table VIIB. Mali: Balance of Payments, 1970-1974
(billions of Malian francs)^{1/}

ANNEX B

	1970	1971	1972	1973 ^{2/}	1974 ^{3/}
A. Goods and Services	-12.2	-18.4	-22.7	-33.8	-60.0
Exports FOB	18.2	21.9	22.7	25.5	28.6
Imports FOB	-20.8	-27.2	-32.0	-42.7	-69.0
Trade balance	-2.6	-5.3	-9.3	-17.4	-40.4
Freight and insurance	-5.0	-6.5	-7.4	-8.7	-16.8
Investment income	-2.9	-3.2	-2.7	-3.9	-4.0
Other services (net)	-1.6	-3.4	-3.3	-3.7	1.2
B. Unrequited transfers	10.9	13.4	16.3	25.6	42.9
Private	2.9	5.4	5.7	3.9	5.0
Government	8.1	7.9	10.6	21.7	37.9
Total current account	-1.3	-5.0	-6.4	-8.1	-17.1
C. Capital (net)	2.0	2.6	5.1	0.6	4.6
D. Total A + B + C	0.7	-2.4	1.0	-7.6	-12.5
E. SDR allocations	1.6	1.3	1.3	-	-
Total D + E	2.3	-1.1	0.3	-7.6	-12.5
Errors and omissions	-3.0	-1.7	-1.8	-2.4	-2.7
F. Overall balance	-0.7	-2.8	-1.5	-9.8	-15.2
G. Use of Oil Facility	-	-	-	-	2.3
Total F + G	-0.7	-2.8	-1.5	-9.8	-12.9
H. Monetary movements	0.7	2.8	1.5	-9.8	-12.9
Deposit money banks	0.9	1.3	1.6	3.0	-1.6
of which: Bilateral accounts	0.3	1.1	-0.2	2.5	1.1
Central Bank	0.8	1.6	3.1	7.0	14.5
of which: Operations Account	0.8	2.7	3.6	7.6	15.8

Sources: Banque Centrale du Mali; B 1975.

1/ For years prior to 1970 see Table VIIA, which is a different series. The overlap of the Tables shows some of the difficulties of reconciling different sources.

2/ Provisional.

3/ Estimated.

Table VII. Mauritania: Balance of Payments
(in billions of ouguiyas)

ANNEX B

	1964	1968	1969	1970	1971	1972	1973	1974 ^{1/}
Merchandise								
Exports, F.O.B.	2.76	3.7	4.38	5.4	5.7	6.0	6.5	9.3
Recorded					5.0	5.4	5.9	9.0
Unrecorded					0.7	0.6	0.6	0.3
Imports, C.I.F.	-3.0	-3.5	-4.3	-4.9	-4.8	-5.5	-6.4	-8.6
Recorded					-3.2	-3.6	-4.9	-8.1
Unrecorded					-1.6	-1.9	-1.5	-0.5
Trade Balance	-0.3	0.2	0.1	0.6	0.9	0.5	-1.0	0.6
Services (net)								
Investment Income	-0.3	-0.6	-0.7	-0.6	-0.7	-0.7	-0.6	-0.8
Services under Aid programmes					-0.2	-0.2	-0.2	-0.3
Other services					-0.7	-0.7	-0.5	+0.6
Balance on services					-1.6	-1.6	-1.4	-1.7
Unrequited transfers (net)								
Private					-0.2	-0.2	-0.6	-0.6
Official					0.4	0.6	1.6	1.1
Total Current Account	-0.9	-0.8	-1.1	-0.9	-0.5	-0.7	-0.3	-0.6
Non-monetary Capital								
Private					0.6	0.5	-	-0.7
Official					0.5	0.2	0.2	0.5
Total Non-monetary Capital Account	0.7	0.8	1.2	0.4	1.1	0.7	0.2	-0.2
Allocation of SDRs					0.1	-1.0	-	-
Net errors and omissions	0.12	-0.18	-0.3	0.4	-0.5	0.1	-	-
Overall Balance	-0.08	-0.2	-0.2	-0.1	0.2	0.3	-0.1	-0.8
Monetary Movements (net) (--increase)	+0.08	+0.2	+0.2	+0.1	-0.2	-0.3	0.1	0.8

Source: A 1974; B 1975.

^{1/} Forecast.

Table VII. Niger: Balance of Payments
(billions CFA francs)

ANNEX B

	1968	1969	1970	1971	1972	1973	1974 ^{1/}
Exports	8.5	10.3	12.9	14.0	16.3		
Recorded	6.6	7.8	11.0	12.2	14.6	13.8	12.0
Unrecorded	1.9	2.4	1.8	1.8	1.7		
Imports	12.8	16.2	19.7	18.2	20.0		
Recorded	10.8	13.4	17.0	15.7	17.4	19.1	-
Unrecorded	2.0	2.8	2.7	2.5	2.6		
Trade Balance	-4.3	-5.9	-6.8	-4.2	-3.7	-5.5 ^{2/}	
Freight and Insurance	0.3	0.2	0.2	0.2	0.3		
Other Transport	0.2	-0.05	0.5	0.4	0.5		
Investment Income	-0.2	-0.4	-0.4	-0.5	-0.5		
Government (not recorded elsewhere)	-1.5	-1.5	-1.7	-1.8	-1.8		
Other	-1.5	-0.3	-1.1	-0.6	-0.7		
Net Services	-2.8	-1.9	-2.5	-2.2	-2.1		
Unrequited Transfers	6.0	6.4	7.8	7.4	8.8		
Private	0.03	-0.3	0.05	-	0.05		
Public	5.9	6.7	7.7	7.4	8.7	12.2	17.2
French Aid	3.8	4.5	5.2	5.2	5.8	4.2	4.7
FED	1.3	1.1	1.4	1.5	2.3	3.3	6.2
UNO	0.6	0.4	0.6	0.6	0.7	0.7	1.3
Others, net	0.2	0.7	0.5	0.2	0.03	4.0	5.0
Private capital, net	1.6	2.9	4.5	2.7	0.4	4.0	5.0
Public capital, net	0.8	1.3	0.7	-0.08	0.4		
Utilization	1.2	1.8	1.1	0.7	1.3		
Repayment	0.4	0.5	0.4	0.8	0.9		
Total net capital movements	2.3	4.2	5.2	2.7	0.857		
SDR Allocation	-	-	0.5	0.4	0.4		
Changes in net foreign assets (rise = -)	0.2	-1.3	-2.6	-4.4	-2.4		
Errors and omissions	-1.4	-1.5	-1.6	0.2	-1.9		

Sources: A 1974; B 1973.

^{1/} Forecast, based on 6 month figures.^{2/} Recorded trade only, hence not comparable with earlier years.

Table VII. Senegal: Balance of Payments
(in billions of CFA francs)

ANNEX B

	1968	1969	1970	1971	1972	1973 ^{1/}	1974 ^{1/}
A. Goods and Services	-20.0	-20.8	-15.7	-22.7	-16.7	-38.2	-7.2
Exports FOB	+35.9	+38.8	+44.1	+37.5	+56.8	+47.5	86.9
Imports CIF	-52.9	-57.5	-62.8	-68.3	-79.5	-92.7	-108.9
Trade Balance	-17.0	-18.7	-18.8	-30.7	-22.7	-45.2	-22.0
Freight and insurance on merchandise	+0.9	+0.9	+0.9	+0.9	+0.8	+0.9	) +10.5
Other transportation	+1.5	+1.1	+4.0	+4.9	+3.5	+4.0	
Travel	+0.1	-0.9	+0.6	+0.6	+1.4	0.9	) -9.1
Investment Income	-3.4	-3.0	-4.8	-5.2	-6.3	-8.2	
Other government	-1.3	-1.6	+0.9	+5.5	+5.5	+7.5	+13.4
Other private	-0.7	+0.7	+1.5	+1.4	+1.2	+1.6	
B. Unrequited transfers	+10.0	+8.2	+11.2	+15.6	+12.8	+16.4	+6.7
Private	+0.3	-1.0	-0.7	-0.8	-0.1	+0.9	-0.5
Government	+9.8	+9.2	+11.9	+16.4	+13.0	+15.5	+7.2
C. Capital other than reserves and related items	+4.1	+6.3	+3.8	+9.6	+8.9	+11.1	+6.5
Direct investment	+1.7	+0.7	+1.3	+2.7	+3.2	) -1.9	-2.5
Other private long-term	+0.4	+1.4	+2.1	-0.4	+0.5		
Other private short-term	+0.1	-0.6	-1.2	+1.2	+0.5	-0.6	-3.8
Government	+2.0	+3.2	+3.7	+4.8	+2.9	) +13.6	+12.8
Monetary institutions	-0.1	+1.4	-2.2	+1.4	+1.7		
D. Net errors and omissions	+1.0	+4.3	+3.9	-2.3	-3.6	+3.1	
E. Total (A through D)	-4.9	-2.0	+3.2	+0.2	+1.4	-7.6	+6.0
F. Allocations of SDRs	0	0	+1.2	+1.0	+1.05	0	
G. Total (E + F)	-4.9	-2.0	+4.4	+1.2	+2.4	-7.6	
H. Reserves and related items (increase in assets)	+4.9	-2.0	+4.4	-1.2	-2.4	+7.6	
Liabilities	-0.4	-0.3	+0.04	+0.2	-0.03		
Assets	+5.4	+2.2	-4.4	-1.4	-2.4		
SDRs	0	0	-0.3	-0.4	-0.9	0.1	
Reserve position in the fund	0	-0.08	-0.2	-0.08	-0.08	-0.08	
Foreign exchange	+5.4	+2.3	-3.9	-1.0	-1.4		

Sources: 1968: B 1973, p.76. 1969-72: B 1975, p.86. 1973-4: Talks with Senegalese authorities and BCEAO officials.
1/ Estimated.

Table VII. Upper Volta: Balance of Payments
(in billions of CFA francs)

ANNEX B

	1969	1970	1971	1972	1973	1974
Goods and Services	-11.1	-11.0	-16.2	-18.4	-19.8	-31.5
Merchandise	-8.6	-8.3	-12.1	-13.0	-16.7	-24.9
Services	-2.5	-2.7	-4.1	-5.9	-3.1	-6.6
Freight and insurance on merchandise						
Other transport	-0.4	-0.4	-0.5	-0.1	-	-
Travel	-0.3	-0.3	-0.5	-0.8	-	-
Investment Revenues	-0.4	-0.1	-0.2	-0.4	-0.5	-0.5
Government Transactions	-0.6	-0.9	-1.4	-0.2	-2.1	-2.3
National					-3.1	-3.4
Foreign					+1.0	+1.1
Other services	-0.8	-0.8	-1.4	-1.3		
Unrequited Transfers	11.6	13.2	16.4	17.4	21.3	27.5
Private	6.2	7.0	8.8	9.0	8.7	10.8
Workers' remittances	3.7	4.9		6.4	6.7	8.7
Public	5.4	6.2		8.4	12.6	16.7
Capital Flows	1.0	0.6	0.5	2.1	2.8	2.5
Non-monetary sector	0.8	0.7	1.0	1.5	-	-
Private	0.5	0.7	0.7	0.9	-	-
Public	0.3	-	0.3	0.6	-	-
Monetary sector	0.3	-0.1	-0.6	0.6	-	-
Commercial banks	0.4	-	-0.6	0.6	-	-
Central Bank	-0.1	-0.1	-	-	-	-
Allocation of SDRs	-	0.5	0.4	0.4	-	-
Reserves and related items	-1.4	-2.9	0.9	-1.2	-	-0.3
Liabilities	1.0	1.0	5.0	-4.0	-	-
Assets	-1.4	-2.9	-0.9	-1.2	-	-
Errors and omissions	-0.1	-0.5	-0.2	-0.3	0.6	-

Sources: BCEAO, No. 222, Nov. 1974; A 1975; B 1973.

Table VIII. Chad: Wages and Consumer Prices

ANNEX B

	1960	1964	1968	1969	1970	1971	1972	1973	1974
I. WAGES (in CFA francs)									
Legal minimum wage, urban areas (SMIG)									
(per month	3,813	3,813	3,813	3,813	4,507	5,200	5,200	5,200	
((per hour)	(22)	(22)	(22)	(22)	(26)	(30)	(30)	(30)	
(index	73	73	73	73	87	100	100	100	
II. CONSUMER PRICES									
A. African consumer price index (none exists)									
B. European consumer price index^{1/}		66.9	81.3	83.3	91.7	97.2	100	105.4	117.1

Sources: A 1973; Ministère du Plan et de la Statistique; Chad authorities.

^{1/} Before 1972 the index was based on a basket of 125 products consumed by European households with monthly income greater than 100,000 CFAF. After 1972 (i.e. in 1973 and 1974) the index is based on a basket of 120 products including 35 locally produced goods and 85 imported. (Source: Direction de la Statistique.)

Table VIII. Mali: Wages and Consumer Prices

ANNEX B

	1960	1966	1972	1973	1974*	1975
I. WAGES (in Malian francs)						
A. Legal minimum wage, urban areas (SMIG), per month	5,547	5,547	5,547	7,547	10,713	12,047
(per hour)	(32)	(32)	(32)	(43.5)	(62)	(70)
Index (1972 = 100)	100	100	100	136	193	217
B. Starting Rates, Civil Service^{1/}						
(a) Junior clerical (elementary school graduate: Cat. D)	18,000	18,000	18,000	20,000	22,200	24,500
(b) Middle level Clerical/technical: (2eme Bac.: Cat. B)	36,750	36,750	36,750	38,750	40,750	42,750
(c) University Graduate (Licence: Cat. A)	63,000	63,000	63,000	65,000	68,583	72,200
Indices: 1972 = 100						
(a) Junior Clerical (Cat. D)	100	100	100	111	123	136
(b) Middle level (Cat. B)	100	100	100	105	111	116
(c) University Graduate (Cat. A)	100	100	100	103	109	115
II. CONSUMER PRICES						
A. Price Index Basic Foodstuffs, Bamako (1972 = 100)						
(a) "Official" (Cooperatives)	-	62	100	111	121 ^{2/}	
(b) Free Market	-	71	100	129	149	
B. Prices of selected consumer goods, Bamako, in December.^{5/}						
(a) Beef (with bone) per kg.	1963		230	259	325 ^{6/}	
(b) Bread, kg.	150		161	179	329 ^{7/}	
(c) Millet, kg. (free market)	60		91	83 ^{3/}	76	
(d) Millet, kg. (Cooperatives)	16.5		-	70	37	
(e) Rice, kg. (broken)	37		132	99 ^{4/}	184 ^{8/}	
(f) Peanut oil (liter)	115		248	250	359	
(g) Sugar (cubes), kg.	80		260	250	454	

Sources: Bulletin Mensuel de Statistique; Malian authorities.

* average monthly.

^{1/} Includes 3,000 housing allowance; excludes family allowance of 2,000 per child per month (first 6).^{2/} Average, first 9 months; index in October 1974 was 139; the free market index for October 1974 was 148.^{3/} The consumer price index uses "gros mil" (sorghum) and gives a free market price of 70 francs for December 1973. The "coop" price was 37 francs.^{4/} The December 1973 rice price cited in the Consumer Price Index is 122 francs per kg. in the market, 61 francs in the Cooperatives.^{5/} October 1974.^{6/} 252 given in another part of same statistical bulletin.^{7/} 173 in same bulletin.^{8/} 169 given elsewhere.

Table VIII. Mauritania: Wages and Consumer Prices

ANNEX B

	1963	1966	1969	1970	1971	1972	1973	1974	1975
I. WAGES (in ouguiyas)									
Legal minimum wage, urban areas (SMIG)									
(per month	1,220	1,220	1,404	1,404	1,404	1,404	1,404	1,650	3,082
(per hour	7.04	7.04	8.1	8.1	8.1	8.1	8.1	9.52	17.8
(index*	87	87	100	100	100	100	100	118	220
II. CONSUMER PRICES									
A. Retail prices of a basket of Mauritanian consumer goods (Nouakchott) ^{2/}							100 ^{3/}	131 ^{3/}	155 ^{3/}
B. European family (Nouakchott) Consumer Price Index (1972 = 100)									
General (excludes rent)		72	80	85	92	100	111	118 ^{1/}	
Food		76	79	84	92	100	107	127 ^{1/}	
C. Retail prices, selected consumer goods ^{3/}									
(a) Millet (kg.)									
(b) Rice (broken, kg.)							15	25	14
(c) Sugar (cornets, 2 kg.)							10	12	20
(d) Bread (baguette, 400 g.)							48	52	153
(e) Cinema							12	7	8
(f) Taxi Ride (town)							30	30	30
(g) Meat							5	5 ^{4/}	5
(h) Kerosene (1 liter)							30	40 ^{4/}	55
(i) Cigarettes (Melia)							7	11	10
(j) Electricity (KWH)							10	20	25
(k) Peanut oil (1 liter)							6.8	6.8	6.8 ^{5/}
(l) Charcoal (sack)							25	31	60 ^{5/}
(m) Tea							130	150	175
							25	30	40

Table VIII. Mauritania.

ANNEX B

- * 1972 = 100.
- 1/ January-June.
- 2/ CRED index. Price quotations for 87 widely consumed items have been taken monthly by the Statistics Service in Nouakchott, since 1973. The index has never been calculated, though prices and weights exist. Because some of the prices showed unreasonable behaviour, and many items were poorly defined, the index as a whole was not reliable enough to use. Instead, 31 of the more important, better defined items were used, with the weights assigned in the original index, to produce the index in this table.
- 3/ January.
- 4/ In March 1975, the official price was 60 ouguiya (UM) per liter, but it was very scarce and buyers were paying 100 UM per liter.
- 5/ In the summer of 1974, meat supplies shrank on the Nouakchott market. Price rises were forbidden, so butchers reduced the quality very noticeably. The amount of bone, fat and gristle per kg. of meat rose sharply at the fixed price.

Table VIII. Niger: Wages and Consumer Prices

ANNEX B

	1960	1968	1969 ^{1/}	1970	1971	1972	1973	1974	1974	1975 ^{4/}
I. WAGES (in CFAF)										
A. Legal minimum wage, urban areas (SMIG)										
(per month)	4,679		4,809	5,199	5,199	5,199	5,199	7,279		8,318
(per hour)	27		27.75	30	30	30	30	42		48
(index*)	90		93	100	100	100	100	140		160
B. Monthly Starting Rates, Civil Service^{3/}										
(a) Junior Clerical (Elementary School Graduate: Category D₂)										
	17,416		17,416	17,416	17,416	17,416	17,416	17,416		20,299
(b) Middle level Clerical/technical (2eme Bac. Category B₂)										
	38,317		38,317	38,317	38,317	38,317	38,317	38,317		42,849
(c) University graduate (Licence: Category A₂)										
	52,250		52,250	52,250	52,250	52,250	52,250	52,250		54,475
Indices										
(a) Junior Clerical	100		100	100	100	100	100	100		115
(b) Middle Level	100		100	100	100	100	100	100		109
(c) University Graduate	100		100	100	100	100	100	100		104
II. CONSUMER PRICES										
A. Index of African Consumer Prices in Niamey (December 1972 = 100)										
General Index	79		87	87	91	100	112	114 ^{5/}		
Food	74		83	80	84	100	119	120 ^{5/}		
B. Index of European Consumer Prices in Niamey (1972 = 100)										
General Index	78		91	95	98	100	103	105 ^{5/}		
Food	78		89	93	96	100	106	113 ^{5/}		
C. Retail Prices in Niamey, selected consumer goods.										
Bread (320 g.)		30	-	-	30	30	30	30	9 months	December
Millet (kg.)		16	-	-	24	31	51	39		-
Red rice (kg.)		53	-	-	68	73	94	93		33
Beef fillet (marche)		230	-	-	225	270	247	341		73
Local peanut oil (liter)		95	-	-	115	109	130	200		-
Sugar (cubes)		80	-	-	87	128	111	190		200
Electricity (3rd category KWH)		19.78	-	-	19.78	19.78	19.78	21.15		195
Kerosene (liter)		45	-	-	50	50	50	75		-
Cinema (3rd category)		40	-	-	40	40	45	45		75
Taxi Ride (town)		100	-	-	100	100	100	100		-

Table VIII. Niger.

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* 1972 = 100.

1/ Annual average: SMIG raised from 27 to 30 CFAF on 1 October 1969.

2/ Annual average.

3/ Includes 10% residence allowance.

4/ Increase as of 1 January 1975: 20% of index for lowest paid civil servants, with 10% for those in middle salary levels and 5% for those in higher levels. The actual rise for most university level civil servants was 5%. It was at the index 314, just above the university graduate starting index (300) that the increase changed from 10% to 5%.

5/ 9 months.

Table VIII. Senegal: Wages and Consumer Prices

ANNEX B

	1964	1968	1969	1970	1971	1972	1973	1974	1974*	
I. WAGES (in CFAF)										
A. Legal Minimum Wage, urban areas (SMIG)										
	(per month) ^{1/}	7,627	8,199	8,771	8,771	8,771	8,771	9,319	12,674	18,557
	(per hour)	44	47.30	50.60	50.60	50.60	50.60	53.76	72.97	107.06
	(index)	87	93	100	100	100	100	106	145	212
B. Minimum rate, middle-level clerical worker, private sector^{2/}										
	(per month)	41,404	41,476	41,548	41,548	41,548	41,548	41,548	48,614	55,903
	(per hour)	238.87	239.28	239.70	239.70	239.70	239.70	239.70	280.47	322.52
C. Civil service entry rates (per month)^{3/}										
(a) Clerical worker (primary school graduate, Category D)										
		18,090	18,090	18,090	18,090	18,090	18,090	18,542	22,833	30,935
(b) Middle-level clerical/technical (high school graduate, 2eme Bac., Category B4)										
		37,239	37,239	37,239	37,239	37,239	37,239	37,239	41,684	50,745
(c) University graduate (Licence, Cat. A3)										
		64,598	64,598	64,598	64,598	64,598	64,598	64,598	70,433	78,324
II. CONSUMER PRICES										
A. African Consumer Price Index, Dakar										
(a) General Index										
		81.6	85.7	87.6	91.0	94.1	100	112.2	131.3	150.7
(b) (Food component)										
		(77.6)	(82.4)	(84.4)	(87.7)	(93.1)	(100)	(118.9)	(129.0) ^{5/}	
B. European Consumer Price Index, Dakar										
(a) General Index										
		88.7	92.0	94.0	96.5	100	107.3	122.8 ^{4/}		
(b) (Food component)										
		(86.8)	(89.7)	(92.5)	(95.8)	(100)	(108.9)	(122.1) ^{4/}		
(c) (Servants component)										
		(93.5)	(100.0)	(100.0)	(100.0)	(100)	(106.3)	(132.2) ^{4/}		
C. Prices of selected consumer goods, Dakar^{6/}										
(a) Beef (with bone), kg.										
						Jan.	Jan.	Jan.	Jan. 1975	
						187	200	241	488	
(b) Millet										
						35	50	35	45	
(c) Rice (brokens, Indochina), kg.										
						40	50	60	125	
(d) Wax print (0.9m. width)										
						450	400	450	480	
(e) Sugar, kg. package										
						70	90	90 ^{8/}	250	
(f) Electricity, kwh										
						39.90	39.50	43.91	63.72	
(g) Taxi ride										
						40	40	40	60	
(h) Charcoal, kg.										
						12	13	13	18	
(i) Bread, 650 g. baguette										
						35	35	59 ^{9/}	86	
(j) Peanut oil, liter										
						98	98	98 ^{2/}	200	

Table VIII. Senegal

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Sources: Bulletin Statistique et Economique Mensuel; Cinquantenaire de l'OIT (Organisation Internationale du Travail), Comité d'Organisation du Cinquantenaire (Dakar: Editions Clairafrique, 1969); Senegalese authorities.

* as of November.

1/ Monthly equivalent = (hourly rate) times 40 times 51/12.

2/ As specified in collective wage agreements.

3/ "Solde brute totale": includes pensions but excludes family allowances.

4/ June 1974 level (latest available data); probably an underestimate of yearly average.

5/ Yearly average estimated as 103% of June 1974 level.

6/ These appear to be market prices. The divergence between official and observed market prices is indicated by the following data for prices averaged over entire years:

		1968	1969	1970	1971	1972	1973
Rice price, CFAF/kg.	(Official	35	45	45	40	40	60
	(Market	50	50	53	51	51	64
Millet price, CFAF/kg.	(Official	31.5	31.5	31.5	31.5	36.5	36.5
	(Market	34	36	31	42	40	72

7/ The variations in millet prices probably are due in part to different statistical assistants, using differing definitions of price.

8/ Rose to 150 in February.

9/ Rose to 140 in February.

Table VIII. Upper Volta: Wages and Consumer Prices

ANNEX B

	1964	1968	1969	1970	1971	1972	1973	1974	1975
I. WAGES (in CFAF)									
A. Legal minimum wage, urban areas (SMIG)									
(per month)	5,030	5,030	5,120	5,372	5,372	5,416	5,892	7,279	8,145
(per hour)	29	29	29.50	31	31	31.25	34	42	47
(Index (1972=100))	92	92	94	99	99	100	109	134	150
B. Wage Scales, US Embassy, Local Personnel, Ouagadougou (thousands CFAF per month)									
(a) Junior Messenger; watchman (starting rate: FSL 8)						11 ^{1/2}	11	13	21
(b) Middle-level Clerical/Technical Worker (starting rate: FSL 5)						24 ^{1/2}	24	26	42
(c) Secretary/translator; Accounting assistant (FSL 2)						58 ^{1/2}	58	60	114
Index, average rate (1972 = 100)						100	100	106	130
II. CONSUMER PRICES									
A. Index of consumer prices, African family, Ouagadougou (1972 = 100)									
General index	93	91	98	101	103	100	108	117	
Food	82	75	95	96	101	100	122	138	
B. Index of consumer prices, European family (1972 = 100)									
General				95	99	100	102	111	
C. Prices of selected consumer goods, Ouagadougou									
(a) Bread (kg.)			-	-	-	89	100	125	
(b) Millet (kg.)			39	32	40	41	60	47	
(c) Local rice (kg.)			79	74	62	66	78	135	
(d) Beef (with bone) (kg.)			117	130	104	137	121	158	
(e) Groundnut oil (liter)			115	115	118	125	125	160	
(f) Kerosene (liter)			40	40	40	40	40	47	

Sources: Upper Volta authorities; Bulletin Annuaire d'Information Statistique et Economique, 1975; US Embassy.
 1/ December 1972.

ANNEX C. SELECTED BIBLIOGRAPHICAL REFERENCES

In the course of the Sahel Economic Survey, a quite intensive bibliographical search was undertaken, in Ann Arbor, Washington, London and Paris, as well as in the Sahel capitals. There were three main targets: (i) the large body of unpublished reports, generated mainly by aid agencies in Washington and Paris; (ii) the weekly (or monthly) periodical literature which concentrates on Francophone Africa, such as Marches Tropicaux, Bulletin d'Afrique Noire, Le Moniteur Africain, Industries et Travaux d'Outre-mer; (iii) the general published literature on problems of the drought, on Sahel development more broadly, or on background subjects useful in understanding what is happening in these societies.

The periodical literature was examined to see whether it could yield very recent economic information of the sort needed to do a general economic survey. While of some use in this respect, this is too much a transient literature, of quickly-fading interest. For this reason few references to it are found below.

The bibliography is grouped into four categories:

I. Non-public sources. These are documents and reports that have some restriction as to circulation. The main components are the outputs of the IBRD and IMF, notably their periodic country reports. Strictly speaking, access to these documents is limited to governments and public aid agencies. In practice, they have in recent years become widely available and are frequently cited in published work.

In addition, the Bureau des Programmes, Direction de l'Aide au Developpement, of the French aid agency, issues some reports which are labelled "confidential" or "restricted" but these also circulate widely. There exists, finally, an extensive literature of United Nations experts' reports and similar documents, which are often restricted in circulation, but which can be consulted on the ground. Several such reports are listed here.

II. Unpublished reports and documents. These come mainly from local governments, aid agencies and international organizations. They are extremely numerous, particularly the reports associated with project financing. Only a limited range

of references from this literature is included below, in part because access is so difficult; it's not much help to mention items which can't be obtained. But also this is a highly specialized literature, with relatively little of interest to the general economist.

III. Published sources. It is here that the degree of selectivity was necessarily greatest, since there is so large and diverse a body of writing on the nature and problems of the Sahelian societies and economies. The focus is on economics - particularly on recent economic developments - and on economics-related material. Relatively few references are included from the vast non-economic literature, and work published before 1972 has been slighted. We have surely missed much of value and relevance in this category, more than in categories I and II.

One omission deserves special mention. Very few of the many articles in the Bulletins of the West African and Central African Central Banks are included here. They are major sources of economic information, but are so well known and there were so many potential citations, that choice was difficult.

IV. Bibliographies. Partly because of the sense of having neglected many rich sources, we include a few bibliographies on the Sahel, on the drought, on general African development. Once again, the aim is not to be encyclopaedic, but rather to indicate to readers with economics-related interests where they may look for more bibliography.

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