

THE SAHEL REGION :
SPLENDOUR YESTERDAY, FAMINE TODAY
WHAT WILL HAPPEN TOMORROW ? *

By

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INTRODUCTION

The purpose of this essay is to help identify the causes of the *social* problem generated by the drought which periodically affects the Sahel region, to assess its effects and to discuss the character of the alternative solutions advanced by government institutions and international organizations.

The vast literature on these subjects (see the bibliographical research of Joyce and Beudot (1976) and that of the Sahel Documentation Center (1977)) is evidence of the interest which they have aroused and also of their complexity, since so many factors – natural, political, social and economic – are involved. Our research will be confined to presenting a *general* synthesis of the problems affecting the Sahel region, mainly from an economic perspective. This approach presupposes the adoption of a wider framework covering other relevant aspects of the question based on the other research papers programmed in the IFIAS project *Drought and Man*.

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What follows is my entire responsibility and does not necessarily express the views of the people and institutions mentioned above.

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In the first part of this study I shall outline the historical background of West African societies; PART II will describe the evolution of African agriculture and the economic conditions of the Sahel countries over the past twenty years; PART III will attempt to assess the economic and social impact of the drought; and the fourth and last part will analyse possible scenarios for the future of the region.

I. HISTORICAL BACKGROUND

The economic history of the Sahel-Sudan region can be divided into three main periods. The pre-colonial phase, which extends up to the 16th century, is characterized by the economic and social progress of the communities in the region, in spite of the limitations imposed by the natural environment. The second period reaches to the beginning of the present century and marks the outset of the region's dependence on an economic order imposed from outside: a dependence which inhibited its potential for autonomous development. The last period, which ends with the accession of the countries of the region to political independence, is that of economic occupation, with the development of the type of agricultural activities, still predominant today.

i) *The Pre-colonial Phase*

At a very early stage – in the 7th century, Arab travellers described the population inhabiting the region and their accounts provide the richest source of available information (1). They reveal the existence of an elaborate social organization and a high level of economic activity along the two great rivers: the Niger and the Senegal.

The towns in the Sahel-Sudan region, which had contacts with the outside world through the trans-saharan trade in which they exchanged their gold against goods from Europe and the Arab world, constituted, at the time, an important link in world trade (2). Despite the importance of trans-saharan trade, the very basis of accumulation was rural activity and the mode of appropriation of the surplus produced in the context of that activity determined the internal social hierarchization.

The primary importance of agricultural commodities as essential goods made land the fundamental means of production and led to the development of an essentially agro-pastoral type of social formation. Agricultural activity in these social formations was limited by its level of technological development and the prevailing natural conditions, but it served a fundamental objective, namely to ensure the reproduction of these societies. The choice of crops, animal husbandry, the practices of crop rotation and nomadism were hence man's response to his environment; an imperfect response in the final analysis, but one whose rationality was dictated by the need to ensure the continuity of the development of productive forces in those social formations.

The specific facts of history demonstrate that, even though climatic problems (above all, long periods of drought) arose during that phase, they did not constitute a sufficient obstacle to bring about a systematic deterioration in the economic and social life of the communities or to make it necessary to abandon the human settlements (3). The successive changes of political regimes were mainly the consequence of economic and social factors without any strong connexion with natural phenomena (4).

Climatic changes had only short-term effects and a limited impact; thus they did not give rise either to large-scale migration or to protracted famines. It seems that this was due to the existence of a social organization which confronted the natural environment by defining *autonomously* the structure of its agrarian production. On these matters Cissoko (1978) notes that:

« With the 16th century, a period of great prosperity, the Niger Bend attained its heyday. It was the centre of one of the strongest state organization that West Africa had ever seen... Leo Africanus, at the beginning of the 16th century, describes in great detail this great economic activity of the Bend. According to the Tarikhs of Timbuktu, the country was rich, the population dense and healthy and famine could not break out. Under the circumstances, unless there was a disaster of long duration, it was possible rapidly to deal with small periodic food shortages. Indeed, the Tarikhs do not mention food shortages in the 16th century, but epidemics of «plague»... The epidemics of the 16th century do not seem to have been very devastating or to have undermined the economic and demographic strength of the Niger Bend... » (5).

Nor is there any evidence in the available sources of any catastrophic effects of climatic phenomena. A dense population grouped together in towns like Gao and Timbuktu, which in their period of splendour had more than 100,000 inhabitants, would in view of the sanitary conditions of the times, have been devastated by famines and recurrent epidemics. Moreover, political and social stability, flourishing commercial activities and the high degree of organization of production are not characteristics of societies at the mercy of natural phenomena. That is why not only is there no strong historical evidence of devastating famines and epidemics, but the very nature of these peoples, their achievements and their progress allow us to assert that the climatic variations were «surmountable» in a group of social formations which autonomously defined their modes of accumulation.

Some researchers, who approach the subject from the climatological angle (6), claim that the Sudano-Sahelian empires reached their

heyday thanks to a long period marked by exceptionally favourable weather conditions. They consider the climate as being the decisive factor which «explains» the progress of the social organization, and base their argument on a highly artificial set of assumptions and evidence derived from indirect and incomplete analyses. They establish a climate/society correlation which seems entirely «mechanistic», ignoring the relevance of intrinsic factors in the dynamics of the development of any social formation.

In fact, this period of growth and apogee of the communities in the region was interrupted, not by climatic alterations, but by external political factors, namely the Moroccan invasion of 1591 which led to the fall of the Songhai Empire and which marked the end of the «great empires of the Western Sudan», a process that was accelerated by the European penetration of the continent.

It is important to point out that it was these changes, induced by forces *external* to the communities and not by *internal* events, which halted the development of the productive forces in the region. It seems that considering only internal factors, the local social forces were in a position to continue the process of growth, since they were achieving significant social and economic goals (7).

Lastly, it should be noted that it is not our purpose to present an idealistic vision of this phase for, in fact, problems common to all developing social formations in their early stages of accumulation did arise during these years. Our aim is rather to show that the natural environment did not constitute an insurmountable obstacle for the dense populations, who were able to settle in that geographical space and to ensure their production.

Certainly, it is not possible to evaluate this period with criteria derived from the analysis of the European experience (8). The rise and decline of the West African «empires» has to be placed in the context of its *own* history while considering the specificity of the African social environment. It is in this sense that we identify a period of *splendour*: the magnificence of the epoch is not related to the comparison with other social formations, it is rather a concept derived from historical evolution proper to the communities living in the region, which in the centuries to come were deprived of the possibility of controlling their social organization: the destruction of the *original* economic and social forces marks the beginning of a process during which the region was unable to ensure a sustained development of the forces of production.

ii) *The Colonial Blockage*

The coming of the European to the West African coast, the invasions from the North and the decadence of the Arab world are the historical facts which determined the decline of the great empires. But it

was the first of these factors which was to have a major long-term effect and was to be decisive in the economic and social desintegration of the region.

The European presence imposed a transformation of the links which these communities entertained with the outside world: this transformation was reflected in the emergence of a new predominant commodity (the slave) and the resulting geographical reversal in the development of the productive forces. The previously predominant commodity (gold), which had formed the link with the outside world, had made it possible to occupy the hinterland of the continent along the line of the great rivers; during the new phase, although gold continue to be an element in trade, it lost its predominant role to the slave trade which, being imposed on the communities from outside, tended to undermine their unity.

The expansion of the slave trade drastically changed the nature of accumulation through its destabilizing and distorting effect both at the socio-political and the economic level. The draining of the population which followed generated political instability within these communities, through the ensuring conflicts to dominate this trade: among other things, it gave rise to armed confrontations, specific manifestations of the struggle for alliance with the Europeans. The forced modification of the social hierarchies blocked the process of accumulation which could no longer continue along the lines that had been predominant during the apogee of the empires, and priority was given to exchange rather than production (9). Cissoko (1969) calls the beginning of this phase «the age of the countries at war», the social scene being essentially characterized by instability and insecurity.

The imposition of this «new economic order», by undermining the very bases of the development of the productive forces, gave rise to a historical break which marked the beginning of the region's subordination to the interests of the colonial powers, who henceforth placed the laws of the world capitalist development above the interest of the local communities.

Analysing this process, Amin (1971b) points out:

«Reduced to the role of supplier of slave labour for the plantations in America, Africa lost its autonomy. It began to be shaped according to foreign requirements, those of mercantilism ... The processes of integration of the peoples and construction of large communities which were developing in the pre-mercantilist period were stopped. Instead there was fragmentation, isolation and an incredible tangling up which, as we know, are at the root of one of the most serious of contemporary handicaps» (10).

The reduction in the supply of manpower seems to have been the most serious immediate consequence of the expansion of the slave trade. In view of the level of development attained by these communities, a *necessary* condition for the continuation of the process of accumulation was population growth. Although it is practically impossible to evaluate exactly the extent of the labour drain induced by the slave trade, the fact that the most cautious estimates confirm a stagnation of the total population between the middle of the 17th century and the middle of the 19th century gives some idea of the situation.

Agricultural production suffered directly from the consequences of the population drain. Cissoko (1969), in his analysis of economic activity, stresses that:

« Agriculture which provided a living for almost all the population ceased to produce enough... Hence the Western Sudanese agriculture did not experience any technical progress... The general insecurity, moreover, slowed down productivity... The shortage of manpower aggravated by the slave trade accentuated the stagnation of the Western Sudanese agriculture » (11).

Food shortages and epidemics ceased to be an exceptional and a typical phenomenon and became a permanent reality. The climatic fluctuations had a more serious impact on these communities, subjected as they were to a process of domination which prevented them from structuring their organization in relation to their own priorities.

The routes opened up by the slave trade also had negative effects on the evolution of the nascent local industry: the gradual inflow of European manufactured products deprived such activities as the textiles industries which had achieved a certain level of development of all possibility of growth.

The colonial blockage, although having a different impact on each of the communities in the region (12), was generally marked by the fact that it gave rise everywhere to what Rodney (1972) identifies as «the loss of development opportunity». This blockage of development was to constitute, for more than four centuries, a fundamental limitation on the future progress of the region. Throughout this epoch, the region was subordinated for the sole purpose of supplying cheap and malleable labour for the production activities of the colonial powers in other regions of the world. This dominant activity did not generate any internal force of social progress; on the contrary, it promoted the deterioration and destruction of local productive activity at a key historical moment: that in which the bases of the world capitalist system were being established.

Africa in general and the Sudan-Sahel region in particular were forcibly integrated into the world system, and lost their autonomy without having the possibility of choosing another path before being ruthlessly subjected by the colonial power.

iii) *The Exploitative Development (mise en valeur) of the Region*

The gradual economic occupation of the territory, with a view to maximizing the surplus extracted from the colonies, led to the development of export-oriented agriculture, disregarding other valid principles of resource allocation directly related to the nature and limitations of the environment.

Despite their negative effect on the productivity of the soil, groundnuts and cotton constituted the main sources of agricultural expansion in the region. The deterioration of the natural milieu went side by side with an arbitrary administration of the local population.

The labour force was compulsorily placed at the disposal of the colonial authority, a fact that only accentuated the process of disintegration of social unity within the local communities which, until then, had been precariously maintained. Forced migration, the compulsory occupation of land with the consequent change in the use of the soil, the establishment of new forms of organization of production are all manifestations of the development of mercantile relations.

The expansion of export crops gradually led to the superposition of two different farming methods: one based on the extraction of surplus and the other geared to the maintenance and reproduction of the direct producers. The fact that production destined for the maintenance of individual producers was transferred to lower-quality land with scarce rainfall and the conversion of these producers into wage-labour, forced the population frequently to resort to trade in order to obtain food, thus creating some uncertainty with regard to subsistence, since the supply was then subject to the fluctuations of the market dominated by the colonial power. Dispossessed of the object of their labour (the land) and compelled to become integrated in a subordinate role (as wage-earners) within the new organization, the local population experienced a gradual deterioration in their living conditions (13).

Furthermore, the increased urbanization in the coastal areas created a pole of attraction and a distorting factor with regard to the regional distribution of production. Since the pattern of demand in the urban areas was appreciably different from that prevailing in the rural areas, the peripheral agricultural zones embarked on a production geared to the market (particularly meat and vegetables) replacing the traditional subsistence output: the effect of this process was a further deterioration of the soils and an increasing uncertainty as to the availability of food in the countryside.

Even when the «development» of the region by the colonial forces was carried out according to the same general rules which characterized the process on the African continent as a whole, it had certain specific features which even today continue to affect the evolution of the countries comprising the region. The most important of these is that the

French colonies in West Africa, although totally occupied militarily in the 19th century were only at a later stage exploited economically (14). This time-lag in comparison with the neighbouring British colonies (Gold Coast and Nigeria) was specifically reflected in two apparently distinct phenomena: the absence of development of basic infrastructure and the lack of participation by local social forces in the spread of capitalist forms of production among other strata than wage-earners.

The last years of the colonial period -- i.e. between the Second World War and independence were marked by a change in the mode of exploitation of the labour force in the rural areas. That process involved abandoning practices based on large production units, and the transfer of production to family units. The atomization of the producers and the imposition of a particular type of crop by the colonial authority gave rise to the emergence of a dependent peasantry, which had no possibility to extended reproduction, both because of the small size of the farms and the low prices received for the sale of its products. The Comité d'Information Sahel (1974) summarizes the end of this phase as follows:

« Hence, on the basis of the implicitly accepted principle that the labour force reproduces itself automatically in the preserved agricultural communities, the neo-colonial policy encouraged family production of export crops from the fifties onwards... Thus we see more and more clearly the emergence, on the one hand, of regions in which cash is obtained from the sale of an agricultural commodity; and on the other hand, more remote areas forming a hinterland in which money comes from the sale of labour power » (15).

Finally, it has to be noted that political independence entailed the subdivision of the region without taking into account the economic basis on which the new political entities were going to develop. The various States created at the end of the colonial period were the product of a unilateral decision by the metropolitan countries, and this political partition was in itself to constitute an obstacle to the development of these countries because it imposed artificial boundaries on the local communities thus weakening them.

II. ECONOMIC POLICY AFTER INDEPENDENCE: THE SUPPOSED ADVANTAGES OF THE INTERNATIONAL DIVISION OF LABOUR

The heritage of the colonial period, particularly the type of criteria used to allocate resources, has had a decisive influence on the evolution of African agriculture in the past twenty years; but it is equally true that after Independence, the maintenance of a highly distorted mode of specialization of production has aggravated economic and social problems.

The theory of «comparative advantages» has frequently been used as an argument to prove the rationality of the structure of world production and, hence, to justify the specialization of the Third World countries in the production of raw materials. These «comparative advantages», defined by the colonial powers, determines the path of specialization of African agriculture and were not, in their essence, reconsidered after political independence in most of the countries.

In the case of the Sahel, it is clear that after Independence, groundnuts and cotton continued to be considered the most «advantageous» crops, thus accepting the role assigned by the prevailing international division of labour and proposed by the centre to the periphery.

i) *The General Framework of African Agricultural Activities*

The generalization of a common phenomenon brought about by colonial policy i.e. single-crop farming constitutes the predominant feature of African agriculture. This practice has led to the deterioration of the soil and has prevented the majority of the people from enjoying a minimum level of subsistence. The deterioration of human and natural resources is a result of an ecologically inadequate land exploitation system. Economic activity is placed in a perspective which gives priority to profit without envisaging the irreversible consequences for the environment which, in the long run, prevent an extended reproduction at a rate required to ensure a minimum level of living for the local people.

In the period 1961-1970, the average annual rate of growth of African agricultural output was 2.9 per cent, as against 0.8 per cent in the period 1970-1975. If we consider the average annual rate of growth for food production per capita, which was 0.4 per cent and 1.9 per cent respectively, for the two periods mentioned above, we can see more clearly the actual stagnation in agrarian production (16).

This sluggish evolution *appears* to be a consequence of a given international division of labour and a given structure of social relations of production, rather than the effect of short-term problems. Hamid and Gakou (1977) have noted in their analysis of the issue that:

«In no way can the crisis which African agriculture has been undergoing for years be explained simply by climatic conditions. Indeed, this crisis has affected countries, like Kenya, which were not stricken by the recent droughts, just as it has the Sahel countries which were badly hit. Furthermore, there was a food crisis in the Sahel even during periods when climatic conditions were good. And finally, during the drought in the Sahel, it was almost exclusively the food crops which were affected» (17).

Owing to the predominance of export crops, African agriculture was affected by the trend towards a deterioration of the terms of trade from which the Third World countries suffered during the 1950s and 1960s, thus reducing the expected inflow of foreign exchange. This relative fall in the income of agricultural producers was accentuated by

the fiscal policies practised in most of the countries and by the price determination policies followed by governments, which tended to adjust prices paid to the producers to a rate lower than the *nominal* increase in prices on the international market and appropriate the difference (18).

The incomes structure grew progressively unfavourable to agrarian producers, eliminating any incentive to increase productivity and preventing any increment in the rate of accumulation. The weakened position of the agrarian producers enabled governments to implement economic policies which tended towards the extraction of the surplus generated by agricultural production and its transfer to the urban occupational groups (19).

Despite the clear indicators pointing towards the exploitation of the agrarian producers, the unsatisfactory results of the agricultural sector were frequently attributed, by the supporters of the principle of «comparative advantages», to another set of factors, namely, the absence of sufficient technical progress in rural activities, the disproportionate population growth and the constraints of the natural environment, all factors pointing to a severe «lack of modernization».

To consider this set of factors as the *cause* of stagnation is to place the analysis of the issue at a superficial level.

In fact, the degree of technical progress is a *consequence* of the type of production relations existing in a social formation. The level of technology (e.g. lack of mechanization, little use of chemical inputs), and its manifestations (e.g. low yields, uncertain harvests) are rooted in the structure of production prevailing in these countries.

Population growth has been regarded as a cause of underdevelopment on the pretext that in the Third World any improvement in productivity is counteracted by the population explosion. Amin (1971b) has made two fundamental criticisms of this argument and shown that in general terms it is not valid. Firstly, the relation between natural resources and population is by no means unfavourable in the Third World and still less in Africa. Secondly, it is the process of marginalization of the population, triggered off by the current economic system, and *not* population growth which engenders unemployment and poverty. The apparent population pressure is the result of a system of exploitation of natural resources which compels the rural labour force to migrate to the urban centres (20).

The argument concerning the limitation of natural resources only takes account of present yields and volumes of production, but not of the potential that would be offered by the natural milieu as a result of the transformation of the modes of exploitation. Agronomic experts have indicated on numerous occasions how «appropriate» technologies can increase the efficiency of resource use.

Rather than being a sequel of the «lack of modernization» – supposedly rooted in the inability of the local population to undertake «efficient» decisions – the increasing impoverishment of the lower strata of the agrarian masses is a direct consequence of a «double-squeezing» dynamics exercised by the urban classes and the international economic system on rural activities.

The «urban bias» in economic policies (21) in African countries reflects the power structure. Bureaucratic elites, using their key position in decision-making, under the pretext of efficiency, allocate scarce resources so as to strengthen their own position within the economic structure. Small agrarian producers and rural workers are confronted with a bureaucratic machinery, which manipulates financial as well as real flows according to patterns dictated by the interest of the dominant social groups.

The international economic order imposes its own dynamics of *unequal* exchange, bringing about a framework of international economic relations where the *uneven* distribution of power precludes underdeveloped countries from reaching a position in which they would be capable of negotiating the conditions of trade on a world level. (22).

The two components of the «double squeezing» dynamics cannot by any means be considered independent of each other; they rather appear to be *complementary* in the composition of the *power* structure which dominates the political scene of African social formations, and they sustain each other.

The main characteristic of the «double-squeezing» dynamics, can be summarized by the conclusions reached in the study carried out by Hamid and Gakou (1977), which examines the economic evolution of Africa over the last 25 years:

«Progress in this sector (agriculture), both for Africa as a whole and for the countries taken individually, has been rare. Productivities, quantities produced, areas cultivated, production techniques, in short, all those factors which make it possible to gauge the progress made, have varied very little» (23).

Bearing in mind the nature of the «double-squeezing» dynamics, let us concentrate on the evolution of the Sahelian economies after Independence.

ii) *The Economic and Social Situation of the Sahel countries 1960-1970*

For the Sahel countries (24) as a whole, GDP increased at an annual average rate of 2.6 per cent during the decade, the GDP per capita reaching US Dollars 125 by the end of the period. The primary sector contributed 49 per cent to total output in 1960, falling to 37 per cent in 1970 – indicating a stagnation of rural production. The share of the industrial sector rose from 15 to 20 per cent during the same period, while the public sector maintained an average of 15 per cent (25).

These figures show the persistence of the production structure inherited from the colonial era. In fact, government policies followed an «outward-oriented» strategy which reinforced the situation of economic dependency. This pattern constitutes a common feature for all the economies of the region.

The «outward-oriented» development strategy implemented by the State in the countries of the region was reflected in the fact that priority was given to export activities in the agricultural sector. This does not mean that governments gave preference to rural activity over urban activity but that, *within* the former, it was the export crops which were the most favoured. This explains, for example, the promotion of groundnut cultivation in Niger and cotton cultivation in Chad, as well as the granting of greater technical assistance and credit facilities for groundnut cultivation, which was already well established in Senegal. To sum up, those rural activities which had clearly emerged as foreign exchange earners during the colonial era were the most favoured by the official agricultural policy.

As a consequence of this strategy international trade has played a key role in the evolution of the Sahel economies. Imports and exports together amount to an average of 40 per cent of the GDP for the region as a whole: in this connexion, the Mauritanian economy appears as the most «open» to the outside world, the sum of imports and exports reaching 77 per cent of GDP in 1970 (26). The export of primary commodities is predominant in all countries of the region (27). Food imports represent on average 30 per cent of the region's purchases from abroad.

The international trade accounts of the Sahel countries showed a growing deficit throughout the period. This was a result of the stagnation of the value of exports, due not only to their relative price fall on the world market but also to a reduced volume of supply and to the continual increase in the value of imports, which reflected the current inflationary trends in the world economy.

The external dependence of these economies, highly vulnerable as they are to fluctuations in world demand, was reflected in a balance of payments crisis. The relative fall in the world price of their main export commodities – particularly groundnuts and cotton – led to a deterioration of the terms of trade in all the countries of the region, except Upper Volta. It is worth noting that these price trends become even more unfavourable when comparing the prices received for the region's exports with the index of manufactured goods on the world market, a relation that shows even more acute signs of deterioration than the terms of trade. In other words, the importing of capital goods – which eventually could accelerate the process of accumulation in the region – has become more costly: here again, we have to stress the lack of realism in the principle of «comparative advantages» in view of the current evolution of the world economy.

The excessive growth of imports over exports led governments to rely even more on foreign aid and financing as a means of covering the deficit in the trade account of the balance of payments. This led to a gradual increase of the external debt and its growth rate and allocation were determined on the basis of the priorities established by the governments of the region as well as the constraints imposed by donors and creditors.

The causes of the stagnation in the volume of exports must be explained here, because this stagnation is apparently contradictory if one considers the fact that the development strategies followed during these years was basically «outward-oriented». In order to analyse this issue, it will be necessary to examine the evolution within the agricultural sector.

Agricultural activity is the occupation of more than 80 per cent of the total working population of the region; wage-earning labour is negligible since the dominant mode of exploitation is the family organisation of production. Estimates made in the middle of the period show that out of a total of 270 million potentially arable hectares, only 17 per cent had actually been farmed, the most noteworthy case being that of Chad, which has 48 per cent of the potentially arable land of the region but only farms 6 per cent of its 129 million hectares of agricultural land (28).

Three types of activity can be distinguished, food crops, exports crops and animal husbandry, their spatial distribution depending not only on the quality of the soils and the frequency of rainfall, but also on the incentives offered by the market and government agricultural policies.

Animal husbandry is largely a nomad activity, since the export crops occupy the best agro-pastoral zones, while food crops – pushed by activities developed in order to supply urban markets – have increasingly been shifted to the ecologically least favourable areas (29).

The fragmentation of production units – a consequence of the policy applied during the final years of colonial domination – weakened the position of the peasants within the social structure. Small producers have seen their incomes systematically reduced during this period, not only as a result of the already mentioned fall in world prices, but also because of the policy practised by the State on domestic relative prices and the taxation structure.

The prices actually paid to the rural producers were adjusted in absolute terms below the current levels of domestic inflation (30), whereas rural activity was more heavily taxed than urban activity. These trends affecting income distribution deprived the peasant of all possibility of improving his own levels of productivity and, in fact, entailed a fall in productivity by inducing the «excessive» use of the land, which actually constituted the sole means of maintaining incomes at minimum subsistence level. Survival rather than efficiency became the dominant attribute of peasant behaviour.

This behaviour is by no means «irrational», but results from the fact that confined as the peasantry is to a marginal role in society, conservation of the environment does not enter into its economic calculation, which is centred on the dilemma of *survival*. It is the marginalization of the peasantry by the social system, and not the behaviour of the peasantry in itself, which appears as the ultimate cause of the destruction of the environment.

The State tended to allocate the surplus extracted from agriculture mainly to the financing of its current expenditure, the largest proportion of which consisted of Civil Servants' wages and salaries (31).

The emergence among the social forces of a bureaucratic elite engaged in the public administration is the main *new* element in the social structure of the region after the accession to political independence. Mirroring the consumption patterns of the colonial rulers, these elites introduced alien forms of behaviour into the social formation which involve the disruption of the local economic structure.

The consolidation of the bureaucratic elite has reinforced the tendency to extract surplus from the productive sectors. The power structure developed through this dynamics puts pressure on the rural social groups which at the end – owing to their weakness – are made to contribute most to this transfer of resources. It is the order imposed by the bureaucratic elite which guides policy. Diop (1972) points out that :

« The post-colonial period is too recent to have brought many changes to this society. But while it has not been fertile – only one class, the bureaucratic bourgeoisie, emerged in the first decade after independence – it brought if not order, at least its order, into the interplay of social classes » (32).

By giving rise to the emergence of relatively high-income groups in the urban areas, the formation of the elite has generated a multiplier effect in consumption expenditure which, because of its composition, has above all entailed an increase in imports, thus widening the gap of the external sector.

The evolution of the social structure in the countries of the region has on the whole been uniform. Growing disparities between urban and rural groups, creation of a bureaucratic elite, incomes policy discriminatory towards the peasants leading to their increasing impoverishment, these were the salient features of the social process during the 1960s, in a context where expatriate control of key economic activities continued unchallenged.

Taking into account the external sector bottleneck, a result of the evolution of prices in the world market and the character of domestic incomes policies, the growth potential of local industry has been reduced to a minimum. Industry, dominated by foreign capital (nationally owned firms being virtually non-existent and State participation minimal) is geared to the processing of primary commodities (agricultural products and minerals) and its multiplier effect is rather limited. This is explained by the fact that the repatriation of profits and the tax concessions granted to foreign capital make it possible to transfer this part of the economic surplus (profits) outside the region, whereas the total wages paid by this sector have only a relatively small effect. It is sufficient to point out in this respect that the industrial sector of Senegal (the most advanced country of the region in economic terms) had created 13,000 wage-jobs by 1960 out of a total of 135,000 created in the *urban* areas, the figures for 1968 are 17,000 and 125,000 respectively (33).

Bearing in mind the extent of migration to the urban centres, the low capacity of the industrial sector to absorb manpower led to an enormous increase in irregular activities, which make up what is called the *informal* sector of the urban economic structure. This is the sector where

small-scale artisans operate near subsistence level, taking advantage of the «inadequacies» of supply in the *formal* sector which is unable (qualitatively and quantitatively) to satisfy the total demand for goods and services.

The efforts made to attract foreign capital – reflected in legislation highly favourable to its installation – and the attempts made by the State to launch new activities have not been as successful as expected, and manufacturing activities experienced little growth during the period under consideration.

To sum up, it can be said that the evolution of the economies in the region during the 1960s is characterized by the «double-squeezing» dynamics dominating the economic process: growing dependence on the outside world and the wider disparities in income distribution demonstrate that there exists a clear pattern of exploitation of the lower strata of the population.

The drought at the beginning of the 1970s took place in an economic and social context dominated by stagnation, dependence and marginalization, where the increasing impoverishment of the rural environment had been strongly induced by a discriminatory set of policies which forced an inadequate use of natural resources from a long-term perspective.

The Sahel countries typical producers of raw materials (agricultural and mineral products), with a precarious industrial sector and a type of accumulation based on the surplus generated by agriculture, are a striking example of underdevelopment. An overall analysis of the Sahelian economies demonstrates that the areas most exposed to «climatic disaster» form part of a wider system which, in addition to more or less serious short-term problems, is subject to a set of mechanisms which tend to aggravate the consequences of any variations in natural conditions.

The disintegration of these social formations is uni-directional: it prevents the transfer of surplus from the «rich» to the «poor» areas, and conversely, accentuates the extraction of economic surplus from the «poor» areas.

III. THE CONSEQUENCES OF THE DROUGHT IN A CONTEXT OF UNDER-DEVELOPMENT AND DEPENDENCY

Although the statistics available for the 1970s are by no means complete, they do highlight the economic and social impact of the drought. Loss of human lives, generalized under nourishment, massive migration and growing impoverishment of the peasants, were the direct and immediate consequences. A marked decline in the contribution of agriculture to the GDP, a considerable drop in per capita income and an aggravation of the foreign sector situation were the manifestations of the crisis at an overall level. No statistics can give an approximate idea of the level of the *tragedy* and might even make it appear as though it were a problem that could be handled with the same kind of policy measures as those applied in advanced countries to overcome «natural disasters».

The number of human lives lost as a direct consequence of the drought has been estimated between 100,000 and 200,000 – Berg (1976) and Brun (1975). Under-nourishment (process rather than a temporary phenomenon) is very difficult to assess and, consequently, the conclusions reached by the various studies concerning the extent of this problem are divergent (34) however, they do agree on the fact that it constitutes one of the major sequels to the worsening of climatic conditions.

One of the most important consequences of the drought, in an environment like the Sahel which has no material means at its disposal for dealing with it, has been the large-scale migration from the zones most affected by the phenomenon to the urban centres and even outside the region. This process, largely irreversible, entails the gradual impoverishment of the migrants, who, having no resources other than their labour power – and usually having no specialization to ensure them a reasonable remuneration in the town – add to the already large urban unemployed with no certain prospect of work. In his research on the demographic consequences of the drought, Cadwell (1975) points out:

« The major demographic response to the drought has not been death but migration... Migration from the north to the south occurred in every Sahel country... An unprecedented number of nomad family groups moved southward from their normal area of seasonal cyclic movement into the towns of the savannah or even the better watered areas nearer to the coast » (35).

Migration is the only possibility for survival, bearing in mind the absence of specific material aid in the disaster area at the time when the drought set in. For the migrant, moving to the town, leaving behind the region which was his permanent living environment is a last resort and he will do so only after having vainly sought other solutions (36) : he is thus compelled to abandon a way of life that had been preserved for generations.

This rural-urban migration is not a new phenomenon in itself, nor an unprecedented short-term manifestation but the aggravation of a structural trend generated by the prevailing economic order. The natural catastrophe merely accelerates the rate of migration, making the phenomenon perceptible even to a casual observer long before the establishment of refugee camps.

The problems created by migration to urban centres – unemployment, overcrowded housing, deterioration of sanitary conditions – increase at an exponential rate during a disaster period, and it is on the basis of these manifestations that one finds brandished once again the neo-Malthusian argument that population growth is the cause of all the economic and social ills of the region.

The large-scale movement of population from the rural to the urban areas induces substantial transformations in the income distribution structure. The direct impact of the drought on distribution is the loss of their capital by the nomadic herdsmen and hence their flow of future incomes. Distorted prices for foodstuffs, the immediate consequence of

drought in the disaster area, considerably reduces the purchasing power of the local population, while at the same time the monopolization of these assets by a minority entails a shortage of supply on the market.

Owing to the scarcity of reliable data, it is not possible to make an overall estimate of the transformations that have occurred in income distribution; however, it is possible to make a qualitative approach. On these lines Berg (1976) notes:

« 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 immigration increased in urban areas and returns to labour 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 a consequence of the differential geographical incidence of the drought » (37).

The crisis which started in the rural areas later extended to the urban centres and only certain traditional social forms – such as the «extended family» – explain why the effects were not further multiplied. Traditional social and family organizations, by providing a «system» capable of absorbing migrants in the urban areas and by the remittance of incomes to the rural areas, have at least partly helped to limit the negative impact by generalizing the reduction in the standard of living thus avoiding total collapse. A social structure which, judged by «modernizing» criteria, would be defined as «backward» has an active function to fulfill in a crisis situation.

The impact on the rural areas differed according to zones and type of activity. At an overall level, livestock production appears to have been affected within «tolerable» limits, since the total cattle stock of the region was reduced by 23 per cent between 1972 and 1974. This aggregate indicator, however, conceals the fact that the heaviest losses were concentrated in specific areas and affected the weakest producers (e.g. in Chad cattle stock was reduced from 4,7 million to 2,7 million heads between 1972 and 1973) (38). Again production also showed a marked decline with a considerable fall in yields per hectare. Average yields were reduced by nearly 40 per cent for the region as a whole, and the massive drop in output affected every country in the region without exception (39).

The drastic reduction of cattle stock and the heavy fall in grain yields combined to produce a dramatic food shortage in the disaster areas, reducing the availability of foodstuffs to nearly 50 per cent below «normal» levels.

In contrast to the decline in food output, it is striking to note the maintenance of yields and absolute levels of production for export-crops (mainly groundnuts and cotton), which did not suffer from the

effects of the drought to the same extent (40). This relatively favourable evolution of the export-crops is due to the fact that they occupy the lands with the best agro-ecological conditions and that the producers have at their disposal a better government-run assistance program.

Imports of foodstuffs and foreign aid in the form of commodities become necessary in order to overcome acute shortages. Inflationary trends in international grain markets made it unavoidable to resort to aid as the only means to mitigate the devastating effects of the drought.

In 1976, the Sahelian countries experienced a new serious drought and once again they found themselves in a very difficult situation. Foreign aid again appeared to be a solution to short-term problems and more than 400,000 tons of cereals were received (41) from different sources. Chad's deficit was estimated at 48,700 tons of grain, in Mali it was put at the level of 132,500 tons, in Mauritania 52,000 tons, in Senegal 180,000 tons and in Upper Volta 65,000 tons, the figure for Niger not being established. A simple calculation shows that, once again, the population of these countries was suffering from food shortages and although not of the magnitude as those experienced in the previous drought, they were at least serious enough for the situation to be qualified as a very precarious one.

The recurrence of the drought and the persistence of serious economic and social problems makes it self-evident that famine and the process of pauperization triggered off in the Sahel by natural calamities has a *specificity* arising from the prevalent character of the social formation. Wiseberg (1976) observes how natural disasters have different effects in different social situations:

« The ruination of corn and soyabean crops in Iowa and Nebraska means higher food prices for most Americans, hardship for farmers and suffering for the poorest strata of US citizens; and, given the precarious world food balance, it means higher world prices for foodstuffs and less food aid to be distributed abroad. But it does not mean widespread starvation in the midwestern United States. By contrast, drought, flood, or pestilence for farmers who live on the margin in Africa, Asia and Latin America means increased malnutrition or death... » (42).

It is a given organization of society that causes drought to be transformed into a series of irreversible processes. The high degree of vulnerability of the ecosystem (43) is derived not only from adverse climatic conditions but also from the «double-squeezing» dynamics which amplifies the effects of the drought.

That is why the future of the region will depend not only on the recurrence of such a natural phenomenon as drought but also and above all on the choice of development strategy in the Sahel countries, insofar as this strategy defines the nature of the insertion of the region into the world economy and the type of social relations of production which prevail internally.

IV. DEVELOPMENT STRATEGIES AND THE FUTURE OF THE SAHEL

Looked pragmatically, the approach adopted in this document could be seen as a purely intellectual exercise about the tragedy of a people without any immediate operational value. However, this approach allows us to evaluate possible alternative scenarios for the future of the Sahel on the basis of the history of the region and the evolution of the social and economic structure of the countries after Independence. It places the programmes, submitted with the view to transforming the region, in the context of the *actual* problems faced by the people in these countries.

i) *Food Production and the International Division of Labour (44)*

The international economic situation over the past few years, especially since the first oil crisis has highlighted the strategic importance of ownership and control of natural resources for the balance of power on the world scene.

The dramatic alteration in the international prices of basic commodities at the beginning of the 1970s has forced a fundamental revision of the assumptions on which the analysis of the future evolution of the world economy were based.

Food production and distribution have been amongst the issues considered crucial in the restructuring of the international division of labour. The explicit abandonment of a *policy of surpluses* of grains by the United States – notably after the massive sale to the Soviet Union in the early 1970s – indicated that the foodstuffs markets had become radically different from the situation which had prevailed since the end of the War: there was a rapid movement away from a structure dominated by excess supply towards one characterized by the pressure of demand.

The rather bleak prospects of a long-term global collapse on the world scene having been abandoned, meaningful discussion about the future has shifted away from the possibilities of ensuring a sufficient world food production towards the *alternative* costs of achieving such a level of output. At present the main issue appears to be the definition of a new basis for the world-wide allocation of food production resources.

In the last few decades, cattle production has been developed in the advanced countries making intense use of grains as a feeding input ; encouraged by a favourable grain/meat price relation, producers structured this activity in such a way as to make it extremely sensitive to any alterations in relative prices. The favourable trend in grain prices which occurred during the 1972/1973 *commodity boom* made it clear that profitability in cattle production was jeopardized by the new situation of world grain markets. The price relation beef/feeding grains drastically changed: between 1971 and 1974 it dropped by nearly 30 per cent (45).

Price trends showed the lack of rationality involved in the resource allocation for meat production, since, as noted by Herrera et al (1976) :

« Because of the strong preference for animal products in many developed countries and some underdeveloped countries, animals are fed with cereals that could be used for human consumption. From a global point of view, this procedure is irrational, since the efficiency of conversion of forage by animals into animal protein is very low (15 per cent on average). To produce protein in this way is a luxury that can hardly be justified given the current world food situation » (46).

Given the conditions of the markets since the beginning of the 1970s, the transfer of animal husbandry to the vast zones of natural grazing land in the Third World, was seen not only as a global necessity but also as a requirement for the advanced countries who needed to reduce the cost of maintaining their labour force (meat being a wage-good of primary importance in their economies).

This transfer would considerably increase total food production yields and would eventually present a profitable channel of expansion for international capital. The restructuring of meat production on a world level is seen as a possibility of increasing profits at a time when the international economy is suffering an acute crisis.

In the early 1970s transnational capital seeking investment opportunities took a new look at agricultural activities « agribusiness » appeared to be a real alternative for expansion.

ii) *Alternative Roles of the Sahel Region in the Future International Economic Order*

What function can be attributed to the Sahel in a future scenario in which the efficiency of agricultural production will be a more decisive criterion of resource allocation than at any other stage in the history of the world economic system, and in which it seems probable that in the determination of their strategies the world powers will give high priority to the allocation of food production?

Paradoxically enough for the supporters of the thesis of « natural disaster » as the main cause of famine and poverty in the Sahel, the region has the *real* alternative of eventually being converted into a centre of large-scale meat production.

The meat production potential of this geographical region has been stressed in a large number of studies. Furthermore, the Comité d'Information Sahel (1974), listing the investments already made by large corporations with the view to developing animal husbandry in the region, makes the point that:

« The big agro-industrial firms are not wasting their time in the Sahel: in the last few years they have undertaken to develop intensive stock-breeding in the very territories where the livestock has been decimated by the drought and the population forced to take refuge in shanty towns and other concentration camps » (47).

One necessary pre-condition for the expansion of meat production under the control of large corporations in the region would appear to be «large-scale evacuation» of the local population, reproducing a typical feature of the expansion of livestock production in other parts of the world (e.g. Argentina, the United States, or even Ireland). Through this sort of «transformation» as Meunier (1975) points out:

« ... it is hoped to be able to provide, through setting up fattening ranches on a large scale, a real chain of industrial production of meat. But no aid is planned for a genuine reconstruction of the livestock formerly owned by the traditional herdsmen » (48).

The development of cattle production under the control of foreign capital is likely to accentuate dependency and, bearing in mind the dominance of foreign capital, there can be no doubt as to the direction in which the transfer of surplus produced in the Sahel will be channeled. It is in this context that our analysis of the historical background of the region appears particularly relevant.

A new international division of labour in food production, involving a reallocation of cattle production, will mean the conversion of the Sahel economies to the role of meat exporters and in the process reproducing a pattern of accumulation on the same pattern as that observed during the colonial period. Throughout that era, the main purpose of the European presence in the region was the extraction of surplus and the organization of production aimed at maximizing that surplus. The long-term effects of such a policy are clear: deterioration of the natural environment and impoverishment of the rural population.

The fact that the region will be converted into a large-scale producer of food at some future date does not in itself mean that the local population will effectively participate in the consumption of this production, since distribution patterns within the capitalist system are not determined by the nature of the commodities produced. Nor does this option imply an automatic improvement in the standard of living of the rural population; on the contrary, past experience has shown that there is every likelihood of stronger dependence and that its effects will become worse. The reason for this is that the aim of locating meat production in these countries is to reduce costs and take advantage of the possibility of exploiting cheap labour and idle natural resources.

Nevertheless, such an expansion of transnational capital is not the only possible scenario for the future evolution of the region. The option for a self-reliant development strategy would seem to be viable, bearing in mind the historical experience of the pre-colonial period. It is therefore of interest to establish a parallel between those societies and contemporary reality in the Sahel countries. The first noticeable contrast concerns the degree of regional integration, whereas the early communities were linked with each other by strong political and economic ties, the present States are failing to integrate even their national economies.

The «outward-oriented» development strategy followed by present governments has led to yet another contrast, with regard to the structure of production. In the early period, the decisive factor in the alloca-

tion of resources in agriculture was the provision of sufficient food for the local population.

The main characteristics of a self-reliant strategy can be described as an effective «delinking» from the present international economic order based on a broad alliance within the Third World aiming, on a «collective» basis, to achieve a more equitable international economic framework *and* the implementation of a domestic economic policy which would ensure the satisfaction of the basic needs of the population.

Obviously, for local social forces to impose a strategy based on such principles is by no means an easy task. Apart from any retaliatory measures which might be expected from the advanced countries, the recurrence of the drought phenomenon is a major obstacle to the implementation of a self-reliant strategy since, in the short-term, the devastating effects of climatic alterations leave the highly vulnerable societies of the region without the possibility of allocating resources with a set of criteria based on their interests in building a more equitable system.

The contradictions between short-term objectives (overcoming the crisis precipitated by drought) and long-term goals (achieving a less vulnerable economic and social system) limit the possibility of defining a development strategy aimed at removing the basic constraints caused by the «double-squeezing» dynamics.

It is the urgent need to solve the acute problems, aggravated by the drought, which makes it appear unavoidable to resort to foreign aid and to undertake measures suggested by the donor countries without taking into account that this recurrent practice impedes the *real* solution of the dilemma.

iii) *Alternative Programmes Proposed for the Future Development of the Region*

Having described the two «polar» scenarios for the future of the region (increased dependence or a self-reliant strategy), let us concentrate on actual programmes put forward to overcome backwardness in the Sahel countries. The review of these programmes is made with the sole purpose of establishing which of the two alternatives the authors emphasize, rather than evaluating them from the point of view of feasibility or accuracy of approach.

It is practically impossible to survey the whole spectrum of «recovery plans», since every international organization and government agency of the advanced countries – almost without exception – has proposed its own alternative. Hence, our analysis will be restricted to those proposals which have attracted most interest, either because of the importance of the organization that presented the study or by the impact they are already having on the development of the region.

These programmes generally fail to give a clear picture of the actual steps that will have to be taken in order to implement their recommendations. In this respect, the remark made by Giri (1976) is relevant:

« It is surprising to note the multiplicity of measures of all kinds which are proposed in the various studies considered, and also the lack of any order of hierarchy for these measures; sometimes the experts' conclusions give the impression that all things need to be done, and straight away. The orders of priority do not always clearly emerge... » (49).

The lack of clear priorities has a major consequence in the kind of message these programmes put forward: bearing in mind the urgency of the problems, one is confronted with approaches that, in view of the magnitude of the task to be undertaken, tend to offer solutions whose implementation would depend heavily on the «magnanimity» of advanced countries. The USAID (1976) proposal clearly stresses the key role to be played by foreign aid:

« Concessional assistance to the area will involve not only a high proportion of grant assistance and local currency financing, but in the initial years of a Sahel development program, it will also be necessary that a large part of the recurring costs of a newly broadened program be financed by external sources until such time as production increases permit the Sahel governments to provide this financing themselves » (50)

According to this proposal, until the end of the present century, about US Dollars 17 billion have to flow to the region on concessional conditions in order to put it in practice. This figure represents at least one fifth of the wealth likely to be generated in the region during that period.

No specific consideration is given to the *control* of the allocation of this large amount of capital resources. Thus one has to assume that the *usual* conditions on the use of aid by recipient countries will apply. In these circumstances, achieving a «modernized» agriculture means the acceptance of a well-defined model of rural development based on an intensive use of techniques suggested by donors.

This «modernized» agricultural sector is expected to insert itself smoothly within the framework of the international division of labour as envisaged by the advanced countries. To this end the detailed MIT (1974) document notes that:

« Since it is inevitable that economic development will give rise to a rapid growth of import demand this underlines the need for export development. In turn export growth will require an agricultural development of livestock for the world market » (51).

The MIT programme acknowledges that within its framework:

« ... the number of people (and families) who can be directly employed in agriculture and have a reasonable income in this example of an agricultural strategy is less than half of the total

at present and will decrease as higher activity levels are introduced into the agricultural production system. Labour intensive production systems may absorb some of the imbalance. Welfare camps can be established but ultimately some meaningful employment will be required for millions of people » (52).

Hence a clear pattern emerges; the solution involves an accentuation of the trends triggered off by the «double-squeezing» dynamics: migration towards the towns and marginalization of the rural population even in a context that supposedly ensures output growth.

The SCET International (1976) establishes that there is no constraint in the equation production/consumption for the Sahel countries, if one takes into account the potentialities of the region (53), but that problems do exist in implementing a programme capable of mobilizing the necessary resources to develop agriculture. Its recommendations, however are left at a general level and are related more to what «ought» to be done rather than «how» to go about the actual process of implementing the proposals which, in the final analysis will have, once again, to rely on foreign aid (54).

The FAO (1973) aim, expressed during the peak of the crisis, that:

« ... It is important that the longer term assistance programmes for the Sahelian zone should not simply serve to shore up the traditional economic systems and maintain the status quo, but should help to bring about a rational change-over to appropriate new systems. There must be special efforts to associate the northern Sahelian peoples more closely with the mainstream of national life and to open up new opportunities and new ways of life for them » (55).

appears, «translated» into ordinary language to support the view that economic variables and not human beings are the key factors in decision-making: an economic rhetoric dominates the programmes offering solutions, in which the *adaptive* factor is the local population which has to accommodate itself to a dynamics imposed by «economic laws» dictated by capitalist rationality. Very few «new» ideas are found in the proposals, which approach the problem with a *developmentalist* mentality treating the Sahelian social formations as units which have to undergo «modernization». Very little attention, if any, is paid to local forms of organization, and hardly any effort is made to try to extract lessons from them in order to develop creative alternatives based on the experience of the people.

But even when the FAO stresses the need to open up new opportunities and new ways of life for the local population, its list of priorities and suggested programmes appear contradictory because, while including projects directly related to the improvement of rural commodities (e.g. development of agricultural «artisanat» at village level, establishment or strengthening of pastoral services and rural development services) it also puts forward proposals based on the «modernization» approach (e.g. investigation into the scope for feed-lots and ranches) (56). In this way,

it paves the way for a series of plans stressing the need for introducing sophisticated technology.

The various action programmes (e.g. MIT, USAID, SCET) even when they did not result in articulated plans, did nevertheless establish the framework in which possible alternatives for the development of the region were and are discussed. They can be said to have conditioned character of the debate about this issue; in this sense, they fulfilled an extremely important ideological role, they defined the criteria according to which the problem of the drought and the future of the region are evaluated. Any alternative framework of analysis, leading to a different strategy, has to face comparison with these apparently complete studies.

As stressed by Giri (1976), the problem has a *political* facet of primary importance which must be borne in mind when analysing it. This political aspect of the issue appears more clearly in the assessment of what *actually* is occurring in the economic process of the Sahel.

At present, a policy-making structure is consolidating in the region, consisting on the one hand, of CILSS (Permanent Inter-State Committee for Action Against the Drought in the Sahel) made up of the eight Sahelian countries (57) and, on the other, the Club des Amis du Sahel, composed of donor (advanced) countries.

Long-term food self-sufficiency is the declared objective of the Sahelian governments and the Club du Sahel members have agreed that any development strategy for the region must ensure the fulfilment of that target. However, donor countries stress the point that «food self-sufficiency cannot be seen as the *unique* objective of the development strategy (58).

And they emphasize:

« Exporting, particularly agricultural products, either raw or upgraded by an industrial transformation, in order to be able to import equipment goods and production factors is an absolute imperative for the Sahel » (59).

A summary of on-going projects in the region (Table I) gives an idea of where the main efforts are being made. The set of programmes seems to concentrate on structural transformations, the building up of new production systems and the marketing of food products by establishing new forms of organization.

TABLE I

MAJOR PROJECTS IN THE SAHELIAN REGION

- CHAD**
- Strengthening Government's marketing organization and building up adequate grain service. US Dollars 5 million (FAO technical assistance, Dutch financing)
 - Various rural development, agricultural and water resources development. US Dollars 10 million (French funding)
 - Lake Chad Basin development (supported by UNDP and other donors)
 - UNDP country program devoting 40 per cent of programmed resources to activities related to the minimization of the effects of future droughts.
- MALI**
- UNDP country program where 61 per cent are devoted to activities that will contribute directly to the long-term solution of problems related to the drought situation.
 - Multi-donor program for the development of the River Niger basin (with other Sahelian countries). (This project is facing delays in the implementation even when financing seems available - notably after the acceptance of OPEC Special Fund to provide US Dollars 5 million)
 - Improving water quality for nomad provision, as well as the sedentary population. (UNICEF support with Danish financing)
 - Selingue Dam construction and other rural and industrial projects. US Dollars 7.3 million (French financing)
 - Sikasso water supply project for improving town's water supply. (Completed with British funding) US Dollars 1.8 million
 - Grain storage project. US Dollars 0.2 million (British funding)
 - Food security program for the improvement of transport and storage facilities (German funding) (Part of a wider Sahelian project)
 - Construction and improvement of rural roads (UNSO with Dutch funding) US Dollars 14.7 million
 - Senegal river basin development (Multi-donor) more than US Dollars 240 million have been provided so far for studies and investment.

TABLE I (cont.)

- MAURITANIA** — Intensification of drilling and well-construction in the South East area. US Dollars 1.1 million
- Preparation of pastoral legislation which will govern the use of grazing areas and water points (Netherlands and FAO Fund-in-Trust program)
 - Protection of grazing land from bush fire (still at its preliminary stages)
 - Ensuring the availability of animal feeds in view of the threat of the drought against livestock population. (Preliminary stages; government seeking funding between US Dollars 4.5 million to 12.5 million)
 - Launching of a program to control cattle diseases; total cost estimated at US Dollars 0.6 million
 - UNDP country program devoting 43 per cent of resources to drought related problems
 - Fisheries development. US Dollars 2.2 million (Japanese funding)
 - Development of underground water resources, palm tree protection and improvement of health US Dollars 2.0 million (French funding)
 - Development of irrigation systems (various donors)
 - Participation in Multi-donor program of the Senegal River Basin development.
- NIGER**
- Hydrological research (Danish funding US Dollars 0.4 million for the period 1973–1977. A loan of US Dollars was granted in 1971, of which US Dollars 0.9 million was used for water supply)
 - Hydrology and hydrogeology, groundnut cultivation program, rural health, US Dollars 7.0 million (French funding)
 - Technical and financial co-operation. US Dollars 26 million (German assistance)
 - Expansion of transport capacity. US Dollars 1.8 million (Japanese funding)
 - Agricultural and health projects US Dollars 3.5 million (Dutch funding)
 - Participation in the development of the River Niger Basin
 - UNDP country program devoting 40 per cent to drought related problems.

TABLE I (cont.)

SENEGAL	<ul style="list-style-type: none"> – Drought related programmes. US Dollars 4.8 million (French assistance) – Technical and financial cooperation. US Dollars 24.6 million (German assistance) – Fishery development (outboard engines and pilot operational vessels). US Dollars 1.3 million (Japanese funding) – Small-scale irrigation activities. US Dollars 1.7 million (Dutch funding) – Development of water resources of the Senegal and Gambia rivers – UNDP country programme devoting 27 per cent of resources to activities promoting long-term solutions to drought-related problems
UPPER VOLTA	<ul style="list-style-type: none"> – Improvement of water supply (1973). US Dollars 3.4 million (Danish funding) – Project for use of domestic animals as a tractive force in farming. US Dollars 1.2 million (Danish funding) – Volta River basin development, dam construction at Bagre and other social and rural projects. US Dollars 3.8 million (French assistance) – Technical and financial co-operation. US Dollars 34.5 million (German assistance) – UNDP country programme devoting 33 per cent of resources to drought-related projects. – Multi-donor programme for the control of onchocerciasis.

Note : The figures (unless otherwise stated) refer to 1977.
The list does not represent a *complete* survey of projects.

Source : UNDP (1978).

Hence, it is mainly the *economic* structure which is affected by the programmes without a clear perception of how the people will adapt to those structures. Even when CILSS states that:

« *The human factor — is essential to the revival of the Sahel, therefore it is necessary,*

- *to carry out research on the pastoral society (traditional use of the soil, motivations, behavioural reaction to innovations, etc)*
- *to have this society participate in initiating necessary, indispensable change » (60).*

one gets the impression, when examining the actual steps that are being taken to change the situation in the Sahel, that the participation of the local people is not seen as a pre-requisite for the implementation of the projects. There emerges a sort of managerial approach in the decision-making structure, lacking a definite concern about the need for integrating the direct knowledge of the rural population in the planning process.

There is no doubt that the Sahelian region will in the future enlarge its food production. What is uncertain is the *actual* participation of the majority of the population in the consumption of the increased output, and this uncertainty becomes even more relevant in view of the persistence of the «double-squeezing» dynamics behind the programmes so far undertaken.

NOTES

1. See Cuoq (1972)
2. Vilar (1976)
3. The references of Arab travellers — see Cuoq (1972) stress the deep-rooted nature and the continuity of the human settlements.
4. This does not mean that there were no confrontations for the occupation of the best-quality land; e.g. Dieng (1975) notes:

« These rivers (the Niger and the Senegal) which were very rich in fish spared the riparian people from famine due to floods and locusts. They were used as water ways. Their valleys are propitious for stockraising, agriculture, fishing, hunting and crafts. They have always attached herdsmen and nomads who very often fought against the crop farmers. The Fulanis, the Moors and the Tuaregs have attempted several times to control the areas which are favourable to stockraising ». (Page 38).
5. Page 812–813. (Translated by Jean Hughes)
6. See Nicholson (1976) where she discusses these approaches.
7. For example Okafor (1953) notes that towards the last years of this period progress was being made in the spread of an «authentic» written local language.

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8. See Dieng (1975) for a critique of the «Euro-centrism» approach to African history.
9. See Rodney (1972).
10. Pages 10 and 13.
11. Pages 8 and 9 (Translated by Jean Hughes).
12. See Barry (1972).
13. This process did not have more serious consequences because of the particular type of access to the land enjoyed by the farmers in the region, which limited proletarianization and created conditions necessary for the transformation of the model of exploitation of the rural labour force which was to take place in the last years of the period. See Amin (1971b).
14. See Amin (1973), pages 32 and 33.
15. Page 23. (Translated by Jean Hughes).
16. Source FAO.
17. Chapter II, Page 42.
18. See Young (1971).
19. The coastal hinterland relation which was unevenly defined during the colonial period in some of the countries (e.g. in West Africa) is by this process exacerbated.
20. Neo-malthusian theory regards the prevailing system of production as a parameter without considering whether a reversal of the organization would not upset the balance between foodstuffs and population.
21. This concept is developed by Lipton (1977). Even when used within a different framework from the one followed in this paper, its argument is presented showing the imbalances of economic policies in underdeveloped countries.
22. The argument developed by Emmanuel, Amin and many others are assumed to be known by the reader, so it is only presented here as a «plain» statement.
23. Page 52 (chapter II).
24. The figures presented for the Sahel countries include Chad, Mali, Mauritania, Niger, Senegal and Upper Volta.
25. The figures in this section are taken from FAO and UNCTAD.
26. The «open» character of the economies becomes more apparent if one adds the fact that trade accounts have been systematically showing a deficit.
27. For 1973, 88.5 per cent of Chad's exports were cotton and meat products ; 73.2 per cent of Mali's exports were cotton and live animals ; 97.9 per cent of Mauritanian exports were iron ore and fish products ; groundnuts products constituted 41.6 per cent of the exports of Senegal. Niger and Upper Volta also show a high proportion of agricultural exports.
28. These figures rather than showing a constraint of the natural resources point towards the possibility of increasing agricultural activities.
29. Thus food production is the activity most exposed to climatic alterations.
30. See Hamid and Gakou (1977).
31. Wage-structures in the government sector tend to mirror differentials established during the colonial period.
32. Page 15. (Translated by Jean Hughes).

33. Amin (1971a).
34. For an assessment of the impact of the drought on nutrition see Escudero (1977).
35. Pages 13, 28 and 29.
36. See the interviews with local people reproduced in Laya (1975).
37. Page 33.
38. FAO.
39. FAO.
40. FAO.
41. UNDP (1978).
42. Page 104.
43. Garcia (1977) defines the *vulnerability* of an ecosystem as the combination of two internal forces: inertia (resistance of the system to deviations from conditions of equilibrium) and elasticity (maximum possible fluctuations in a given structure without the ecosystem losing its capacity to recover the same conditions of equilibrium). Consequently the vulnerability of a system is very great when this system has a low inertia and elasticity. The Sahel fulfil the conditions for being considered a system with a very great vulnerability.
44. Since other parts of the Drought and Man Project deal extensively with the issues of this section, the subject here is presented only taking into consideration its most relevant aspects for the purpose of this research.
45. FAO (1977).
46. Page 68.
47. Page 165. (Translated by Jean Hughes).
48. Page 129. See also Bonte (1975).
49. Page 29.
50. Page 27.
51. Page 52, Annex I.
52. Page 237, Volume II.
53. Pages 13–17.
54. Pages 33–36.
55. Page 2.
56. Pages 10 and 11.
57. The six already mentioned plus Cape Verde and The Gambia.
58. See Club des Amis du Sahel (1976) pages 2 and 3.
59. Club des Amis du Sahel (1976) page 2.
60. Page 8, Richard et al (1974).

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RESUME

L'auteur se propose d'identifier les causes des problèmes sociaux créés par les périodes de sécheresse qui affectent la région du Sahel, d'en analyser les effets et de passer en revue les différentes solutions proposées par des institutions étatiques et des organisations internationales.

Cette étude est l'une des plus fouillées qui aient jamais été publiées en langue anglaise. L'auteur a procédé à un tour d'horizon historique des sociétés Ouest Africaines. Il qualifie l'ère précoloniale qu'il établit du début du VII^{ème} siècle avec les premiers récits des voyageurs Arabes jusqu'au XVI^{ème} siècle, de période de «splendeur» non pas dans un sens comparatif avec des normes occidentales mais dans le sens des sociétés organisées travaillant la terre, produisant suffisamment pour sa consommation et entretenant des relations culturelles et commerciales avec d'autres groupements avec le commerce lointain florissant, l'or étant échangé contre des produits en provenance de l'Europe et du monde arabe. C'étaient des sociétés qui vivaient en harmonie avec leur environnement ce qui fait que les aléas climatiques n'ont jamais eu les résultats désastreux que connaissent les sociétés contemporaines. D'emblée l'auteur rejette la thèse très répandue des incidences climatiques sur le développement de ces sociétés. Il prévoit les premières causes de déclin avec l'arrivée des Européens sur les Côtes d'Afrique de l'Ouest, les invasions par le Nord et la décadence du monde arabe des facteurs qui ont précipité l'éclatement des grands empires.

Dans un deuxième volet l'auteur analyse le «blocage colonial» causé par l'esclavage, le dépeuplement de l'Afrique, la perte de l'autonomie, l'introduction des cultures de rente aux dépens des cultures vivrières etc. Pendant quatre siècles dit-il le développement bloqué allait être l'apanage de cette partie de l'Afrique dont le rôle essentiel était de fournir de la main d'œuvre à bon marché pour les activités de production des puissances coloniales dans les autres régions du monde.

La période de la «mise en valeur coloniale» devait amener la migration forcée, l'occupation brutale des terres, l'intensification des cultures de rente telles l'arachide et le coton qui étaient devenues les principales sources d'expansion agricoles. L'urbanisation incontrôlée devait créer un pôle d'attraction et un facteur de distorsion.

La situation ne s'est pas améliorée avec l'indépendance. Pour cette deuxième partie de l'étude l'auteur parle de la spécialisation déséquilibrée de la production qui a aggravé les problèmes économiques et sociaux. Il rejette la théorie des avantages comparatifs à l'échelle mondiale, constatant que le rôle attribué au Tiers-Monde était celui d'un assujétissement aux impératifs des pays du Nord. Il constate une stagnation dans l'agriculture, conséquence directe de la division internationale du travail et d'une structure prédéterminée des rapports de production plutôt que des effets climatiques.

La détérioration des termes de l'échange a eu pour effet de déstimer l'accroissement de la productivité freinant ainsi le taux d'accumulation.

Dans une dernière partie l'auteur passe en revue les propositions des différentes organisations nationales et internationales et les programmes d'action envisagés, notamment ceux de la FAO, de l'USAID, du CILSS etc.