

**AGRARIAN TRANSFORMATION IN BURKINA FASO
(1960-2003)**

*Dissertation Submitted to Jawaharlal Nehru University
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DHARMJEET KUMAR



**CENTRE FOR WEST ASIAN & AFRICAN STUDIES
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067
INDIA**

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CENTRE FOR WEST ASIAN AND AFRICAN STUDIES
SCHOOL OF INTERNATIONAL STUDIES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110 067, INDIA

Phone Off. : 26704372
Telegram : JAYENU
Fax : 91-11-26165886
91-11-26162292

Dated: 28 July, 2004

CERTIFICATE

Certified that dissertation entitled "AGRARIAN TRANSFORMATION IN BURKINA FASO (1960-2003)" Submitted by me in partial fulfillment of the requirement for the award of the degree of MASTER OF PHILOSOPHY has not been previously submitted for any other degree of this or any other university and is my own work.

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Signature of the Student

We recommend that this dissertation may be placed before the examiners for evaluation.

A.K. Pasha

Dr. A.K. PASHA
(Chairperson)

Chairman
Centre for West Asian and African Studies
SIS, New Delhi-110067

S.N. Malakar

Dr. S. N. MALAKAR
(Supervisor)



Centre for West Asian & African Studies
School of International Studies
Jawaharlal Nehru University
New Delhi-110 067 (India)

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Dharamjeet Kumar

PREFACE

Burkina Faso is situated in the western part of Africa and is one of the least developed countries of the world. Agriculture is the prime occupation of its people and it provides livelihood to the ninety percent of the population. Agrarian earnings primarily drive the country's economy and it contributes more than forty percent to the GDP. Under such conditions, any talk of agrarian transformation in Burkina Faso automatically assumes great significance.

Since colonial times, agrarian structure of the country has been subjected to different kinds of changes. However, it is a matter of academic debate whether this has benefitted the people at large or not. Though the research work has taken care to highlight the central arguments around which these debates revolve, it has mainly focussed upon the involvement of the state in transforming the agrarian structure in the post-colonial period.

Three hypotheses have been taken into consideration while conducting the research:

- The colonial ownership of the agricultural production system basically characterizes the agrarian transformation in Burkina Faso during the colonial period.
- The social forces dominating the land and its production systems determine the post-colonial agrarian transformation.
- The emerging trends of agrarian transformation in Burkina Faso reflect the unresolved questions of land reforms and distributive production system, which can prove to be problematic in future.

The research work has been divided into five chapters. Chapter I contains the introduction, which introduces the proposed research in the context of transformation in the African Agriculture. Chapter II focusses upon the changes that have been brought about in the agrarian structure of the country during the colonial period. It also analyses its implications for the later periods. Chapter III concentrates on the agrarian transformation that the state attempted to bring upon in the aftermath of independence. However, it has been taken into care that its successes as well as its failures in this regard are well accounted for. Chapter IV deals with the changing agrarian scenario of the country for the past few years in the over all global context. Chapter V has summarily throws the light upon the whole research that has been undertaken in the previous chapters.

Chapter – 1

Introduction

AGRARIAN TRANSFORMATION IN AFRICA IN GENERAL AND BURKINA FASO IN PARTICULAR

This chapter deals with the theoretical perspective of agrarian transformation in African agriculture. We will also see the various factors responsible for it and the impact of it on the position of African agriculture. Later on, it moves to the case of Burkina Faso where the proposed research topic is introduced in the contextual background of African agrarian transformation.

Though it is widely known that Africa is the only continent whose overall agricultural growth rate has been less than its population growth rate, the explanations for it have been different and sometimes contradictory. Does its colonial past share some parts of the responsibility? Though there is a great variety in the modes of agricultural production and organization throughout the continent but there is also a commonality beyond that which can be seen in the form of communal or tribute-paying forms of occupation of land.¹

A higher level of food self-sufficiency has often been obtained due to relatively high labour productivity but it has also been accompanied with very low yields per hectare. There was a need to shift to intensive mode of agricultural production by employing large number of annual labour, which, no doubt, could have resulted into lower labour productivity but it would also have ensured high yields per hectare. The shift to intensive agriculture was the sine qua none for any development worth the name and it constituted the challenge that the African people had to accept.

But the challenge is yet to be accepted. Colonizers not only failed to accept it, rather they never had any such intentions. It was easier for them to secure an immediate profit at no cost by forcing the peasants of Africa to perform unpaid- or very poorly

¹ P. Gutkind, "The Political Economy of African Peasantry and Modes of Production", in P. Gutkind and I. Wallerstein (eds), *The Political Economy of Contemporary Africa* (Sage, Beverly Hills, 1976), p.91.

paid- surplus labour through forms of indirect control. African peasants were forced to produce the cash crops only to benefit the colonial capital dominating the global financial system.

It made the Africans' lives considerably miserable because they had to work without machines or modern inputs and they were also doing tremendous harm to their soil. Colonizers thus continued with the old tradition of the slave trade; exploiting the Africans by force and violence that guaranteed neither the long-term reproduction of the labour force, nor the reproduction of the natural conditions of production.

Decolonization of African countries was also unable to alter this mode of their economic integration into the world capitalist system.² Independence came in response to the demands of the new stages of the globalization of capital (the rebuilding of Europe and the hegemony of the United States) and not in response to the African peasant problem. Moreover, the prosperity of the 1960s in the West raised a new euphoria for the Africans to orient their economic system towards export markets. The World Bank and IMF are also no less responsible for the poor fate of the African peasants today. They continued their pro-west policy with much enthusiasm that led to catastrophes in the later years.

The crisis of the 1970s and 1980s resulted from the combined effects of the over-exploitation of the land and of men and women to the extent that was beyond sustainability. The pro-agriculture talk of the West is contrasted with an implicit preference for industrialization, which is said to be the source of all the problems. The reason for seeking greater output per farmer is to make possible a higher degree of urbanization. But urbanization without industrialization can be disastrous. Conversely,

² Mohamed Lamine Gakou. *The Crisis in African Agriculture* (Zee Books Ltd., London, 1987), p.X.

industry is necessary to make greater agricultural output possible: it has to supply it with machinery and offer it a growing market in return. That is what the option for a selfcentred national and popular strategy means. If this option is rejected in favour of a systematic preference for integration into globalization, any talk of giving priority to agriculture becomes hollow.

In any case, these rhetorics have never prevented Western aid agencies from giving preferences to support for agri-businesses in the name of efficiency. The fact that these policies continue to be advocated in the West testifies basically to the lack of seriousness with which Africa is treated. In fact, Africa, in the imperialist vision of the world, is above all for the West a source of mineral resources. Neither its industrialization nor its agricultural development is thus taken seriously.

Overall, during the five decades from 1950, total agricultural production as well as total food production rose substantially in all regions of the world.³ These remarkable increase, however, did not have the same effect on per capita food supplies in the developed regions and in the underdeveloped ones. Whereas in the former, per capita food supplies were satisfactory given low population growth rates, in the latter, population increases were quite often close to production increases making rates of growth of per capita food production virtually insignificant.

Compared to the other regions of the world, both developed and underdeveloped, Africa has considerable potential arable land resources. With 10% of the world population, Africa has 25% of world potential arable land, which appears to have economic potential for arable agriculture under existing level of technology and only 27.8% of arable land are under cultivation. The rudimentary techniques of

³Ibid., p. 3.

agricultural production along with the practice of shifting cultivation cause a large waste of land resources and accelerated erosion of soil. Thus, because of its low technical level, African agriculture lags considerably behind that of other underdeveloped regions.

The continent suffers from a serious water problem and rainfall is frequently irregular over much of the region. Irrigation, which could have provided solution to this problem, is unfortunately very little developed. In the continent as a whole, only two countries (Egypt and Sudan) have major irrigated areas. If we measure the level of mechanization by the quantity of energy consumed from all sources, it is estimated that Africa has availability of 0.05 hp./ ha.of arable land as against 0.19 in Asia and 0.27 in Latin America.⁴ In Western Europe, the quantity of energy per hectare is 0.93.

So it can be said that compared to other regions of the world, Africa has the availability of major natural resources for the development of agriculture. But these resources are both under-exploited and poorly exploited because of the very low level of development of the region. The result is very low yields and productivity. Moreover, this low level of yields was not compensated by a proportionate increase in cultivated areas despite the existing potential, at least for crops intended for consumption.

On the other hand, if we look at cash crops, the extension of cultivated areas in Africa was, in percentage terms, considerably higher than in the rest of the world. Consequently, the share of Africa in world production of food crops has fell whereas its share in the production of export crops has risen substantially.

⁴ K. J. Michalski, "Stage and Prospects of Agricultural Mechanization in the countries of Asia, Africa, and Latin America", in G. Hahn and L. Rathmann, Akademie-Verlag (eds), *Recent Stage and Prospects of Agricultural Mechanization in Developing Countries* (Berlin, 1976), p. 16.

While assessing the situation of African agriculture over the years a few generalizations can be made:

- A certain disparity exists between countries and groups of countries in terms of increase in per capita food production in post-independence years.
- Self-sufficiency in the production of cereals has not been achieved by a number of countries especially in the northern and western part of Sub-Saharan Africa. Consequently, food imports have risen over the years for these countries.
- For most countries that have serious external payment difficulties, this situation poses serious problems for food security and for economic development in general.
- International food aid destined for the region does not help the cause much.

So except for a mineral or oil producing countries, the developmental policies in rest of Africa has consisted of extracting resources from agriculture in order to finance the rest of the economy. This has meant that in the agriculture sector, efforts were for a long time concentrated solely on products for which there is a demand in the world market.

From the colonial period down to the present day, this policy has led to a continual decline in the capacity to produce local foodstuffs in order to satisfy food requirements. The consequences of such policies reached their critical threshold in the early 1970s. The great famines that struck much of the region at that time, simply revealed explosively a crisis situation that had in fact existed since the first contacts

between the capitalist systems and African traditional systems, essentially based on subsistence.⁵

The agrarian scenario of Burkina Faso is not at all different from the overall conditions of the African agriculture except the local variations, which should always be considered with sincerity. The two most important features of Burkina Faso's agriculture are- its vital role in the country's economy and the many unfavourable constraints on it.

As the predominant activity, agriculture accounted for 40% of GDP; most importantly, it employs more than 80% of the working population and earns more than 90% of the foreign currency.⁶ Development potential is severely limited by the climatic constraints. The climate is characteristic of the Sahelian regions with inadequate and irregular rainfall combined with high temperatures and desert winds. Furthermore the soil is poor and erosion is extensive. Irrigation can not be developed because the country has few rivers and is mountainous.

In 1960, the agriculture of Burkina Faso had all the characteristics of traditional underdeveloped agriculture, with very low productivity, stagnation, lack of equipment (an insignificant amount of farm machinery), no fertilizers and very low agricultural exports. Very modest progress has been made since 1960. The primary sector production increased only by 14 percent between 1960 and 1990 although the increase was greater for the crops alone. As the working population rose more than total production, productivity fell. This course of events explains the lower degree of self-

⁵ M. F. Lofchie, "Political and Economic Origins of African Hunger", *Journal of Modern African Studies*, vol. 13, 1975, p.346.

⁶ J. Lecaillon and C. Morrisson, *Economic Policies and Agricultural Performance in Low Income Countries*, (OECD, Paris, 1987), p. 84.

sufficiency with the proportion of consumption covered by domestic production falling over the years.

The growth of exports looks satisfactory with an increase of 68 percent in volume from 1964-66 to 1980-82.⁷ However, as agricultural imports rose faster, the net gain in currency was down to zero in 1980-82 against 1 billion CFA annually from 1964 to 1966. As a result the agricultural trade balance deteriorated and export/import cover fell. This was a poor performance for an agriculture-dominated economy and represents a failure. The agriculture of Burkina Faso is no longer capable of earning a foreign currency surplus because production has not increased with increase in population and growing inequalities of grain have to be imported.

This relative stagnation of Burkina Faso agriculture is partly due to yield, which remained constant or only rose slightly (case of millet-sorghum) for all products except cotton, which enjoyed a spectacular increase. This stagnation can also be attributed to the very limited relations between the agricultural and non-agricultural sectors. With the exception of cotton, purchases of agricultural inputs are very insignificant.

In order to get the true picture of the evolution of agriculture of Burkina Faso, the cotton zone must be looked at separately from the rest of the country. In that zone, agricultural income per worker were more than double the national average in 1979-81 and have increased sharply since independence. By contrast, average income stagnated or fell in other regions, particularly in the centre where more than 60 percent of the agricultural population lives with incomes 20 percent below the national average.⁸

⁷Ibid., p. 84.

⁸ Mike Spears, "Agrarian Change and the Revolution in Burkina Faso", *African Affairs*, vol. 90, 1991, p.96.

Despite the overall mediocre trend, farmers' real money incomes increased substantially by 77 percent from 1960-62 to 1980-82. The two factors explaining the increase are the development of cotton as a wholly marketed crop, and the increased marketing of grain linked with urbanization. These money incomes are, however, concentrated in the cotton zone which is also the region which sells most grain. Moreover, money income per farmer rose much less because the number of farmers rose by about 40 percent over the period.

Unlike other countries of the region, Burkina Faso underwent no radical changes in economic policy between 1960 and 1990. Nevertheless, there were significant changes of direction in policy regarding state intervention, investment and price controls etc., after few decades of independence. Burkina Faso did not leave the franc area and joined the *Union Monétaire de l'Ouest Africain* (UMOA) when it was formed in 1962. As a result, it was able to maintain and develop trade with neighbouring member countries of the franc area without obstruction.⁹

In principle, growth of money supply is controlled by the *Banque Centrale des Etats de l'Afrique de l'Ouest* (BCEAO) which sets ceiling for the loans. In practice, these ceiling have not acted as a constraint because the sums rediscounted have always been lower. This is the consequence of a very careful monetary policy maintained throughout the period. The supply of money, in both current and constant francs increased little and the liquidity ratio remained very low.

Until 1972 there was little state intervention. A plan was, in fact, formulated for 1963-67 followed by a second for 1967-70. The first was never implemented and the

⁹ J. Lecaillon and C. Morisson, *Economic Policies and Agricultural Performance in Low Income Countries*, (OECD, Paris, 1987), p.85.

second was only a working programme so that it was not until 1972-76 that an effective development program was set in motion. Agriculture development policy was regionalized and decentralized through Regional Development Organizations (ORDs) set up progressively from 1966 onwards. Each ORD received foreign aid and technical assistance.¹⁰

Until 1972 the state did very little regarding marketing of crops. While government control was the rule for cotton, all cash and food crops (other than sesame and groundnuts) were marketed through the private sector. Agriculture enjoyed a degree of freedom but received little aid. Public investment was low; price policy was unfavourable and the trend of real prices was downwards.

The decade of 70s was marked by monetary expansion, a return to budget deficits and interventionism. As a result of rising agricultural production, the money supply increased rapidly and doubled in constant francs from 1972 to 1976. Subsequently, this increase continued in nominal value because of the budget deficit but was offset by a fairly rapid increase in prices. From 1975 to 1982, budget deficits piled up, leading to a liquidity crisis which compelled the state to seek foreign loans. These deficits were partly due to greater state intervention during the 1960s.

Two developmental plans (1972-76 and 1977-81) committed more public investment particularly in the agricultural sector. The network of ORD was extended to the whole country and the state tried to control the marketing of grain. In 1974, it decided to give the ORD a monopoly of purchases from farmers and the *Office National des Cereales* a monopoly of sales to consumers. These measures upset the

¹⁰ Mahir Saul, "Grain Market and Merchants in Burkina Faso", *The Journal of Modern African Studies*, vol. 24(1), 1986, p.142.

grain market and led to a setback. So, from 1976, the role of the offices was confined to the sale of imported cereals and the regulation of prices.

The variations of rainfall also play an important role in Burkina Faso's agriculture and it must be taken into consideration in assessing its agricultural performances. The first ten years were mediocre; despite normal rainfall for the region, production and productivity fell but the advance of the cotton led to a significant increase in real money income. Agricultural exports almost doubled in nominal value or increased by a half in real terms. A combination of unfavourable factors accounted for these results; these included poor initial conditions, a price cutting policy and low agricultural investment.

In 1960, the situation was very different and the agriculture of Burkina Faso was stagnant, very poor and unable to produce grain surpluses for export. While Burkina Faso did not have the benefit of substantial investment as from the Office du Niger before 1960, it was mainly worse natural conditions, which kept production down. From 1960 onwards, there was no change in institutions meant for the supplies of manufactured goods and agricultural inputs to rural areas or the traditional system of marketing.

On the other hand, state gave no priority to agricultural development and investment stagnated at the very low level of 3 to 4 percent of agricultural production until 1969. In these circumstances there was very little farm equipment with numbers of ploughs, carts and sprayers limited to between 6000 and 7000 units respectively in 1972. This was, however, an improvement over the 1960 stock. Furthermore, total fertilizer consumption was still very low.

During the 1960s therefore, the modernization of agriculture was marginal and agriculture of Burkina Faso was still using archaic techniques. Price policy provided no incentives for farmers to buy inputs in order to increase their production and official prices were in fact down in real terms. This emerges even more clearly when prices are corrected by the manufactured goods price index instead of the general price index.

The opposite conditions prevailed during the decade of 1970s, with a policy more favourable to agriculture but very inadequate rainfall. Performances must be judged against this handicap. Despite a marked drop in the rainfall index, the growth rate for production, productivity and incomes rose substantially. For the first time since independence, agriculture sector witnessed a growth in Burkina Faso. Progress was certainly modest and confined almost certainly to the cotton zone, but that zone undeniably produced increasingly grain surpluses and improved cotton production by about 130 percent. The effect in that region was a marked rise in the living standards of farming families who could then buy durables.

These advances were due to investment and higher real prices. From 1973 onwards the volume of investments exceeded 10 percent of agricultural production and reached an average of 14 percent. 80 percent was financed out of aid, which therefore played a decisive role. The volume of aid increased rapidly and the percentage going to rural development rose from 20 percent to 30 percent. This drive for modernization brought in much more equipments and sharply increased fertilizer consumption. A number of schemes favoured this modernization in the cotton zone, in the Banfora area for the sugarcane and in the Volta valleys.

Farmers were keen to adopt these new techniques because it increased their profits from their crops. Real prices rose by 2.8 percent annually instead of falling and

when nominal prices were corrected by the manufactured goods price index the price increase was much greater. Despite the weather difficulties, agricultural performance of Burkina Faso is linked with policies started by the successive governments. A new start was made in certain areas but it should be remembered that these successes were achieved in the areas least affected by drought and that conditions for agricultural development over most of the country continues to be very unfavourable.

There have been a wide variety of literatures which have dealt with the subject of African agriculture in detail. Though they have studied the issue from entirely different viewpoints, but all have agreed to a point that the continent faces the problem of persisting food insecurity. My study has derived a lot of inferences from these literatures. However, my study differs in the sense that it focusses upon the agrarian conditions of a particular country, and has analysed its transformation in the historical context. The comparative method has been deliberately avoided because it sometimes blurs the distinction between the peculiarities of local conditions that the countries often have. In the next chapter, when agrarian transformation in Burkina Faso during the colonial rule is discussed the above mentioned ideas have been kept in mind.

CHAPTER – 2

AGRARIAN TRANSFORMATION IN COLONIAL BURKINA FASO

This chapter deals with the issue of agrarian transformation in Burkina Faso during the colonial times. It begins with giving an overview of the socio-economic condition of Burkina Faso during the pre-colonial times and then focusses upon the process of colonization. As the chapter proceeds, the proposed issue of the chapter is dealt under various sub-heads like the land tenure system, food security, agricultural credit institutions and the agricultural research institutions during the colonial rule in Burkina Faso.

PRE-COLONIAL BURKINA FASO: AN OVERVIEW

In 1984 the leaders of Upper Volta changed the name of this former French colony to Burkina Faso, a term combining two of the country's many languages. As one of the world's poorest nations, Burkina Faso counts people among its most important resources. The remittances from migrant laborers working in the more affluent Ivory Coast sustain the households of the approximately ten million citizens in Burkina Faso, over 80 percent of whom live in rural areas.

The tradition of southward migration became firmly established during the colonial era, when France incorporated the Volta region into its West African empire precisely in order to turn the drought-prone but relatively populous Mossi plateau into a labour reserve.¹ As the French colonial administration invested little in developing Upper Volta, independence in 1960 heralded a new era of dependence on foreign donors, especially France. But steady infusions of aid failed to prevent either the onset of famines or the overthrow of six governments.

¹ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.341.

In 1983, however, flight commander Thomas Sankara came to power promising an end to both neocolonialism and rural suffering. Although this revolution was cut short by Sankara's assassination in 1987, it did initiate improvements in rural literacy, health, food security and women's rights.² The current regime of Blaise Compaoré has deregulated the economy, mended relations with the West, and pledged a commitment to democracy. Burkina Faso is still extremely poor, but enjoys a reputation for religious and ethnic tolerance, as well as for its rich performing art traditions.

The economy of Burkina Faso is based on agriculture and stock farming as the country's principle activity and it engages almost 90% of the working population. However, the agriculture is of subsistence type dominated by small family farmers who mostly use basic hand tools and make marginal use of pesticides and fertilizers.

The organization of agricultural production system can be divided into three main types based on the different socio-cultural context:

1. In the west, the Bwa-Dagari system prevails where households are grouped together and form a village concession consisting mainly of village fields and bush.
2. In the central-south and east, the Mossi system works where households occupy separate concessions scattered across the territory. Here there are small plots around the village concession, and beyond that fallow land or bushes.
3. In the north, the Fulani system operates combining the first two systems, with some households living like the Bwa-Dagari and others like the Mossi.

² Mike Spears, "Agrarian Change and the Revolution in Burkina Faso", *African Affairs*, vol. 90. 1991, p.105.

Apart from Stone Age axes found in northern Burkina Faso, archaeology provides few clues about the region's first human inhabitants. The ancestors of the Lobi and Bobo peoples were among the earliest agriculturists, settling in the savanna west of the Mouhoun (or Black Volta) river. While these lineage-based societies never developed centralized polities, migrants from the Dagomba region (in present-day Ghana) founded the Mossi dynasties on the more arid plateau to the north.³ The most powerful Mossi kingdom, Ouagadougou, was founded in the late fifteenth century. Nineteen smaller but fairly autonomous Mossi states ruled over territories to the north, west, and east, and eventually assimilated many of the neighboring peoples into Mossi society.

Both the Mossi and the southern peoples lived primarily from rainy-season agriculture, supplemented during the long dry season by hunting, gathering, and in some places fishing. Millet and sorghum were staples throughout the savanna. Wetter conditions in the far south supported the production of root crops and, later, rice. In the far north, seasonal rainfall also shaped the migration patterns of Peul (or Fulani) pastoralists.

Situated between forest and Sahelian zones, the Volta region was traversed by caravan traders who dealt in cola, gold, and slaves from the forest regions, salt from the Sahara, and luxury goods from North Africa. The traders brought weapons and horses to the court of Ouagadougou, but found the most lively markets in southern towns such as Sya (now Bobo-Dioulasso), where Mande-speaking Zara merchants had settled amongst the Bobo.⁴

³ G. P. Murdock, *Africa: Its People and Their Cultural History* (McGraw Hill, New York, 1959), p.46.

⁴ L. H. Morgan, *Ancient Society* (Henry Holt, New York, 1877), p. 81.

In the sixteenth century, the Mossi expanded northward into the Sahel, where they were rebuffed by the armies of the Songhai empire led by Sunni Ali. But neither Ali nor his successor, Askia Muhammad, was able to convince the Ouagadougou king, Mogho Naaba, to convert to Islam. Although many Mossi traders eventually did convert to Islam, the Volta region has remained less Islamized than the rest of the Sahel.

In the eighteenth and nineteenth centuries, slavery became a common practice in the Volta region. Some Mossi kingdoms captured local peoples or bought slaves from other kingdoms to work as agricultural or domestic laborers.⁵ These slaves were often allowed to engage in wage-earning activities for themselves, such as cultivating food and raising cattle. At the same time, southern peoples were subjected to slave raids from the Kong empire (northern Ivory Coast). With no armies and few weapons, peoples such as the Bobo lived in large, densely settled villages for protection.

THE PROCESS OF COLONIZATION

By the late nineteenth century, Great Britain and France were racing against each other to establish spheres of influence in the West African interior.⁶ In 1887 the French explorer Louis Binger visited Ouagadougou during his trip across West Africa. He was unimpressed by the Mossi kingdom, noting that the Mossi cultivated only what they needed in order to subsist, so that even if there were no paupers in their country, there were virtually no rich men either. Yet the Mossi region was densely populated, and Binger suggested it would make a suitable labour reserve for French ventures elsewhere in West Africa. In particular, labour was needed for irrigated cotton production in the

⁵ C. D. Forde and P. Kaberry (eds), *West African Kingdoms of the Nineteenth Century* (CUP, 1967), p.104.

⁶ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.36.

fertile but sparsely populated Niger River basin, which French engineers believed had the potential to become a "new Egypt."⁷

The Mogho Naaba Wogbo refused Binger's invitation to make his kingdom a French protectorate. The explorer did, however, manage to secure a protectorate agreement from the Ouattara leader of Kong, whose empire by then included much of the southern Volta region. Over the next several years the French conquered regions to the east, west, and north of the Mossi kingdoms, and in 1895 French troops occupied Bobo-Dioulasso overcoming resistance from the town's Zara warriors. The following year the French defeated Ouagadougou's Mossi army and burned down much of the city. Wogbo escaped, and later sought British protection.

In 1898 France and Great Britain reached an accord, granting France dominion over Upper Volta. The territory was initially designated a military zone, but in 1904 it became part of the colony Haut-Sénégal-Niger, administered from Bamako.⁸ After their earlier experience with the recalcitrant Wogbo, the French were determined to undermine the authority of the Mossi kingship. When Wogbo's successor Sighiri died in 1905, the French replaced him with a 16-year-old *naaba*, who posed little threat to the colonial regime. They also replaced lower-level Mossi chiefs, where necessary, with more compliant appointees, and imposed the *indigénat*, a legal system which effectively placed all judicial power in the hands of French administrators.

However, the French could not afford to dismantle the Mossi kingdom or other pre-existing authority structures entirely. Although French officials were posted to each of the colony's administrative districts (known as *cercles*), they needed chiefs to collect

⁷ S. Amin, *Neo-Colonialism in West Africa* (Monthly Review Press, New York, 1973), p.124.

⁸ Mike Spears, "Agrarian Change and the Revolution in Burkina Faso", *African Affairs*, vol.90, 1991, p.92.

taxes and recruit labor, and thus appointed them to these duties even in regions with no prior tradition of centralized authority. This was the case, for example, in the Bobo-Dioulasso cercle, where appointed Ouattara chiefs were usually unpopular and ineffective, and known for embezzling taxes.

The first quarter of the twentieth century was a period of extreme hardship for the peoples of Upper Volta. Although the French officially ended slavery in 1901, tens of thousands of Voltaics were forced each year to labor in cotton fields and construction sites, while others were conscripted into the military. Such policies, coupled with a punitive system of taxation, provoked popular revolts throughout the colony,⁹ ranging from a 2000-person anti-tax march in Ouagadougou in 1908 to a series of village revolts in west of Bobo-Dioulasso in 1915-1916. Thousands also fled south to the British colony of Gold Coast, where labor laws were less coercive.

In 1919 the French made Upper Volta a separate colony, in order to have a better control over its people and develop its economy.¹⁰ As in the previous decades, thousands of laborers were forcibly recruited to build an administrative post in the new capital, Ouagadougou. The roads and rail lines were made to facilitate the export of cotton, a crop which peasants in many cercles were forced to cultivate. But the French invested little in irrigation, fertilizer, or other agricultural improvements in Upper Volta, since it was still considered primarily a labor reserve for neighboring colonies' projects. Consequently, cotton farming in more arid areas led quickly to soil degradation, especially since many rural households, having lost their most able-bodied members to compulsory labor projects, were too short-handed to look after their land

⁹ C. Coquery-Vidrovitch, *African Noise-the permanent ruptures* (Payot, Paris, 1985), p.358.

¹⁰ A. I. Asiwaju, "Socio-Economic Integration of the West African Sub-region in Historical Context", *Journal of African History*, vol.17, 1976, p.162.

properly. Forced cash-crop cultivation also took time and land away from grain farming, leaving rural areas dangerously vulnerable to food shortages.

This vulnerability became tragically obvious in the late 1920s, when a series of droughts coincided with plunging world prices for cotton and commodities after 1929. Famines in 1926 and 1930 led one French colonial official to warn of demographic collapse. By 1931 Upper Volta was not only famine-stricken but also bankrupt, and in September 1932 the country was dismantled and divided up among neighboring French colonies. Most of the territory went to Côte d'Ivoire, where voltaic labor was needed for coffee and cocoa plantations as well as for the Abidjan-Ouagadougou railway.

The rail line reached Bobo-Dioulasso in 1934, and several European trade firms soon followed.¹¹ Besides a handful of French administrators and soldiers, most of the town's other European residents were Roman Catholic missionaries known as *Pères Blancs* (White Fathers). As elsewhere in the Volta region, the Bobo mission was hurrying to win converts during a time of rapid Islamization. The *Pères Blancs* targeted village youth in particular; offered catechism classes and staged festivities at the mission, and spoke out openly against forced labor.

When World War II began and more than 10,000 Mossi volunteered for active military service. Some served in Europe or North Africa, but many remained in the Bobo-Dioulasso military camp, or were used for forced labor. Soon after the war ended, the French government agreed to grant its colonies representation in the French National Assembly. Côte d'Ivoire received three seats, and in November 1946 Ivoirian Félix Houphouët-Boigny and two Voltaics, Daniel Ouézzin Coulibaly and Philippe

¹¹ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.342.

Kaboré, all members of the radical Rassemblement Démocratique Africain (RDA), were elected its deputies.¹²

In that same year, Mossi chiefs asked France to restore Upper Volta as a separate colony. They were primarily interested in reinstating their own political influence, but France agreed to their request mainly because France sought to cut the region off from the anticolonial politics of Houphouët-Boigny and the RDA. The charismatic Ivoirian was already extremely popular around Bobo-Dioulasso, especially after he convinced the French National Assembly in April 1946 to abolish forced labor.

Upper Volta was reconstituted on September 4, 1947. The RDA remained popular in the southwest, but in the north lost support to Mossi-dominated political parties, such as the conservative Union Voltaïque (UV). Over the next decade, growing nationalist movements throughout Africa made decolonization inevitable. In Upper Volta, this was a time of relative prosperity. Many World War II veterans invested their pensions in commercial agriculture, trade, and transport companies, and both Bobo-Dioulasso and Ouagadougou grew rapidly.¹³ Still, political factionalism during the 1950s, combined with the fact that Upper Volta was still landlocked and resource-poor, boded ill for independence.

In 1958, two years after universal suffrage was granted throughout French West Africa, France's African colonies took part in a referendum on whether to become semi-autonomous members of the French Community. Upper Volta, like all its neighbors save Guinea, voted yes. That same year saw the rise to power of Maurice Yaméogo, a Mossi member of the newly formed *Parti de Regroupement Africain*. After

¹² E. J. Berg, "The Economic Basis of Political Choice in West Africa", *American Political Science Review*, vol. 54, 1960, p.398.

¹³ R. M. Lawson, *The changing Economy of Upper Volta, 1954-67* (OUP, 1970), p.380.

he was elected President of Upper Volta's Council of Ministers, Yaméogo moved to align himself with the politically moderate RDA and its founder Houphouët-Boigny, who was soon to be the president of Côte d'Ivoire. A 1959 treaty of economic cooperation between the two leaders indicated that Upper Volta, which was for long the labor reserve of its wealthier neighbor, would continue to depend on Côte d'Ivoire for employment and port access.

Unlike many emerging African leaders, Yaméogo argued that his people were not ready for total independence. By then, however, France was committed to pulling out of all its West African colonies. Upper Volta got independence on August 5, 1960, and Yaméogo became its first president.

After this part on the process of colonization, the important issue of land tenure has been discussed in the overall context of agrarian transformation in Burkina Faso. Firstly a detailed study of the French colonial policy regarding the land tenure of the entire French West Africa has been done and then its implications for Burkina Faso has been briefly outlined.

LAND TENURE SYSTEM DURING THE COLONIAL RULE

Traditional Negro concepts hold that the land belongs to no individual or group but itself, a divinity that no one can appropriate, much less buy or sell. But by offerings and rites the family that first arrives on a piece of unoccupied land obtains the right to use it- a privilege that is transmitted from generation to generation. In the course of time, landed property came to be regarded as belonging to the collectivity, both living and dead, which meant that it must be transmitted intact to the descendants. The chief, as representative of the collectivity and its sole intermediary with the ancestors and the

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earth divinity, divides the property among the sub-chiefs until it is ultimately parceled out to families.¹⁴

Land, even though it may appear unoccupied, always has an owner. In some cases the right of land use may be ceded, in whole or in part, gratuitously or for payment, but always on condition that the consent of the divinity be obtained by the performance of appropriate rites. Even the most unscrupulous of West Africa's Muslim conquerors, despite their precise Islamic concept of absolute property rights, recognised that the conquest gave them no ownership of the soil.

In a predominantly agricultural country like Burkina Faso, land is the only type of property that has importance in native eyes, and the produce of the earth alone is susceptible of outright ownership. Outsiders are often permitted to hunt or fish or to cross a piece of land provided their activities develop no commercial character and they pay a certain sum or proportion of their catch to the family that has inherited the right to use the property. Customs admits that the individual property may be bequeathed, but in all question of inheritance the general interest of the collectivity outweigh any other considerations. Debts are inherited along with the assets of the deceased, and collective responsibility is so highly developed that the family of a recalcitrant or insolvent debtor assumes his obligations. The debtor can give a pledge to his creditor for an indefinite period, which the creditor may use as he sees fit, but he can neither sell nor give it away.

From the time of conquest, French policy rested on the simple and erroneous assumption that property was an attribute of sovereignty belonging to the chief, and that

¹⁴ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.345.

France had acquired sovereign rights over the land.¹⁵ In consequence the Africans were regarded as medieval vassals in their relation to the overlord-state. After the federation was formed in 1904, the various decrees concerning landed property that had been issued in Burkina Faso were consolidated. And the distinction that they had drawn between the public domain (consisting of inalienable land such as roads, coasts, and riverbanks) and the private domain that the state might alienate were maintained. By a free interpretation of article 713-14 of the French civil code, lands vacant and ownerless were declared to be the state property. At the same time, however, it was laid down that land belonging to African collectivities could be granted to individuals only with the approval of the governor-in-council.

Certain decisions were made thereafter by French courts in West Africa, which ignored or narrowly interpreted this recognition of native collective property and threatened to reduce the Africans to a landless proletariat after which, a commission was appointed in 1915 to study the question. The war interrupted its work and this committee never reported, so the court continued to insist that all land to which could not produce a clear title belonged to the state.

Although the 1904 decree had inadequately protected Africans property rights, it had surrounded the granting of concessions with certain precautions and had also initiated a system of land registration in order to give individual Africans security of property. By 1925, however, the system was recognised to be a failure because few Africans had taken steps to register property. Thereafter an officially issued property title did not confer outright ownership in the occidental sense of the term, but constituted a guarantee and a confirmation of traditional land usage. Moreover, claims

¹⁵ M. Chanock, "Paradigms, Policies and Property: A Review of the Customary Law of Land Tenure", in K. Mann and R. Roberts (eds), *Law in Colonial Africa* (Heinemann, London, 1991), p.65.

made against such titles now fell within the competence of first-degree courts and hence were judged according to local custom.

Despite these improvements, and others made in July 1932, a total of only 1,512 titles, covering 21,808 hectares, had been issued by January, 1936, and of these 1,351 were in Ivory Coast, 78 in Guinea, 3 in Senegal, 20 in Sudan, 24 in Mauritania, 7 in Dahomey, and 4 in Niger.¹⁶ Because of the cash received from crops grown in the coastal region and the longer contacts its people had had with the Europeans, the Africans of these regions were more interested in registering their property than were those of Burkina Faso, where poor crops and shifting cultivation still prevailed. In those zones, the administration's effort to differentiate by law between individual and collective property did not materialise due to the obstacles of tradition.

By a series of ruling and decrees in the 1930's the state reinforced its claim to ownership of all land in French West Africa, expropriated property for reasons of public utility, or issued registered titles to individual Africans. Both because of official policy increasingly favoured the development of agriculture in African hands and because Europeans made few demands for land grants, the number of concessions made was very small in relation to the Federation's total area. Much of the land given out before 1903 was later abandoned by its holders, and by 1938 only some 75,000 hectares were still held as concessions with permanent titles, chiefly in Ivory Coast and in Guinea. After 1937, only provisional titles were granted and in these even the concessionaire's usufruct rights were made contingent upon the rate and the degree to which he developed the property ceded. Moreover, his power to mortgage such land was limited. About 80,000 hectares were held on such long-term lease on the eve of the Second World War.

¹⁶ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.346.

Land concessions were granted not only to Europeans but to Africans as well, mostly in towns, on condition that the latter should not dispose them to a foreigner. This provision was designed to check the alienation of urban property to the Syrian-Lebanese, who had been acquiring big plots in the coastal cities. Rural concessions granted to Africans were most extensive in the Niger Project area, where some five thousand families had been granted land and full title of which would pass to them at the end of a ten- to- fifteen years period. In general, the poverty of French West Africa's soil, the shortage of local labour, and the large amount of capital required to develop big plantations automatically curtailed the number of Europeans requests for sizeable land grants.

The Second World War and early post- war years brought a reassertion of state's claim to ownership right over all landed property in the Federation. By applying to French West Africa in August 1941, an anti- Semitic Metropolitan law, the Federal administration assumed the power to refuse or grant permission for the sale of any piece of land.¹⁷ Until these exceptional wartime laws were abrogated in 1946, the government continued to use this authority to acquire at low cost urban property belonging to Africans.

Wherever land had little cash value and was plentiful, the state's expropriation of it encountered no obstacles, but in the towns and export- crop areas the indemnities paid by the government were considered ridiculously small. Moreover, the expropriated land was not always used for the declared public-utility. Shortly afterwards, most of the land thus expropriated was sold by the administration to merchants. It was on the Cap Vert peninsula, however, that the spoliation of African property- owners to make room for Greater Dakar aroused the deepest resentment.

¹⁷ M. Breusers, "The Making of History in Colonial Haute Volta", *The Journal of African History*, vol. 40, 1999, p.448.

Town dwellers, on the whole, were in a position to understand the necessity of certain expropriations and in any event to press their claims for adequate indemnification. Quite different was the position of the peasants, who neither understood what was happening nor how to seek redress. In their case, part of the difficulty arose from the pressure exerted by a growing population on land that was traditionally cultivated by shifting agriculture. In the Sahel zone the nomad's areas were being reduced by expansion of cultivated fields and in the Sudanese region the land long farmed by established tribes was increasingly used by African trespassers coming from other regions. But all the rural population considered Forest Service as their number- one enemy.

In the decade between 1939 and 1949 the area classified as forest reserve grew from 3,354,000 to 6,915,000 hectares,¹⁸ in conformity with the government's programme to preserve the Federation's fast dwindling timber resources and to check soil erosion. In some places forest reserve reached to the edge of farming village and heavy fines were forbidden to clear the ground for cultivation or even to gather firewood. Minutes of all the territorial assemblies are filled with reports of the peasantry's grievances against the Forest Service, and the government was blamed for the excesses of its agents and for their failure to explain clearly to villagers why the area under forest reserves had been more than doubled.

Actually this issue placed the African Parliamentarians and assemblymen in a quandary, and they were unable to make a clear-cut policy in regard to forest reserves, the granting of concessions, and the registration of individual land titles. The only domain in which the territorial assembly could exercise a decisive veto was that of land

¹⁸ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p. 349.

grants. However, large holdings have never been a grave problem in French West Africa, where even the biggest development schemes have been deliberately located in semi deserted regions. In principles the assemblies had opposed making large land concessions to non- Africans, but at the same time they had recognized the need to attract outside capital and technical skill to develop their country.

As to the registration of land titles, also, the African elite had been of two minds. They were torn between wanting Africans to have the right to dispose of property on a modern individualistic basis and their desire to protect the mass of their compatriots against imprudent sale of their heritage. Except in the towns, however, this was largely an academic question. Few capitalist wanted rural land, and in the absence of an extensive survey, and qualified personnel to register titles it was physically almost impossible for the great majority of Africans to sell their land. Despite frequent official exhortation and propaganda, few African have cared to individualize property. By 1950 only 1,742 African in the Federation had registered title to a total of 28,000 hectares.¹⁹

Everywhere the amount of land collectively and individually owned by Africans had been shrinking, and the indigenous population was in general agreement that further encroachment by the government must be checked. For years African Parliamentarians and their French supporters had agitated in Paris for a land reform bill. Specifically they asked for abrogation of the 1935 law that declared the state to be master of all vacant and ownerless land, and the enactment of a legislative guarantee of native property rights throughout French Black Africa.

¹⁹ J. P. Platteau, "The Evolutionary Theory of Land Rights as Applied to Sub-Saharan Africa: A Critical Assessment", *Development and Change*, vol.27, p.34.

The Minister of Overseas France in June 1948, and the Economic Council in February 1950, opposed abrogation of 1935 law, on the ground that it might lead to denial of the sovereignty of the state, probably jeopardize the concessions and the land already granted and possibly rekindle tribal warfare. In the end, the French government accorded partial satisfaction to the advocates of reform through a decree-law of May 18, 1955. By this measure the 1935 law was abrogated, African customary rights over the land were restored and the machinery for transforming them into individual property was simplified. Another implication of this measure was that concessions in future could be granted only after a formal renunciation of customary rights over the land in question and the territorial assemblies were given more authority in conceding land. Moreover, the government was made responsible for execution of the terms under which a concession was granted and the state right to own or expropriate property was restricted to land whose vacancy could be effectively proved or that was indisputably necessary for works of public utility.

This was a very important reform and should put an end to abuses that had been widely denounced. It also paved the way for increasing economic production and accomplishing administrative decentralization. Development project could no longer be delayed by uncertainties over the land tenure system, and assemblies had acquired many of the powers they had been seeking.

In case of Burkina Faso, the colonizers themselves had changing views about the land tenure system. In the first half of the twentieth century, French colonial leaders promoted a policy that discouraged ownership of agricultural lands, though this had less to do with their support of traditional system than with their desire to monopolize

land rights themselves.²⁰ Later, however, there was a shift in the colonial rhetoric to a policy promoting individual ownership rights, as the belief emerged that private ownership was the only means of ensuring increased agricultural output. In the aftermath of independence, Burkina Faso leaders arduously supported individual ownership of land, perhaps believing that a policy of this sort gave them greater credence in their quest to be considered a modern state.

FOOD SECURITY AND THE COLONIZERS

Another important issue worth discussing in the context of agrarian transformation in Burkina Faso is food crisis, whose genesis in fact can be traced back to colonial times.

Before the French came, the creation of millet reserve was not a widespread practice among West African tribes.²¹ Only the strong states with the stable economy, such as that of the Mossi, regularly constituted grain reserves and stocks of fodder. Periodic raids by nomadic warriors and requisition of conquerors furnish a historical example of Sudanese improvidence.

In many areas the Africans to this day either sell all his surplus harvest or uses it to make a fermented drink, seemingly with no thought as to the possibility of a poor crop the following year. The shrewder middlemen store much of what they buy from the farmers and then sell it back at the double or triple the price when they feel the pressure of hunger during the interval between the harvest. In the forest zone, where crops are less seasonal and there is more dependence on perennial natural product, the problem of food reserve is less acute than in the more northerly zones. In the Savannah area the

²⁰ T. J. Bassett. "Land Questions and Agricultural Transformation in Sub-Saharan Africa", in T. J. Bassett and D. E. Crummey (eds), *African Agrarian System* (University of Wisconsin Press, 1993), p.7.

²¹ Virginia Thompson, and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.355.

severe famines of 1914, 1927, and 1931 prompted the government to create the granary reserves through the agency of the S.I.P. (*Societes Indigenes Prevoyance*).²²

Although the motive behind the instituting of compulsory grain reserves was laudable, its applications were miscarried. By the decree of January 17, 1935, every individual in the Federation was required to supply a quantity of millet varying between one hundred and one hundred and fifty kilos and to be responsible for its transport to an official granary. Thus a family of ten had to supply a thousand to fifteen kilos of grain, which in some cases meant virtually its entire production.

Before the war, the forced labour prevented the male members of the family from devoting their whole time to farming, and payment of head tax often required them to sell a part of their harvest. As for non-farmers, many had to buy the quota of grain at exorbitant prices in the open market. Administrators, who rigorously applied the law, were empowered to imprison those who defaulted.

Further difficulties arose when the time came to distribute the reserves. Sometimes termites, wind, and rain had so damaged the stored grain that there was nothing left worth distributing. Then, too, some of the chiefs who were entrusted with the distribution were guilty of favoritism and even the S.I.P. were criticized for their unscrupulous hoarding. In September 1946, riots broke out in Niger, in which reportedly twenty-eight were killed and two hundred and sixty arrested following a local chief's refusal to distribute millet reserve.

From 1946 onwards, West Africans used their newly acquired political power to agitate for the misuse of grain reserves, particularly in Niger. It was their arbitrary management by the chiefs that were particularly resented. African assemblymen and

²² Ibid. p.366.

Parliamentarians claimed that, if left to themselves, the native population would reconstitute the granaries on a family basis provided that the production of food crops and the means of transportation were improved. Finally, in the spring of 1955, the administration acceded to the unanimous African demand for abolition of the compulsory grain reserves and transferred the responsibility of maintaining voluntary granaries to the newly constituted co-operative societies.

The distribution of grain in the Voltaic region prior to the colonial conquest can be contrasted, on the one hand, with places which had not developed a food market, and on the other, with the fringes of desert where grain entered long-distance trade. The latter, however, even when it did not include cereals among its staples, facilitated shorter exchange inside or between villages in which food figured prominently. Local trade took place in periodical markets where the relationship between local communities were relatively peaceful, as in the Mossi kingdom.²³

However, in areas characterized by frequent eruptions of violence, as in the western part of what is now Burkina Faso, all concerned had to rely on the existence of a network of travelling traders. Along with cooked food, grain was one of the commodities that entered such short-distance trade in the pre-colonial period. Two factors involved in the demand for grain were the important activity of beer brewing,²⁴ and the sporadic local deficiencies in food and seed grain resulting from micro-climatic variations, as well as by differences in the productive capacities of households.

²³ Mahir Saul, "Grain Market and Merchants in Burkina Faso", *Journal of Modern African Studies*, vol.24, 1986, p.130.

²⁴ Mahir Saul, "Beer, Sorghum and Women: Production for the Market in Rural Upper Volta", *Africa*, London, 1981, p.750.

The colonial regime introduced a new element in exchanges of grain. First, it created an initially weak but growing administration, as well as a stable demand for troops, notably in Bobo-Dioulasso, where an important military base was established as a result of repeated revolts during 1916-17 and 1941. At the same time, the expanding external administration threw the local population into the realm of European currency through taxation and wage labour by army recruitment, public works, and employment in private enterprises.

Agricultural output was also directly affected because one of the colonial policy measures between the two wars was to encourage the production of cotton, largely by compulsion, in fields monitored by chiefs. This practice was abandoned when it was decided that the attempts had failed. At the same time, the administration periodically requisitioned relatively important quantities of grain to build local or regional reserves against the eventuality of a harvest failure. Canton or district chiefs often administered these stocks, and most of this grain found its way to the market through private hands. Because the operation was so open to abuse, it left bitter memories, especially in the villages in the western part of the country. Later, the regime created rural co-operatives-S.I.P., which, among other things were also involved in the collection of rural products and their distribution, thereby helping to provision the cities.

AGRICULTURAL CREDIT INSTITUTIONS DURING THE COLONIAL RULE

At its birth in 1910,²⁵ the organization known as S.I.P, simply aimed at protecting African against their habitual improvidence by creating grain reserves. Soon the S.I.P became a credit institution, then a producing and marketing organization with

²⁵ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.356.

tangential activities, and still later there arose the possibility of its becoming a co-operative society. Originally confined to Senegal and to peanuts, these societies were formed in each *cercle* throughout the Federation and were called upon to deal with new and widely differing situations. The goal assigned to them by the decrees of July 4, 1919, and January 23, 1925, virtually made the sky their limit. They were to take all measures contributory to the development of agriculture, animal husbandry, fishing and uncultivated produce, as well as to improve the condition under which products were harvested, processed, stocked, and marketed.

To some extent the S.I.P was built on institutions that already existed in native society. In the Muslim Brotherhoods, for example, aid to fellow members was a religious duty and in this way Islam reinforced the spirit of solidarity already strong among the Negro tribesmen.²⁶ So the S.I.P in Muslim areas was able to utilize this doubly strong foundation of mutual aid but, in order to get around the koranic prohibition against usury, it had to term its loans contribution.

Among the fetishists, the S.I.P utilized such ready-made communal groups as the age classes and the occupational castes that were to be found throughout the Negro regions. Working from these indigenous bases, the government first formed the societies with voluntary members and African chairmen. As this experiment proved unsatisfactory, two new elements were added- compulsory membership on the part of all African farmers and herders in each *cercle*, and a strict control over each local society by the *cercle* commandant as its *ex officio* chairman. Generally speaking, joint action by two or more S.I.P was discouraged out of fear lest they acquire a political colouring or develop into pressure groups.

²⁶ Bonnie Campbell, "Social Change and Class Formation in French West African States", *Canadian Journal of Development Studies*, vol. 8, 1974, p.331.

Because of the compulsory nature of the S.I.P membership, dues were kept very low. As they were collected at the same time as the poll tax, these dues became identified in the eyes of African with fiscal charges and were termed the *petit impot*. Apparently few African related their payment to any benefits they received from the operation of their local S.I.P. Dues formed the financial backbone of the societies' activities until the world depressions. At that time the S.I.P were co-ordinated with agricultural- credit institutions and were permitted to sell their members' surplus produce and to contract loans.²⁷ In 1935, a common fund was created for all the S.I.P in each colony, over which the territorial governor exercised tight control.

As early as 1926 a beginning was made in setting up agricultural-credit organization, but it soon became apparent the many and complex formalities surrounding their operations made them useless to the average African producer. Six years later they were replaced by the territorial agricultural-credit banks in the coastal colonies. Loans granted by these reorganized agricultural-credit banks rose from an aggregate of 4 million francs in 1932 to 21.6 million francs in 1941.

Second World War checked the expansion of both the S.I.P and the agricultural-credit institutions. Many of them survived, in fact, solely because of the loans granted them by the state. In 1946, however, the government demanded a partial repayment of these loans well before the Federation's economy had recovered from its war time slump. As the government ill- timed action coincided with the inauguration of representative political institutions, West Africans now had a medium through which they could voice the grievances they had long felt against certain official economic

²⁷ Mahir Saul, "Grain Market and Merchants in Burkina Faso", *Journal of Modern African Studies*, vol.24, 1986, p.131.

policies. Especially severe was the criticism they levelled against the S.I.P as an undemocratic survival old-style colonialism.²⁸

The S.I.P executive committees were charged with being under the thumb of the cercle commandant, who used their fund to carry out programmes often unrelated to the interest of their members. The 25 percent interest rate charged by the S.I.P on seed loans it made to members was denounced as usurious, and the honesty of its marketing agents was said to be not above reproach. Moreover, so their opponent argued the societies were engaged in many economic and local-welfare activities that was more properly the responsibility of the state and should be financed from public funds. In the Grand Council and the territorial assemblies there was a widespread demand that the societies be abolished and be superseded by co-operatives. This was also the tenor of the recommendations made by the Council of the Republic in August 1947.

The government did not immediately accede to this demand, and it was not until March 1949, that the first official step was taken to reform the S.I.P by confining them to a more strictly provident role. At that time F.E.R.D.E.S was created to take over their rural-engineering activities, and their local-welfare operations were transferred to the education and health services working with the fund supplied by the Federal and territorial budgets. The late 1940's also saw a burgeoning of co-operative societies and a reorganization of agricultural-credit facilities. This did not entail elimination of the Societies de Prevoyance, but brought about their decentralization and the granting of more voice in their management to members. It was the official viewpoint that the S.I.P still had a unique function to perform and that they could not be replaced by the co-operatives until the latter had had the more experience.

²⁸ K. E. Robinson, "The S.I.P. in French West Africa", *Journal of African Administration*, London, 1950, p.354.

By 1949, two years after they had been inaugurated, there already existed forty co-operatives for Senegalese peanuts farmers and six for Guinea's banana planters, and these had received loans, either outright or guaranteed by the government, totalling 250 Metro francs. More co-operatives for cocoa farmers in Ivory Coast and oil palm growing in Dahomey were coming into being. By 1950 there was a total of 212 co-operatives in French West Africa, organized into six main groups.²⁹

Despite the relatively large number of co-operatives formed in short order throughout the Federation, their evolution more than justified the government's caution. They were in fact confined to a few regions producing export crops, had a very limited membership, and were almost wholly occupied in marketing their members produce. The movement started out with one of the most difficult forms of co-operation- that of marketing export crops- and among them chose peanuts, a product that was costly to transport and one that brought only small profits to the producers. Because of the poor preparation, inefficient or corrupt management, and lack of supervision, the co-operatives collapsed as rapidly as they mushroomed, and by the end of 1951 were almost without exception heavily in debt and to a total that ran into several hundred million CFA francs.

For very different reasons the agricultural-credit institutions, during this period, were equally if not so spectacularly unsuccessful. Even though, after they were reorganized in 1931, they had steadily enlarged the scope of their operations and the size of the loans made, the latter aggregated less than 40 million francs by 1939, and during the institutions' activity was practically nil. Revived after the Liberation, they loaned a total 16 million francs in 1947, 19 million in 1948, and 81 million in 1949, but

²⁹ Claude Meillassoux, *The Development of Indigenous Trade and Markets in West Africa* (London, 1971), p.167.

after that they tapered off to an annual average of some 40 millions. Though in 1949 the government decentralized and simplified their operations and permitted them to dip onto federal reserve fund, their contribution to the French West Africa's economic development was very slight. Such as it was, it benefited mostly the planters and industrialists, almost all of whom were Europeans.

AGRICULTURAL RESEARCH INSTITUTIONS DURING THE COLONIAL RULE

Until the end of World War I, scientific agricultural research in French West Africa was conducted on a highly individualistic and regional basis. Too many experimental stations were established in a few colonies, while others had none at all. Owing to the instability of their personnel and of the fund at their disposal, the handful of reports turned out by these stations had only a temporary and limited value in terms of practical application.

After 1919 it was decided that research on colonial agriculture could be better co-ordinated in France, and a corps of agriculture engineers for the colonies were set up in 1921. At the same time the *Institut d'Agronomie Coloniale* at Nogent-sur-Marne and the *Musee National d'Histoire Naturelle* in Paris were given the duty of guiding research undertakings.³⁰ In 1931 and again in 1937 a congress on scientific research in colonies met in Paris. Its members stressed the need to close the gaps then existing in research programmes, to attract and give specialized training to men undertaking scientific work overseas, and to form an over-all organization that would direct and co-ordinate the work done by them in France and in the French empire.

³⁰ Virginia Thompson and Richard Adloff, *French West Africa* (Ruskin House, London, 1958), p.362.

From 1932 to 1934, long-term plans were drawn up and some of them were actually carried out. Their basis was economic, however, rather than scientific, for they were all designed to make an autarkic unit out of France and its colonies. In execution these plans were further narrowed down, for official encouragement was given almost wholly to only one part of the programme- the production of colonial crops needed by France- and in French West Africa its success was obtained at the expense of food self-sufficiency. Moreover, not even in the production of export crops did scientific research at this time play an important role. Development of the Federal and territorial agricultural services did not keep pace with the increasing spread of planted areas, and there was little co-ordination between the individual activities of these services.

Theoretically, long-term research programmes were drawn by missions composed of specialists sent out periodically from French scientific institutions, and the local technical services were simply to carry out their recommendations and to conduct a few field inquiries. The Office Du Niger at Segou carried the only important independent research done locally during this time, but its work was confined to the development of two crops in a limited area. That co-ordinated planning and scientific research in French West Africa had been neglected was implied by provisions in the law of August 25, 1938, which for agronomic purposes divided the Federation into two main sectors. Thenceforth agricultural research in the Sudanese zone was to be entrusted to the Bambey station in Senegal and that for the coastal zone to the Bingerville station in Ivory Coast. Only at Bambey, however, the new programme had got underway by the time World War II broke out.

In October, 1943, there was set up at Paris an Office de la Recherche Scientifique Coloniale (known later as O.R.S.O.M.) to meet the long-felt need for a central organization that would direct and co-ordinate the scientific work on colonial economic problems undertaken in France and in the Overseas Territories. One of the main task

assigned to it was the training of men to staff colonial research centers, and to do so it had to institute appropriate courses at the Sorbonne and other Metropolitan universities. After a period of study in France, future overseas researchers were to spend their second year at training Centre to be built at Adiopodoume in Ivory Coast. Assignment to research centres throughout the French Union would follow graduation from that institution.³¹

In 1944 the new programme began, with forty prospective geologists, botanists, and genetic biologists. Three years later, more than fifty candidates were trained at Adiopodoume, where the first building had been constructed in 1946. During this period O.R.S.O.M. was also organizing special missions which, in French West Africa, have been studying indigenous medicinal plants, mapping soil and vegetation zones, analyzing labour migrations, investigating termites habits, and observing animal husbandry.

By 1952 the Adiopodoume centre had been equipped with fine laboratories, extensive gardens, and a large European staff, and possessed its own geophysical laboratory at Hann in Senegal. For its work on soils, food and export crops it maintains regular liaison with the agricultural stations at Bingerville, Niaouli, and Bambey and also keeps in touch with the work being done by the Office du Niger. For the 1947-55 period, O.R.S.T.O.M. received subsidies amounting to 2,537 million Metro francs, and by the end of the latter year employed two hundred persons.

As regards purely local institutions in French West Africa, the needs arising from or intensified by the war led to a proliferation of specialized scientific organizations and to the first effective co-ordination of the Federal technical services. In 1941 a General

³¹ R. Combes, "Offices and Institutions for Scientific Research", *The Journal of African History*, vol.1, 1973, p.326.

Inspectorate of Agriculture was created and a Centre for Scientific and Technical Fisheries Studies was established in Dakar. In 1944 a Directorate of Animal Husbandry and Forestry was formed and linked with other Federal economic services. Concurrently new units, specializing in various crops, were organized at Paris for the purpose of directing the work of branch stations, either those already functioning or ones to be constructed in the producing regions of French Africa south of Sahara. Some of these organizations, such as those dealing with the anti-locust operations and soil conservation, worked with international bodies, while others took over and expanded work already initiated in Black Africa. In addition to these organizations that operate on an all-Africa or all-French Union level, there are semi-autonomous and highly specialized Federal stations such as those of quinine in Guinea, coffee and cocoa in Ivory Coast, and five rice-study centers.

From the forgoing account it can be readily seen that French scientific research was still oriented towards export crops, although a number of new organizations included the study of local food crops as well. In this amorphous and complex situation the only local institution that had maintained continuity in its operations and autonomy in its management was the Office du Niger, though it was loosely affiliated with other rice-research stations.

So this was the agrarian position of French West Africa during the colonial times and agrarian transformation in Burkina Faso during colonial times has been assessed through the prism of French agrarian policy over the entire region. The independence came in 1960 and the next two decades confirmed the economic omens of the late colonial period. The agrarian transformation of the country for this period also confirms that and has been dealt in detail in the next chapter.

CHAPTER – 3

AGRARIAN TRANSFORMATION IN POST-COLONIAL BURKINA FASO

It totally makes sense that any talk of economic reconstruction in post-colonial Burkina Faso should have focussed on addressing the agrarian concerns of the people first. However, the way in which it has been addressed is even more important and has been discussed in detail in this chapter. The chapter covers the issue under the sub-heads like the land tenure system, the process of mechanization and its relationship with land tenure system, and the state intervention in the agricultural sector of the economy.

Burkina Faso has remained an agrarian economy, with agriculture providing a livelihood for 90% of the population. But the performance of agriculture is strongly constrained by the erratic limits of land and water and by demographic pressure on the availability of land. It is a land locked country of 11.5 million people and is considered one of world's poorest states with partial participation in the world market. According to the International Monetary Fund statistics, 91.8% of the population relies primarily on subsistence farming for its employment, which complicates market participation. It has a population density of 260 people per square kilometer of arable land, and land quality ranges from fertile in the south to arid in the north. Further, its culture remains tightly wedded to its tradition, which include sacred treatment of the land and unconditional respect for elders. Under such conditions, any talk of agrarian transformation in post-colonial Burkina Faso must begin with an analysis of changes that has been brought about in land tenure and its distributional patterns.

LAND TENURE SYSTEM IN POST-COLONIAL BURKINA FASO

Across Africa, traditional land tenure policies share certain features. One common attribute is reliance on lineage in determining who has rights to a plot of land. Generally, this system of inheritance results in increasing fragmentation of farm plots,

as heads of households are required to leave land to more than just one person.¹ A second feature is the presence of a land priest, who is responsible for managing land disputes and assigning land that is not currently occupied through lineage. Examples can be found in Ghana and Ivorycoast.

Traditional land tenure systems in Burkina Faso are not unlike those in other neighbouring countries. Land is distributed based on relationships to the founding lineage, and a land priest resolves disputes and allocates unclaimed land. The manner in which this is done differs from region to region. In the eastern Gourmantché region, unclaimed land for farming may be obtained by anyone whose grandfather farmed land around the village. Among the Mossi people of the Central Plateau, long-term allocation rights are set by the village chiefs and distributed to heads of households based on the lineage pattern. Those household heads are then responsible for distributing land to extended family members to ensure that food supply needs are met.² In the southwest Bobo territory, the land priest appoints men in the village chief's supervision to a land committee, and it is the duty of this group to assign farming rights to members and extended family.³

Certain effects of the lineage-based system are apparent across ethnicities. Foremost, among all, is the tendency toward fragmentation, or the increasing subdivision of plots. Though it contributes to inefficient farming, fragmentation is less of a problem the further one goes out from the village, as here farmers are using land that was previously unclaimed. A second effect of the lineage system is the presence of

¹ J. W. Bruce, "Do Indigenous Tenure System Constrain Agricultural Development?" in T. J. Bassett and D. E. Crummey (eds), *Land in African Agrarian System* (University of Wisconsin Press, 1993), p.45.

² Mahir Saul, "Land Custom in Bare: Agnalic Corporation and Rural Capitalism in Western Burkina Faso" in T. J. Bassett and D. E. Crummey (eds), *Land in African Agrarian System* (University of Wisconsin Press, 1993), p.80.

³ T. J. Bassett, "Land Question and Agricultural Transformation in Sub-Saharan Africa" in T. J. Bassett and D. E. Crummey (eds), *Land in African Agrarian System* (University of Wisconsin Press, 1993), p.7.

land borrowing. Farmers not entitled to lands through lineage would face the prospect of going landless and thus without a sufficient food supply; the solution is to borrow land from a farmer entitled through lineage. This can and occasionally does create ethnic conflicts when members of an outside ethnicity—often the powerful Mossi—borrow land and establish a base for the influx of their own extended families. In general, however, problems are avoided because borrowed lands confer only temporary rights. Over the last half-century, outside forces, first the colonizers, and later the international organizations, have also contributed to a change in the understanding of land rights in Burkina Faso. The impact of these forces on traditional land tenure system is worth considering.

Of the two, the colonizers themselves had changing views about agricultural land tenure in Burkina Faso. In the first half of the twentieth century, French colonial leaders promoted a policy that discouraged ownership of agricultural lands, though this had less to do with their support of traditional systems than with their motive to monopolize land rights themselves.⁴

Later, however, there was a shift in the colonial rhetoric to a policy promoting individual ownership rights, as the belief emerged that private ownership was the only means of ensuring increased agricultural output. In the aftermath of independence, Burkina Faso leaders strongly supported individual ownership of land, perhaps believing that a policy of this sort gave them greater credence in their quest to be considered a modern state.

⁴ Mike Spears, "Agrarian Change and the Revolution in Burkina Faso", *African Affairs*, vol. 90, 1991, p. 101.

The international aid community made similar contributions to the land tenure policy. Having done little with respect to land reform in Africa throughout the 1960s and 1970s, and having witnessed the stagnation of agricultural production during this period, organizations like the World Bank began aggressively promoting the privatization of land ownership in the 1980s. This approach was based on the neoclassical argument that formal tenure leads to greater investment by the owner, and thus results in increased levels of production.

Yet even as the efforts of the World Bank and other organizations continued, enthusiasm in much of Africa has not been the same, especially at local levels. Traditional exchange agreements between lenders and borrowers of land remain more comprehensible to farming communities and weaken the perception of a need for formal tenure.

The post-independence perspective on land tenure in Burkina Faso has shifted towards private ownership, yet there has been resistance to leaning too far in this direction. The official laws of the country have taken a similar path. The laws that existed from the 1960s to the 1980s closely resembled traditional practice, as land was not owned by individuals but allotted on earlier basis. This system was highly respected because it was traditionally more comprehensible. However, sporadic cases of individuals or villages challenging the spirit of these laws were enough to force a shift away from reliance on tradition.

In 1984, under the guidance of the revolutionary President Thomas Sankara, Burkina Faso instituted the Agrarian and Land Reorganization (RAF), whose principle

effect was to declare that all land belonged to the state.⁵ The idea was to remove the concept of traditional land rights from the official law, which it indeed did, but an unintended negative effect also arose: because, now land could be claimed by those who could work it, and the this law encouraged farmers to expand their holdings. By showing minimal usage, farmers were able to control reserve stocks of land, to be saved or bartered scrupulously. In 1991 a new RAF text was introduced in Burkina Faso to remedy the consequences of the 1984 law and, at the same time, to introduce officially the notion of private ownership. The first major change was outlined in Title II of Law No. 014/96/ADP (Government of Burkina Faso 1991), which created the National Land Domain (DFN), comprised of all lands within the limits of the state. Article 5 of the same law went on to introduce the second important change: that certain lands of the DFN can be ceded as private property to citizens of the state. Because the management of private property would take place at the village level, this law attempted to address the competing demands of public and private ownership, while acknowledging the importance of customary practice.⁶

The results of these seemingly ambiguous and very delicate laws are that traditional leaders are cautiously supportive owing to the attention paid, however vague, to the sociopolitical and religious views of the local farmers.⁷ Applied loosely, the law still allows the lineage system to carry weight through its application at the village level, which reduces the potential for conflict among villagers while introducing privatized land.

⁵ Armelle Faure, *Private Appropriation in Rural areas: Politics of Land Ownership in Burkina Faso* (IIED, London, 1995), p.5

⁶ Ibid. p.7.

⁷ Philippe Tersuguel, *The Question of Tractors: Modernization of Cotton Plantation in Burkina Faso* (Paris, 1995), p.39.

The common official assumption in Burkina Faso is that land is limitless. As long as arable land is left uncultivated, and anyone seeking a plot can obtain it in one way or the other, the perception of land abundance will remain, and land tenure policies will be considered sustainable and relatively fair.

Another result of such policies in Burkina Faso is a pronounced flexibility in the allotment of farming plots. While this has significant positive effects that allow farmers to use the best lands available and to live outside of their village, there are two possible negative effects that confront the assumption of limitless land: 1) more people having access to land in a given area and 2) greater share of land made available to big farmers.⁸

THE PROCESS OF MECHANIZATION

Just as conceptions about land tenure were evolving, agricultural landscape in Burkina Faso was undergoing a change because of mechanization of agriculture. Burkina Faso presents an interesting case in this regard, because, unlike other African countries, the introduction of mechanized agriculture came quite late and through very informal processes. Although mechanization generally refers to the introduction of any type of machinery into the agricultural practices, in the case of Burkina Faso it is the influx of tractors.

Thus, when we speak of agricultural mechanization, it is primarily the process of Tractorization that is taking place. These tractors, typically of European origin, are of medium output, and serve as the only form of tillage in a mechanized field, since

⁸ Mahir Saul, "Land Custom in Bare: Agnalic Corporation and Rural Capitalism in Burkina Faso" in T. J. Bassett and D. E. Crummey (eds), *Land in African Agrarian System* (University of Wisconsin Press, 1993), p.81.

fields in Burkina Faso generally do not receive secondary tilling. The point to be kept in mind here is that it was conventional agricultural practices that preceded mechanization in Burkina Faso. One thing should also be very clear that the very flexibility that allows the system of land tenure to thrive opened the door for an expansion of mechanization, which in turn may lead to contentious effects on the land tenure system.

Across Africa, just as there was a post-independence push toward increased privatization of land rights, so too was there an urge for more tractors in the agricultural setting, an urge perhaps welcomed by African states seeking to put on a modern face. The rise of tractors can also be attributed to the modernizing efforts of the former colonial masters.⁹ Those colonial efforts have led, and continue to lead, to the import of machinery whose adaptability to the African landscape has never been wholly considered.¹⁰ While tractors bring certain advantages, such as increased labor productivity, contract work and rental opportunities for owners, and reduced drudgery; there are also significant drawbacks to tractor use in Africa. The cost of a tractor is usually several times an average farmer's annual income, and fuel and maintenance costs and a short, unpredictable season further compound this affordability factor. Furthermore, tractors may lead to the exploitation of women, since it is the role of women to weed and harvest the fields at the end stage of cultivation. Tractors also require increased training, cause greater soil erosion, and demand large areas of land to ensure that ownership will be cost-effective. Thus, it is not evident that the tractor is the most appropriate tool for African farmers.

⁹ J. H. Sanders, "Developing New Agricultural Technology for the Sahelian Countries: the Burkina Faso Case", *Economic Development and Cultural Change*, vol. 39, 1990, p.2

¹⁰ Iftikhar Ahmed, "Farm equipment Innovations: Background and Objectives", in B. H. Kinsey and I. Ahmed (eds), *Farm Equipment Innovations in Eastern and Central Southern Africa* (Gower Publishing Company, Hampshire, 1984), p.4.

Within Burkina Faso, the rise of mechanization has been very slow relative to the process in other African countries, as Burkina Faso has been the target of fewer development projects. While twelve other African countries were experimenting with tractors just after World War II, Burkina Faso at that time was only beginning to explore animal traction, an effort that never flourished due to pastoralist-agriculturist conflict. The tractor itself was not introduced in Burkina Faso until the 1970s, and then only on a very small and informal scale.¹¹

Therefore, Burkina Faso's farmers have continued to farm as they have for generations, on the strength of the daaba. The daaba is a wooden-handled hoe with an iron head, which the farmer uses by stooping over and pulling the earth. The handle is generally quite short, though it may be longer in areas where the soil is sandier. The instrument is considered to be both reliable and flexible, allowing farmers to till almost any terrain. Importantly, the daaba has an element of traditional prestige, since every farmer's ancestors tilled in the same fashion and the daaba farmers thus believe that they are practicing true farming. Nevertheless, tilling large areas of field remains extremely difficult for the daaba farmer. Although the daaba remains heavily relied upon, and the presence of tractors remains sparse, tractor numbers are growing. According to the Food and Agricultural Organization, there were 1,933 tractors in Burkina Faso in the year 2000, which, as a number of tractors per 1,000 agricultural workers, was essentially low. However, the number of tractors per 100 hectares of arable land has grown from zero in 1980 to six in the year 2000. This indicates that, though the percentage of farmers who use tractors is still very small, the impact that these farmers have on cultivation areas is undoubtedly expanding.

¹¹ Philippe Tersiguel, *The question of Tractors: Modernization of Cotton Plantation in Burkina Faso* (Paris, 1995), 76.

The small but increasing presence of tractors in Burkina Faso has evolved as the conditions for mechanization have improved in the country. To support a farming culture based around mechanization, three conditions must be present: 1) sufficient levels of income, 2) market opportunities, and 3) a profitable cash crop. The income levels in Burkina Faso have been improving steadily, not only in the farming sector, but also among the civil service. This has allowed greater numbers of people to set aside the income for new purposes. Market opportunities have also improved as banks and credit institutions have begun to make credit available to farmers though still on a minor scale. Finally, with the help of the government, cotton has become a well-established cash crop in Burkina Faso, thus providing farmers with the incentive to mechanize.

Interestingly, agricultural mechanization in Burkina Faso has also been accompanied by a shift in the identity of the farmer. Paradoxically, the true farmers want to leave farming, while non-farmers are entering the field. Young farmers, seeing the discrepancy between their own traditional efforts and the ease with which big, mechanized farmers are able to till land, are seeking to escape farming. Conversely, rising incomes among the educated class has led to the possibility of farming as an investment. This sparks a greater demand for tractors and village land by the city-dwelling elite, leading to an influx of "gentlemen" farmers.¹² Thus, although the introduction of tractors in Burkina has come slowly, the effects of increased agricultural mechanization are no longer insignificant.

¹² O. T. Solbrig, "Introduction: Conceptual Analysis and Some Policy Suggestions", in O. T. Solbrig, R. Paarlberg and F. Di. Castri (eds), *Globalization and Rural Environment* (Harvard University Press, 2001), p.18.

Land needs change with mechanization as farmers using tractors must till larger areas to ensure sufficient incentive for their investment in mechanization. The tensions that this expansion creates may be lessened, of course, if the change leads to less labour exploitation and improved food production. Unfortunately, this has not been the case.

Clearly defined social roles in Burkina Faso dictate that men till the fields and women do the weeding and harvesting. As tractors till greater expanses of land with less labour, male labourers are displaced and their short-term tilling employment is eliminated. Perhaps more significant, however, is the exploitation of women that tractors provoke.¹³ Because harvesting equipment has not been introduced in Burkina Faso, women are forced to do the work by hand. Thus, just as work is taken away from men, more is demanded of women. They are typically not paid for their work in the fields, as men may be, during the intense tilling period. Rather, women in the extended family of farmers using tractors are pressured to do their part when harvesting time arrives.

This strict separation of tasks between men and women precludes the possibility of reallocating to men the extra harvesting labor that tractor-tilled fields create and in that sense tractors actually have a harmful, exploitative effect on female laborers. As for production, though tractors allow for increased output, there is no evidence that tractor farming has a positive effect on agricultural yields.¹⁴ Improved production per unit of land is a function of better quality tillage, and tractors provide no advantages here vis-à-vis daaba farming.

¹³ Philippe Tersiguel, *The question of Tractors: Modernization of Cotton Plantation in Burkina Faso* (Paris, 1995), p.264.

¹⁴ Prabhu Pingali, *Agricultural Mechanization and the Evolution of Farming System in Sub-Saharan Africa* (John Hopkins University Press, 1987), p.102.

Furthermore, in order to assure returns on their investments, mechanized farmers concentrate greater proportions of their land on the production of cotton. Thus, while agricultural output increases, food crops in fact decrease as a percentage of cultivated land. Total food production may or may not increase in absolute terms, but the disproportionate shift toward cotton, whose economic benefits go on solely to the cotton farmer, represents a relative loss to a society still struggling to overcome severe malnutrition.¹⁵

THE LAND TENURE AND THE PROCESS OF MECHANIZATION

While agricultural mechanization and land tenure policies in Burkina Faso have been evolving autonomously over the last few decades, they are not entirely independent issues. Broadly speaking, tension arises when the spread of mechanized farming begins to encroach on the land rights of small farmers who are not able themselves to mechanize. It can be argued that, though land is still considered an abundant factor of production in Burkina Faso, mechanization will begin to have effects similar to those of a rapidly expanding population, namely that the demand for more area will push people to marginalised lands. At some point, as single-farmer plots, and then village areas, expand within the borders of the country, conflict will arise, and the poor will likely lose out to the rich.

This scenario is not imminent in Burkina Faso, but the tensions are no longer insignificant. Neoclassical economists can argue that the tension between land rights and mechanization is a straightforward one to resolve: expanding mechanization will favour the efficient over the inefficient, and as long as land rights are privatized and sellable,

¹⁵ Philippe Tersiguel, *The Question of Tractors: Modernization of Cotton Plantation in Burkina Faso* (Paris, 1995,) p.264.

inefficient farmers will have profitable reasons to abandon their land and invest their resources in a different sector of the market economy. Thus, everyone will be better off. The difficulty, though, is that Burkina Faso does not fit neatly into the globally connected, market-driven world.

A landlocked country of approximately 11.5 million people, Burkina Faso is considered very poor, and like many poor countries, it has only "one foot in the market".¹⁶ According to International Monetary Fund (IMF) statistics, 91.8% of the population relies primarily on subsistence farming for its employment, which complicates market participation. Burkina Faso has a population density of 260 people per square kilometer of arable land, and land quality ranges from fertile in the south to arid in the north. Furthermore, Burkina Faso culture remains tightly wedded to its traditions, which include sacred treatment of the land, unconditional respect for elders and traditional leaders, and clearly defined gender roles. All of these factors complicate the shift to privatized land holdings that the process of mechanization encourages.

Despite these complications in Burkina Faso and elsewhere, contemporary development policy, guided by mainstream economic thought, assumes that growth is a prerequisite for reduced poverty, and that commercial activity is the catalyst for economic growth. Competition and private ownership are considered essential. What is important then, is to consider how sound development policy might be applied in socially acceptable ways. When one examines agricultural land tenure policies as they exist in law and in practice, the finding is that 1) there is currently enough agricultural land in Burkina Faso, but that this will not always be the case, and 2) whether

¹⁶ J. W. Bruce, "Do Indigenous Tenure System Constrain Agricultural Development?" in T. J. Bassett and D. E. Crummey (eds), *Land in African Agrarian System* (University of Wisconsin Press, 1993), p. 36.

intentional or not, a delicate balance between official laws and customary practice has been reached that allows for the thriving of harmonious agricultural communities.

It is possible now to think more thoroughly about how land tenure and agricultural mechanization might operate in tandem. Problems arise on several fronts. First, the increasing presence of tractors affects labour and production in Burkina Faso, since new farming techniques can dictate changing land needs. Second, tractors create pressure for land acquisition, which raises direct conflicts with policies of land ownership rights. Third, market tensions arise between the need for competition and the need for alternative activities in the economy. Finally, political pressures exist that may make the combination of Tractorization and current land tenure policies untenable for the future.

It remains the case that "substantial access to land" persists in Burkina Faso and in almost all of Africa.¹⁷ However, clear incentives exist for tractor owners to expand their holdings exponentially, and, under essentially open access conditions, they have little reason to consider the declining returns to their tillage. It is true that the agricultural land in Burkina Faso is considered the property of the state, as part of the National Land Domain, which is allotted by village leaders on a usufruct basis and which can be ceded for individual ownership. But big farmers with tractors are able to clear and use relatively vast areas, and these same farmers tend to have the greatest opportunities to turn their holdings into private property.

Furthermore, land acquisition can be a real problem between adjacent villages. After all, even though arable land may be plentiful in Burkina Faso, the land that

¹⁷ J. H. Sanders, "Developing New Agricultural Technology for the Sahelian Countries: the Burkina Faso Case", *Economic Development and Cultural Change*, vol. 39, 1990, p.6.

farmers value most is the land extending outward from their own village. Thus, depending on the proximity of adjacent villages, land may seem to "run out" much sooner than it actually does. A case where conflict has begun to arise is in the southeast province of Kompienga. The farmers from Pama, the provincial seat of the province, have customarily extended their operations toward the small village of Kompienga. However, since a hydroelectric dam was built in Kompienga village in 1982, its population has risen and now surpasses that of Pama. The newcomers in Kompienga are seeking land to farm, and what was once considered open expanse by the village of Pama is now within the administrative boundaries of Kompienga.

The tensions created by market forces are also significant, particularly because agricultural mechanization has contributed positively to economic growth and development in a country like Burkina Faso. The economic growth for Burkina Faso requires commercial growth in the agricultural sector, as this process will spur increased investment. Furthermore, as part of its structural adjustment program with the IMF, Burkina has been encouraged to strengthen its capacity for privatization. The result is an increasing dedication to conditions of market-based competition. In this sense, efficient farmers are forcing out less efficient ones, which leads to fewer but larger farms.¹⁸

Tension arises here on two levels. First, the pressures of competition are in conflict with the fragmentary nature of traditional land tenure. The lineage-based model for land distribution is not economically efficient, but it remains a socially harmonious practice. Second, are the tension that arises for farmers who are freed to pursue other

¹⁸ Robert Paarlberg, "The Impact of Globalization and the Information Society on the Rural Environment", in O. T. Solbrig, R. Paarlberg and F. Di. Castri (eds), *Globalization and the Rural Environment* (Harvard University Press, 2001), p.IV.

activities, but who have no realistic alternative for making a living. Competitive market forces are arguably part of a shrewd process that ultimately results in higher per capita incomes and improved standards of living. At the same time, however, successful competition is dependent on the existence of alternative market activities. If the alternatives exist, then competitive forces would be of great value to Burkina Faso; if they do not, then the security of a large portion of the population is critically threatened.

A final set of problem worth exploring has arisen through the socio-political climate in Burkina. Fortunately, the country has enjoyed several years of relative calm and has received tacit international support for its policies. However, a subtle class struggle has developed, as villagers understand the advantages that the elite enjoys from their political influence. The villagers are becoming increasingly resigned to the fact that those who obtain land from the government are those who have the support of political decision-makers. Not coincidentally, these same elites are the big "gentlemen" farmers who own the tractors, which further sparks their desire for land.

Population growth is another phenomenon that contributes to the tension between agricultural mechanization and land tenure rights in Burkina Faso. Burkina Faso population has been growing at 2.1 percent annually, and an increasing population will naturally have greater demands for land. So the question becomes: who is pushed further away from the village, the farmers using tractors or the traditional farmer in the village lineage? This tension will not become easier to resolve, as the population and the presence of tractors are growing in tandem.

The massive influx of Burkina people returning from Côte d'Ivoire in light of recent political, religious, and ethnic strife there has exacerbated the tension caused by

a naturally rising Population. Between three and four million such people had migrated to Côte d'Ivoire,¹⁹ seeking an opportunity to work on plantations and earned higher incomes than farming in Burkina Faso could have provided. However, as the conflict in Côte d'Ivoire escalated, increasing animosity had been leveled at the Burkina people in the country, forcing many of them to return to their country of origin. Seeking land of their own, they have been pushed into a situation of already rising tensions.

Despite growing land use pressures, arable land is still plentiful in Burkina Faso. Additionally, privatization and market competition do contribute to economic growth and improved standards of living. Furthermore, open conflict resulting from the effect of tractors on land holdings is in no way imminent. But it is necessary to reveal that the conditions for conflict exist, and that tensions are likely to rise along with population growth as more tractors are introduced in the agricultural sector.

Tractors, while increasing output through larger cultivated areas, have exploitative effects on labour and push cultivation away from food production, thus reducing the relative social value of the expanded areas they require. Tractors also create tensions concerning land acquisition, since they promote land grabs. This tension is especially strong between adjacent villages.²⁰ Tractors may soon have the effect of pushing small farmers out of subsistence farming and into a void where very few market alternatives exist. Finally, tractors may contribute negatively to class struggles at a time when Burkina Faso's rising population is making land harder to attain. This is not to say that there is no place for tractors in Burkina Faso, only that a potential for

¹⁹ *The Atlas of Burkina Faso* (Young Africa Publications, Paris, 1998), p.30.

²⁰ Philippe Tersiguel, *The Question of Tractors: Modernization of Cotton Plantations in Burkina Faso* (Paris, 1995), p.264.

future conflict exists at the crossroads of agricultural mechanization and land tenure policies at the village level.

What is meant here is that the rise of agricultural mechanization in Burkina Faso will occur, with or without policies to guide it. For this reason, it is imperative that the issue is addressed before serious conflicts arise between mechanized farmers and traditional landholders. Threats to land abundance are not urgent now, but this will not remain the case forever. It is wise, then, to confront the mechanization-land tenure tensions in their incipient stages.

When we explore the land tenure policies in Burkina Faso we see that the traditional land tenure system based on village lineage continues to thrive. Indigenous policies have been incorporated into official laws, and a delicate balance has emerged between the public, the private, and the customary in Burkina Faso. When considering the rise of agricultural mechanization in Burkina Faso, there are still very few tractors in the country, and most farmers continue to till their fields manually. However, tractor use is growing quickly, and the effects that tractors have on agricultural land expansion have given rise to tensions between mechanization and land tenure.

Looking more closely at these tensions, we find that a gradual adjustment of land tenure policies toward increased privatization, coupled with government efforts to moderate slightly the expansion of larger tractors, could benefit Burkina Faso. By promoting market participation in a socially acceptable manner, the conditions should exist for a prudent and sustainable development scheme.

The question may now be asked: what does this story reveal for other countries facing similar tensions? Across Africa, problems such as elite land grabs, commercialization

of traditionally held land, and exploited labor persist; examples can be found in Botswana, Côte d'Ivoire, and Kenya.

The lessons are most applicable to Burkina's West African neighbours, where both levels of mechanization and traditional land tenure systems closely resemble the situation in Burkina Faso. Even within the region, tensions may vary depending on the relative stage of mechanization. For example, the strong commercial agricultural industries in Ghana and Côte d'Ivoire during the 1970s made those countries attractive to aid organizations, which in turn led to a large increase in the number of tractors. Ironically, those countries now have fewer tractors per 100 hectares than they did in 1980, evidence that the rapid influx of tractors was not sustainable or socially acceptable. For most countries in the region, however, tractor numbers resemble those in Burkina Faso, making the present an ideal time to consider the rising tension between traditional land tenure and agricultural mechanization.

What is certain is that where subsistence farming remains the predominant source of employment, and where traditional land tenure is defined by flexible, lineage-based norms, a significant influx of tractors will conflict with the land tenure system. In such a scenario, there is a need to balance market-driven policies with arrangements that respect and suit the unique social structures existing at the village level in African countries.

STATE INTERVENTION IN THE AGRICULTURAL SECTOR

What has been discussed so far deals with the fundamental issue of land tenure in the overall agrarian structure of the country. The general agrarian scenario is that the farmers generally subsist by cultivating enough land to feed their families and by selling any leftover portion, ideally 10 to 20 percent of the crop, to obtain other necessities. The crops that are grown in Burkina Faso are relatively few. Millet and sorghum are the staples, used to feed most families and to make traditional beer. Approximately 80 percent of cultivated land are dedicated to these two crops. Maize is often cultivated around village compounds, and some crops-primarily peanuts and green beans-are planted in relatively small quantities as cash crops. One other crop, cotton, is vital to Burkina Faso's agriculture. As the country's principle cash crop and primary export, cotton impacts commercial growth in ways that other crops do not. Economic benefits accrue to those who grow the crop, leading to even greater commercial opportunities. Thus, income divides develop between those who can grow cotton and those trapped in a cycle of subsistence.

Agricultural production can be divided into "food crops" and "cash crops." Food crops, which consist of cereals (millet, sorghum, fonio), maize, and rice, are the most important products of the agricultural sector and uses 80% of the cultivated area. Cash crops are cotton and ground nuts. Cash crops are of fundamental importance to Burkina Faso's economy, because they provide the main trade revenue of the country. Cotton in particular has been Burkina Faso's main export commodity and has gained significant importance over the years.

Since independence the state has played a major role in the agrarian transformation of Burkina Faso. It has devoted between 10% and 25% per annum of

public investments to agriculture and started many Rural Integrated Development Programs, the most recent being the Valley of the Sourou River project.²¹ The extension agencies of the Ministry of Agriculture have provided services such as training, agricultural technique development, and agricultural inputs to the farmers. The state as a seller of inputs and purchaser of harvests, has fulfilled another important aim of regulation through organizations like SOFITEX in the area of cotton production and the OFNACER, responsible for stabilization of cereal production. The state has also influenced the agricultural sector as a policy maker. The agricultural policies constantly changed during the decades in adjustment with changing regimes and their perception of the relative importance of rural versus urban dwellers and their varying needs. The state, using the tools of producers price controls, has provided both incentives and disincentives for the volumes of agricultural outputs.

Some common characteristics emerging from the agricultural policies implemented by successive governments are like: a) the state has constantly reorganized its services in line with its prevailing objectives to modernize the agricultural sector; b) it has managed to control the pricing policy of agricultural products; c) it has attempted to organize producers and provide them with adequate infrastructure.

To facilitate the development of the agricultural sector, 11 Regional Development Offices (RDO) were created.²² The most important aspect of these offices is the Extension Service, responsible for all rural development activities in a given area.

²¹ Mike Spears, "Agrarian Change and the Revolution In Burkina Faso", *African Affairs*, vol. 90, 1991, p.96.

²² L. Filippi-Wilhelm, "Traders and Marketing Boards in Upper Volta- Ten Years of State Intervention in Agricultural Marketing", in K. Arhin (ed), *Marketing Boards in Tropical Africa* (KPI, London, 1985), p.120.

These activities include distribution of fertilizers, insecticides, and chemicals for the protection of stored grain; collection of credit; purchase of farm products; promotion of cooperatives; collection of statistical data; promotion of community activities; and advice on planting techniques.

The first Five-Year Plan, launched in 1967, gave priority to increasing the output of cereals through better cultivation methods and the use of fertilizers. As in previous years, the objectives were diversification of crops, soil conservation, and improvement of the irrigation system. These improvements were expected to double agricultural output in 15 years. The long-run decision was also taken to establish a complementary system of agriculture and livestock. The plan foresaw the development of irrigated areas of intensive farming as well as the enlargement of regions of traditional dry farming. The total investment for rural development during that time was 29.8% of total public investment.

The main objective during the second Five-Year Plan (1972-76)²³ was primarily to overcome the impact of the drought the country had just suffered in the early 70's, which hit crop farming severely. In 1973, the RDOs were given the monopoly for purchasing grains from farmers. The creation of the RDOs strengthened the role of the state as a buyer and purchaser of agricultural products. After four years of implementation of the government's measures, the objectives of monopolizing the grain trade and achieving price stabilization was not attained by the state. OFNACER, the national cereal board, was entrusted with greater responsibility for marketing cereals and supporting official producer prices at the level of farmers.

²³ J. Lecaillon and C. Morisson, *Economic Policies and Agricultural Performance in Low Income Countries* (OECD, Paris, 1987), p.85.

Like the food grain supplies, the livestock sector was severely affected by the drought of the early '70s. The drought-induced losses were estimated at 12-15% for cattle and at 8-10% for sheep and goats. In the years 1975-77 the government undertook several measures to reconstitute the cattle stock. To facilitate these efforts, a new agency, the ONERA (*Office National d'Exploitation des Recherches Animales*) was set up. Its task was to develop domestic and export marketing of livestock and livestock products.

Given the substantial disparities in agricultural potential between the Mossi plateau and the peripheral areas, the government's policies aimed to redistribute the population to alleviate population pressure on the Mossi plateau. The attempt to out-migrate people from the Mossi plateau into lands of richer soil, better rainfall, and low population density in the peripheral areas was a means of promoting the country's long-term agricultural development. A government agency, the *Autorité d'Aménagement des Vallées des Voltas* (AVV), was created in 1974 to organize settlement in the White, Red, and Black Voltas.²⁴ The government also launched projects to eradicate the simulium fly, tsetse fly, and malaria in infected areas and also planned to mechanize production and begin resettlement schemes.

Since the 1980s, the government and NGOs have taken a number of measures to reduce the heavy dependency of agriculture on rainfalls. Despite the large number of factors working against overly ambitious irrigation development, it was imperative for the government to formulate at least a moderate irrigation development program. The major objective of the program was to complement rain-fed agriculture at the margin and to gradually overcome the constraints identified earlier. Later, the government

²⁴ J. Baker, *The Politics of Agricultural in Tropical Africa* (Sage, Beverly Hills, 1984), p.132.

introduced local low-cost water retention schemes and started irrigation programs such as the Sourou Valley Rural Integrated Development Program.

When Thomas Sankara became the president of the country he introduced various changes at the policy level to give the ongoing agrarian transformation a new direction.²⁵ The *Conseil National de la Revolution* (CNR) led by Sankara, Compaore and other officers, was established after the *Comite de Salut Public* (CSP), a military formation, was overthrown on 4 August 1983. The political strategy of the CNR government was defined in the '*Discours d'Orientation Politique*' (DOP) pronounced in a speech by Thomas Sankara on 2 October 1983. In addition to emphasizing that the aim of the 'popular and democratic revolution' (RDP) was to create an 'independent, self-reliant and planned economy' in Burkina Faso, the revolutionary government stressed its intention to mobilize the peasants and workers in a socialist transformation of the country. But numerous conflicts and tensions developed during the four year rule of the CNR, culminating in the coup d' etat in October 1987 which brought the *Front Populaire* (FP) to power. Foreign, political and economic relations have also been important factors in the domestic power struggle in Burkina Faso. Another cornerstone of the political analysis of neo-colonialism presented in the DOP was the anti-imperialist stance of the new government.

The agricultural policy of the years of the revolution was distinguished from earlier efforts by a great plurality of objectives: production and productivity gains; income stabilization; food security; foreign-exchange earnings, and generating fiscal revenues. The implementation of policies to meet these objectives involved a series of government interventions, such as minimum producer prices, maximum consumer

²⁵ Mike Spears, "Agrarian Change and the Revolution in Burkina Faso", *African Affairs*, vol. 90, 1991, p.100.

prices, administration of agro-industrial output and input prices, marketing and stabilization boards, and regulation of markets and foreign trade.²⁶ The revolutionary government also gave priority to the construction of earth dams and the digging of wells for irrigation. Its first economic objective was to achieve food self-sufficiency in the decade that followed revolution.

But even while trying to improve the agricultural sector and the lot of the peasants during the first years of his administration, Sankara adopted the 1985 Agrarian and Land Reform Law, which actually hurt the interests of the peasants. The law nationalized land that had been private property or owned according to custom. The program was meant to promote the rational use of land to increase productivity and social justice but was viewed with great hostility by the peasants.

One of the major positive changes in the agricultural sector brought about by Sankara's policy was that of self-help rural development. The best known such project is the Sourou valley agricultural project. In the first phase a 711-m canal was constructed in the Sourou valley. The canal was constructed entirely by local labor to bring water from the Mouhoun to the Sourou dam. The second phase involved the establishment of 40,000 hectares of irrigated land and the construction of a barrage at Samandéni. Of this land, 15,700 hectares were divided into plots worked by small shareholders and land for agro-industries. The rest was run by the state, with about 3,000 hectares devoted to sugar production and 5,800 hectares to cotton and oilseed producing crops. The Sourou project is an example of what can be achieved in an arid area that was considered to have little potential. Self-help schemes for soil

²⁶ Ibid. p.103.

improvement, especially in the Mossi highlands, where soil erosion due to over-cultivation was prevalent, were also developed.

In May 1987, the Ministry of Agriculture established new, decentralized development agencies, the Regional Agricultural Production Centers (*Centres Regionaux de Production Agropastorale*). They replaced the Rural Development Agencies (*Organismes de Developpement Rural*), which were abolished in 1986.²⁷ Their essential function was to provide extension schemes to the farmers.

Beside that, numerous initiatives to promote particular crops or activities were launched between 1982-87, but were subsequently abandoned for lack of resources or support from the people. The government has consistently considered agriculture as the engine of growth but changed the nature of its development from being extensive, which had harmful environment consequences, to being intensive. In 1988, 11 Agricultural Production Units were set up, with the aim of operating the irrigation infrastructures.

Another step was the creation of a network of revolutionary defence committees (CDRs) and popular tribunals (TPRs) which formed the institutional framework for the mobilization and political education of the population along the lines presented in DOP, the CNR proceeded to draw up an economic development plan for the country. This stressed the satisfaction of basic needs through improvements in the health and education services as well increasing agricultural production with a view to achieve food self-sufficiency. Rural vaccination and literacy campaigns were launched through the CDRs in 1984, which planned to develop the agricultural sector focussing upon the

²⁷ Mahir Saul, "Grain Market and Merchants in Burkina Faso", *The Journal of Modern African Studies*, vol. 24(1), 1986, p.138.

improved management of water resources, the implementation of large scale irrigation schemes and programmes to halt environmental degradations.

The popular development programmes also envisaged a major improvement in infrastructure, notably through the construction of a railway from Ouagadougou to the northern province and Tambao where deposits of manganese are located. But although these sectoral investment programmes were intended to mobilize indigenous labour and local resources, it is significant, and paradoxical, that 80 percent of the finance was derived from the external sources.²⁸ Agricultural development schemes in Burkina Faso remain dependent on the availability of aid channeled through numerous bilateral and multilateral agencies. However the flow of remittances from migrant labourers working in Ivory Coast also continues to represent an important source of income for many rural communities.

The 'popular investment effort' promoted by the CNR was accompanied by a series of austerity measures designed to reduce the budgetary deficits of the state and to transfer resources into the development of the agricultural sector. But the real income of the state employees, including civil servants and teachers, were drastically affected by wage restrictions and by the imposition of compulsory levies to raise funds for the development programmes. During the drought in 1984 and 1985, official agricultural producer prices were increased; adding to the financial squeeze faced by the food consumers. On the other hand, although traders and business classes were denounced as enemies of the people, private investment in manufacturing industries, in construction and in agricultural input supply sector was encouraged by the CNR. It is also

²⁸ G. Martin, *The Ideologies at Practice in Burkina Faso* (Economica, Paris, 1988), p.47.

paradoxical that the economic policies initiated by the CNR under Sankara resembled the approach advocated by the World Bank in terms of regulating the public sector.²⁹

In distinguishing between the pro- and counter-revolutionary forces and groups in the political programme outlined in the DOP, the CNR also aimed to control political expressions in the civil society. In the period prior to the RDP a number of different organizations and groups including the military had struggled for political influence in Burkina Faso. By relocating the focus of debate and activity within the framework of CDRs, the CNR attempted to challenge the power of the trade unions as well as political parties and the traditional figures of the authority in the rural areas. This led to the increasingly divisive conflicts, both within the CNR itself and in relation to the various alliances of classes and groups in the towns and the villages. The emphasis which was given by Sankara to the emancipation of women, including a campaign against prostitution and the drafting of a new family code which would outlaw polygamy, was perhaps one of the most contentious issues in the attempt to transform the society in Burkina Faso.³⁰

The trade unions, and particularly the teacher's union, having been severely repressed under the previous military regimes adopted a cautious attitude to the CNR right from the first days of the revolution. Declining living standard of the urban workers and civil servants as a result of the wage controls and price increases led to a rapid deterioration in the relations between the government and the representatives of the state employees. At the same time, the concentration of power in the hands of the CDRs which had been set in all the workplaces, threatened to undermine the

²⁹ J. Fontaine, *Evolving Economic Policies and Disinvolving States- Notes in an African Context* (IDS Bulletin, 1987), p.17.

³⁰ J. Ziegler, *Oppression and the Cultural Resistance* (Seuil, Paris, 1988), p.193.

negotiating strength of the traditional workers' organization. Strikes and protests by the teachers' union in 1984, linked to a suspected attempt to overthrow the CNR, resulted in the dismissal of a large number of teachers. Despite differences of opinion within the CNR, which in addition to the military comprised representatives of several small communist parties, restrictions on the activities of the trade unions were imposed.

Radical restructuring of the relations of production in the agriculture sector and in the rural communities was also high on the agenda of the CNR. However the introduction of an agrarian reform, through which all land in Burkina Faso became property of the state and the formation of CDRs in the villages, also presented the government with serious difficulties focussing on the transfer of power away from the traditional chiefs. As young people in the rural areas became organized in the CDRs, which assumed responsibility for allocating land, the authority of the chief was weakened. Traditional system of land management and labour organization were condemned as feudal practices in the rhetoric of the DOP.³¹ At the same time, the CDR attempted to gain control over the extensive network of village associations, which had developed throughout the country during the 1970s. Furthermore, increasing economic inequality in the cash crop producing regions, and the emergence of a group of richer innovative farmers using modern production techniques, accentuated the conflicts with the CDRs in the villages. The extent to which rural development programmes should be organized on a collective basis was also a contentious issue.

As far as food security was concerned, the government was also anxious to restrict the speculative activities of the private merchants who controlled the distribution of cereals. Although producer prices for food crops were raised in 1984, the

³¹ G. Martin, *Ideologies at Practice in Burkina Faso* (Economica, Paris, 1988), p.48.

enforcement of the regulation was difficult due to the operational inefficiency of OFNACER. Numerous employees of this and other parastatals were also accused of corruption and tried by the popular tribunals. Strengthening the network of co-operative cereals banks which had been set up throughout the country since the mid 1970s were seen by the CNR as a means of improving the bargaining position of peasants producers in the cereal market. The cereal banks, particularly in the northern deficit producing region of the country, provided an important insurance scheme for many villagers who had become dependent on supplies from other region or the food aid from abroad.³² However, attempts to negotiate purchasing agreement between OFNACER and the cereal banks groups floundered on the inability of the parastatal marketing board to meet its commitments for payments and collection of the harvest. At the same time, the private merchants mounted opposition to the government intervention in the cereal market, and negotiation on delivery prices for cereal supplies to OFNACER collapsed on several occasions. The merchants were particularly hostile to the creation of a series of measures, which were intended to regulate and control commercial activities and raise revenue through taxation.³³

The production of large cereals surpluses, following increased rainfall in 1986 and combined with the late arrival of food aid shipments after the drought in 1984 and 1985, led to a rapid fall in prices, which further weakened efforts to stabilize the cereal market. OFNACER, which managed the security stocks constituted largely on the basis of food aid consignments, was unable to purchase grain at official prices, and the producers were forced to sell to the private merchants at lower prices. Failures, like not developing efficient modes of state intervention in the cereals market, over-production

³² M. Anderson & P. Woodrow (eds), *Rising from the Ashes- Development Strategies in times of Disaster* (Westview, Paris, 1989), p.76.

³³ P. Labazee, *Enterprises and Entrepreneurs in Burkina Faso* (Karthala, Paris, 1988), p.233.

of cereals in the southwestern regions of the country while not ensuring adequate food supplies in the deficit regions of the north proved a major setback for the government. But the growing urban demand for imported wheat and rice, as well as the failure to increase domestic output of the latter product also comprised the rhetoric of food self-sufficiency in Burkina Faso. Restrictions on imports of fruit and vegetables from Ivory Coast and an increase in the price of beer, added to the dissatisfaction amongst the urban population whose purchasing power had been steadily eroded. Declining standard of living also encouraged the merchants and entrepreneurs to seek opportunities for profits outside the country.³⁴ It is significant that the Front Populaire, well aware of the increasing economic hardship faced by the urban workers, included wage increases, price reductions and the lifting of import restrictions amongst the first measures introduced after the coup d'état in October 1987.

The alienation of merchants, state employees and urban workers under condition of severe financial austerity was accentuated by the degeneration of the CDRs into instruments of coercion. Internal disagreements between the members of the CNR, and increasing international pressures also contributed to the isolation of Sankara.³⁵ Although the rectification under the leadership of Campaore and the FP did not entail a complete rejection of the revolutionary programme put forward in the DOP, the new government had abandoned the previous strategy of confrontation with the major institutions of civil society. In recognizing the strength of the trade union movement and the private sector in the towns, as well as the traditional political authorities in the rural areas, the FP shifted towards an emphasis on the need to generate renewed

³⁴ Ibid. p.226.

³⁵ E. Skinner, "Sankara and the Burkinabe revolution- charisma and power, local and external dimensions", *Journal of Modern African Studies*, vol.(26-3), 1988, p.27.

economic activity based on the consolidation of an entrepreneurial middle class and the introduction of state capitalism.

But, although the reorganization of the CDRs and the abolition of restrictions on the activities of the trade unions, combined with a renewed effort to encourage private investment, created the basis for a democratic opening, the military was still in power. The legalization of political parties, as well as inclusion of various political groupings in the coordination of the FP, were also frequently discussed. But, as the execution of the suspected opponents of the political parties showed, a stable coalition around the government no longer existed. In this sense it seemed that the cycle of alternative waves of democratization and militarization³⁶ which have characterized Burkina Faso since independence, was set to continue. How the government has fared in transforming the agrarian structure of the country in the next decade has been discussed in the next chapter.

³⁶ B. Szajkowski, *Marxist Regimes Series-Economics, Politics and Society* (Pinter, London, 1989), p.54.

CHAPTER – 4

AGRARIAN TRANSFORMATION IN BURKINA FASO IN RECENT TIMES

Since the beginning of 1990s, lot of issues like globalization, environmental concerns, and the role of NGOs etc. have suddenly gained prominence because in one way or the other it is linked with the lives of the people. If examined closely, these issues are also closely linked with the agrarian needs and habits of the people, and more so, if the economy of the country is heavily based on the agriculture sector as is the case in Burkina Faso. This chapter deals with some of these concerns under the various sub-heads like role of the state, private organizations and the NGOs in the agrarian transformation of Burkina Faso. Apart from that, it also has other sub-heads like environmental concerns and its relationship with the agrarian transformation of the country.

ROLE OF THE STATE

Over the decades, agriculture has evolved as the lifeline of Burkina Faso's economy contributing more than 40% to the GDP and ensuring employment and revenue to 90% of the active population. Farming in Burkina Faso can be classified into two groups: subsistence farming (cereals and tubers) and yield farming (oilseeds, fruits, vegetables). Agriculture generates more than 50% of income from export. Cotton occupies first rank in export from Burkina Faso and earns more than 30% of the revenue.¹ In 1998 the estimated annual production of cotton grain was 420,000 tones, which brings Burkina Faso among the best producers of cotton in West Africa. The cotton is exported to Taiwan, Indonesia, Thailand, India and other Asian countries.

In order to permit this sector to play a key role in the national economy, the government has adopted many reforms, which aim to stimulate economic growth and to

¹ J. Lecaillon and C. Morrisson, *Economic Policies and Agricultural Performance in Low Income Countries* (OECD, Paris, 1987), p.83.

guarantee the food requirement of the country. Hence structural adjustment program was started between 1993 and 1995. This program has liberalized commerce and the price of cereals, recognized the cotton network and created a suitable fiscal system for the agriculture sector. A second program of structural adjustment called "PASA II" is currently in progress. The government policy in the agricultural field has the following targets.

- To increase the production of cereals, tuber fruits and vegetables by modern tools of farming and to extend the use of fertilizers.
- To create a growth rate from the year 2000 at 10% per annum.
- To promote establishment of industrial units in agro processing, to transform agricultural resources into finished products or semi-finished products for export and for local market.
- To increase as far as possible the share of agriculture sector in the GDP.

As a result, a number of opportunities have emerged in Agricultural Sector, which include:

- Industrial units for manufacturing tractors.
- Industrial units for manufacturing pumpsets for irrigation.
- Industrial units for manufacturing of agro-food products.
- Small industrial units for agro-chemicals (fertilizers, pesticides).
- Industrial units for manufacturing of textile (cotton fabrics, garment manufacturing, yarn).

- Setting up of units for production of commercial farming (fruits vegetables, arabic gum, cotton).²

The growth rate of the livestock is divided as per the following breed of animal: cattle, pigs, assign, camelin 2%; goat, chicken 3%; horse 1%. Burkina livestock is mainly exported to the neighbouring countries in West Africa: Ivory Coast, Ghana, Togo, and Benin. Leather products are mainly exported to Italy, Spain, Portugal, Holland, Cyprus, Switzerland, Nigeria, and Ghana. The country has only one industrial unit, which transform leather into semi-finished products before export. Milk production is assessed to be more than 200,000 tones. However, the country doesn't have milk-processing units, which can turn these resources into finished and durable products for export or the local market consumption. It has only 20 dairy units using indigenous and semi industrial methods. The government policy aims to assist in creating a better growth of livestock thus ensuring higher nutrition levels of the population and increasing the share of this field in the national economy. The short-term aims of the government are to encourage the creation of industries of breeding products, to stimulate the production of cattle feed, to diversify the cattle production and to improve the health of animals.

So the emerging opportunities in this area are:

- Small industrial units for milk processing- (dairy plants) breweries.
- Small industrial units for the production of animal feed.
- Small industrial units of veterinary pharmaceutical products.
- Meat processing units.

² Y. N. Ganmtore, *Burkina Faso for Business* (Embassy of Burkina Faso, New Delhi, 1997), p.19.

- Small units for leather.
- Cattle rearing- ranching and poultry.³

ROLE OF THE PRIVATE ORGANIZATIONS

During the last 15 years, agricultural modernization has been rapid in the western part of the country,⁴ where rather favourable conditions of soil and climate prevail. Cotton, and to a certain extent maize, have become important cash crops, human and livestock population have increased rapidly, and agricultural mechanization through draft animals have reached 50% of the farm household.

From the late 1980s through 1995, however, worsening terms of trade for cotton, maize and livestock resulted in deterioration in the provision of services for farmers. This decline affected credit and input delivery system, as well as marketing and extension organization, the latter belonging to the SNVA (*Systeme National de Vulgarisation Agricole*). Farmers now face narrower profit margins and increasing pressure on land. They need to intensify or diversify their production system, to learn how to calculate margins and how to compare different production system techniques, levels of intensification, etc.

Current extension messages often focus on the technical aspect of the innovations and ignore the social and economic implication. Furthermore, the programs lack the capacity to respond to specific needs of different type of farm households. To respond to these needs a team of Farming System Research (FSR) scientists have introduced Farm Management Group Counseling (FMGR), which is a participatory

³ Ibid. p.20.

⁴ G. Faure, P. Kleene, S. Ouedraogo, and G. Raymong, *Burkina Faso: Using Farm Management Group Counseling to Improve Agricultural Extension Efficiency* (AKIS, 2003), p.1.

extension approach based on farm diagnostics leading to introduction of innovations, within the setting of a training program. Taking into account the identified needs of farmers (through previously conducted and on-going FSR programs), this approach focuses on farm household economics first and technical innovations second. What kind of households are able to apply definite set of technology for reasons of size, labour, investment capacity, access to markets, credits, etc., are questions that need to be considered to improve extension efficiency.

Since 1992, a pilot project has been conducted in the western zone.⁵ A mixed team has been constituted, which includes FSR researchers from INERA, extension staff, trainers and field extension workers (FEWs) from SNVA and PDRI/HKM. In the first phase, participating farmers are restricted to school-leavers and adult education trainees who join voluntarily. In the second phase, the method is extended to all farmers. Technical assistance is being provided by CIRAD, in the context of its assessment program for transfer of technology and methodology. The final objective of the pilot project is the design of a complete set of management tools for on-farm implementation, as well as its training components, within existing extension systems. A \$23 million grant from the French Ministry for cooperation covers current operation cost for the period 1993-1996 through the PDRI/HKM (a project for the promotion of local development in the cotton zone).⁶

Participatory training is the first characteristic of the Farm Management Group Counseling approach. Sessions are held every fortnight and last about three hours. They are devoted to training for diagnostics, learning simple principles of farm management, input/output calculations, field visits and demonstrations. The participants gather farm

⁵ Ibid. p.1.

⁶ Y. N. Ganetmore, *Burkina Faso for Business* (Embassy of Burkina Faso, New Delhi, 1997), p. 19.

management data and registered during the sessions in specially designed farm records notebooks. Handouts on improved practices, written in comprehensive local language, are thoroughly explained and discussed, and put into relation with the outcomes of individual farms chosen among the participants, and analyzed by the group. Based upon their own constraints and preferences, the participants make their choices from a diverse set of proposed innovations.⁷ Management improvements include better crop rotations, balance between food security and cash crops, use of draft animals and equipment, use of inputs, erosion control, labour organization, etc.

The diverse set of innovations covers three domains:

- 1) Intensification and diversification of crop and livestock production;
- 2) Mixed farming (integration of agriculture and animal husbandry); and
- 3) Erosion control and improved land-use management.

The central idea is that the sustainability of agricultural system can be attained in many different ways following a variety of paths, and must be adapted to the needs and potential of different categories of farm households. The literate farmers of the first phase of the project are generally young dynamic men and women, who either still work with their parents or have just created their own households. That is why from the beginning enlarged sessions are organised in order to associate all members of the participating household to the program. Through field visits, demonstrations and counseling sessions open to all farmers; a much larger part of the population is gradually being introduced to the program.

⁷ S. Ouedraogo, *Burkina Faso: Using Farm Management Group Counseling to Improve Agricultural Extension Efficiency* (AKIS, 1995), p.2.

For the second phase, a special program has been started that focuses on groups of non-literate. In many villages, formal or informal groups based on neighbourhood; kinship, religion, etc. exist. If leading representatives of these groups participate in the Farm Management Counseling Group, and if they are able and willing to play an animateur's role, the special program can be started. Training of these farmers-animateurs is conducted every six months.

Monitoring is done by individual data gathering, observations, yield measurement, etc., as well as during explanatory field visits and regular training sessions. Participants record their own data in farm record notebooks. These books are verified during the dry season with the help of animateur. The latter then sends an anonymous resume to headquarters for compilation. This database built up for farmers' registered farm management records is a powerful instrument for comparative analysis. It provides the farm-advisors with a variety of standards, which are gradually updated over the years, constitute an important source of information to both practitioners and administrators for improving, advice-giving and policy-making. The animators through simple registration forms concerning quantifiable impact such as attendance keep other records, visits organized, introduction of innovations, yields obtained, etc. A third type of quantitative and qualitative evaluation is done by questionnaires after training sessions, special studies by students, common interval evaluation field tours, and external evaluation mission.

All Farm Management Group Counseling (FMGC) impact studies on FMGC report that farmers place the highest priority on improved food security through more efficient management food stocks throughout the year.⁸ This requires improved planning and

⁸ G. Raymong and Kabore, *Burkina Faso: Using Farm Management Group Counseling to Improve Agricultural Extension Efficiency* (AKIS, 1995), p.3.

estimation of food production and the calculation of daily and total consumption needs, as well as the marketable surplus. Farmers have in general been very pleased with this aspect of training.

Other frequently mentioned success factors are:

- They achieved a better understanding of their income and expenditure;
- At field level they have learned how to measure production and yield, and how to calculate input levels and costs;
- They appreciate the comprehensive knowledge they received on major innovations such as the production and use of manure, quickset hedges (especially for delimitation of land-property), production and use of fodder crops and crop residues, etc.

Satisfaction by FEWs is high. They all mention a much better understanding of the structure and functioning of the major types of farm households in their zone, as well as the impact of FMGC on their regular extension activities. They all state that FMGC is both interesting and efficient, but they also indicate that it demands a great deal of effort.

The activities of the pilot project have been carried at two levels. The first consists of design and test of prototype instruments in three villages. Level 2 is represented by the verification of the revised instruments in nine different villages, under conditions of normal presence of extension personnel. Independently, SNVA has introduced FMGC in 20 other villages of which 10 were supervised by the adult-education trainers. An association of market gardeners, who adopted the instruments to their specific needs, led another experiment with FMGC.

Working with a mixed team of researchers, extensionists and trainers proved to be a very enriching experience. Special efforts have been made by the team to develop training courses for the growing number of FEWs participating in FMGC. One-week refresher courses organized one or two times a year played an important role in updating and improving the instruments.

At the July 1995 FMGC workshop,⁹ the participants concluded that in general this approach could be easily integrated into the SNVA under the following conditions:

- FMGC should be introduced on a limited scale, (only in villages where there was an explicit demand);
- FMGC could be introduced according to a rotating system, within villages with groups having a limited life-time, and by progressively covering other villages;
- The same FEWs could simultaneously conduct FMGC in part of their villages, and the current programme elsewhere;
- Supervision and monitoring by a mixed team of researchers, extensionists and trainers should be a requirement; and
- Regular refresher training sessions should be organized; these sessions will also provide the opportunity to exchange experience and improve the instruments.

FMGC conducted by farmers' organizations should be encouraged, because these groups are generally well motivated. Successful introduction of FMGC to existing extension system relies on determination and motivation. The approach does not require more personnel or funding, except for specific action-research and training in

⁹ Ibid. p. 3.

the beginning. Support from existing research capacity could often be mobilized to fill this need.

Compared with the current extension practices, Farm Management Groups Counseling introduces a new economic dimension, provides tools to farmers and FEWs how to analyze farm production, use of inputs, revenue and expenditure, etc. in a participatory way, and how to link these findings with appropriate introduction of innovations. In this way FEWs became real farm-management advisers who learnt how to handle variability of farm practices, and how to adjust their advice to the specific needs and potential of different categories of farmers.¹⁰

Farm Management Group Counseling provides an opportunity to improve extension methods by enlarging the scope of existing programs to include the farm household economies concepts and to fine-tune technology transfers to better meet the identified needs of different categories of farmers. FMGC provides farmers with a range of farming practices that can help them to identify or diversify their production and increase their agricultural income. It can be a key component of any agricultural development process; it develops farmers' capacity to better adopt new farming practices and related technical choices. It helps them ultimately to better manage their farms and the surrounding natural resources.

In the future, with the strengthening of the Farmer Organization Movement, FEWs could become of these independent bodies. They most probably will be asked to support their members for improvement of farm incomes, making use of simple, understandable instruments of farm management.

¹⁰ Dolle and Raymond, *Burkina Faso: Using Farm Management Group Counseling to Improve Agricultural Efficiency* (AKIS, 1995), p.4.

ENVIRONMENTAL CONCERNS AND THE ROLE OF THE NGOs

Another important issue worth noticing in the overall context of agrarian transformation in Burkina Faso in recent times is heavy soil degradation and desertification of the cultivable land and the extent up to which efforts have been made by the state and civil society to mitigate the disaster. We already know that a vast majority of population practice subsistence form of agriculture in the country. However, this is a subsistence agriculture that does not adequately meet the needs of a rapidly expanding population.

This situation is explained, on the one hand, by natural conditions that are unfavourable to agricultural production¹¹ and, on the other, by an archaic agricultural system (lack of organization in production, temporary crop production, a stock-farming system based on transhumance, excessive woodcutting etc.). On the other hands, it is dominated by small family farmers who use basic farming methods (almost 70% of farmers use the *daba*) and farming techniques that contribute to the degradation of environmental resources. Climatic conditions and the pressures of the human and livestock populations further exacerbate this degradation.

The various development agencies have expressed their concerns regarding the extent of this degradation of the environment, which was accelerated by the great drought of the 1970s. Several efforts have been made to combat desertification, increase productivity and improve food security. The country has developed policies and strategies to deal with the phenomena allied to the rapid degradation of natural resources. This policy initiative was outlined in the first five-year Popular Development

¹¹ J. Lecaillon and C. Morrisson, *Economic Policies and Agricultural Performance in Low Income Countries* (OECD, Paris, 1987), p.83.

Programme (1986-90) which placed particular emphasis on conservation, the protection and restoration of the environment through the implementation of three major initiatives designed to combat bush fires, straying animals and excessive woodcutting. In the same way, the development of the Agrarian and Land Re-organisation (ALR) in 1984 aimed to achieve the rational management of natural resources by solving the problems associated with land distribution and access to land.¹² Subsequently, many other papers and strategy documents were developed – in particular the National Action Plan for the Environment (NAPE) in 1994 – by the Ministry of the Environment and Tourism and the various organisations responsible for implementing these strategies to control desertification.¹³

The policies for the restoration of the environment implemented by various development agencies (government departments, projects, NGOs) have, in certain respects, made it possible to control the degradation of natural resources. However, there is still a need for more coherent SWC (Soil and Water Conservation) strategies for the effective and sustainable re-establishment of the balance of the ecosystem. It would, in fact, be advisable to introduce associated measures, especially by reinforcing the farmers' capacity for self-help.

The five-year Popular Development Programme (1986-1990)¹⁴ has placed particular emphasis on conservation, the protection and restoration of the environment through the implementation of three major initiatives:

- To combat bush fires;

¹² *Analysis of the Constraints and the Potential of Agricultural Development of Burkina Faso* (INERA, Ouagadougou, 1994), p.22.

¹³ *Resume of National Strategy on Environmental Matters* (Ministry of Environment and Water, Ouagadougou, 1996), p.2.

¹⁴ J. J. Kessler, and C. Geerling, *Environmental Profile of Burkina Faso* (Wageningen University of Agronomy, Netherlands, 1994), p. 37.

- To combat straying animals;
- To combat excessive woodcutting.

This policy initiative was also reflected in the introduction, in August 1984, of laws governing the rational management of natural resources, in particular the Agrarian Land Re-organization (ALR). The aim of the ALR was to distribute land among the inhabitants of a village by giving them long-term rights of occupation, and therefore guaranteeing the security of tenure that is crucial for carrying out sustainable initiatives for the protection of the environment.¹⁵ The laws stipulate that for all areas given over to rainfall crops, these initiatives must include anti-erosion sites and make provision for the erection of windbreaks and other soil conservation measures.

Apart from these initiatives, the PNLCD (National Programme for Combating Desertification) 1986, outlines national strategies for a more focused intervention with regard to the environment.¹⁶ The PNLCD proposes a new strategy that includes the following main lines of action:

- The launching of an extensive campaign to increase awareness and educate the population with a view to encouraging them to take an active part in managing their own environment;
- The integration of development initiatives;
- The promotion of research in the fields of agronomics, zootechnics and forestry.

¹⁵ *Analysis of the Constraints and the Potential of Agricultural Development of Burkina Faso* (INERA, Ouagadougou, 1994), p.28.

¹⁶ J. J. Kessler and C. Geerling, *Environmental Profile of Burkina Faso* (Wageningen University of Agronomics, Netherlands, 1994), p.30.

- The monitoring and evaluation of all projects for combating desertification with the following general objectives: 1) to protect and restore the environment; 2) to achieve food self-sufficiency; 3) to meet national requirements in terms of energy, timber and construction materials.

The PNLCD also suggested ways of implementing, coordinating, monitoring and evaluating the strategy via the establishment of an executive body, the CNLCD (National Committee for Combating Desertification). To implement the PNLCD ideas, eight programmes were developed: 1) Conservation of natural resources; 2) Intensification and diversification of animal and vegetable production; 3) Awareness, education and organisation of the rural populations; 4) Meeting energy, timber and construction requirements; 5) Meeting water requirements; 6) Controlling migration; 7) Opening up new regions to migrants; 8) Associated research.

A number of initiatives aiming to make a direct or indirect contribution to combating desertification and to the restoration of soils have been launched by the government, to run concurrently with the implementation of the PNLCD. For example, the PSB (Programme Sahel Burkina), LUCODEB (Combating Desertification in Burkina) and PNGT (National Programme for the Management of Rural Areas).¹⁷ The aim of the latter is to control and then 'reverse' the process of the land degradation affecting the quality of life of the rural communities.

After a preliminary phase, the World Bank approved financing for US\$ 16.5 million. The project has six main lines of approach: a) The development and implementation of management plans for some 130 rural communities in three provinces; b) The development and implementation of integrated management plans for

¹⁷ Ibid.p.31.

classified forests and rural areas near three classified forests and 47 neighbouring communities; c) Technical support for initiatives currently underway in 18 provinces; d) The establishment of a system for monitoring the environment at national level and for monitoring the impact of the project; e) The development of human resources; f) Management and research. In addition to the above initiatives there will be many others, including: CONAGESE (National Council for the Management of the Environment); Technical initiatives by the Ministry of the Environment, Ministries of Agriculture, Stock-Farming, etc.

According to the Permanent Secretariat of NGOs¹⁸, 145 NGOs are currently working in Burkina Faso. Of these, more than 3/4 are involved in combating desertification. These NGOs usually work in a few socio-ecological zones and are concentrated mainly in the north and centre where more than 2/3 are based. Most NGOs have gradually evolved from their role as charities to become involved in the socio-economic development of the country with the following aims and objectives: 1) The active participation of populations in their own development; 2) Food security; 3) Combating desertification.

To achieve these principle objectives, the NGOs working in the field of combating desertification base their work on a participatory approach to development. The work of the NGOs is based on the premise that development is only sustainable when the primary beneficiaries are also the decision-makers. They consider that the increasing awareness, mobilisation and active participation of the population are the principle objectives to be achieved in order to promote localised projects of common or individual interest. This approach to development requires the populations to be aware

¹⁸ *Directory of the Member NGOs* (SPONG, Ouagadougou, 1996), p. 32.

of their role within society and of their responsibility in terms of the national programme. The NGOs believe that communities should rely on their own resources and that the government should provide secondary support. This concept of the active involvement of the beneficiaries has led to a series of associated measures linked to literacy, management, maintenance and the monitoring of development operations.

The belief that the population should be actively involved in and assume responsibility for their development is shared by the NGOs that mainly provide financial and technical support for local associations involved in the implementation of initiatives in the field. To facilitate the re-establishment of agriculture, stock farming and the ecosystem that have all been severely affected by successive droughts, the development agencies, and especially the NGOs working in Burkina Faso, have focused their efforts on soil and water conservation with a view to encouraging intensive agriculture. To this end, they have promoted the widespread use of various techniques, including anti-erosion sites, compost trenches, assisted natural regeneration, mulching, reforestation, quick-set hedging, planting of fertilizing species, etc. Most of these are traditional techniques with improved methods of application. They are being promoted because they are easily achievable and do not usually involve much financial outlay, which encourages farmers to adopt them.¹⁹

The digging and sinking of wells and the construction of mini-dams have been introduced as secondary measures because they not only provide the water that is vital to the survival of people and animals, but also offer new development opportunities for rural communities during the dry season. Faced with the extensive human damage to a resource already degraded by drought, it was imperative to find solutions to restore,

¹⁹ *Role of the NGOs in the Implementation of PAFT in Burkina Faso* (PAFT, 1990), p.14.

preserve and protect these natural resources. This was why certain voluntary NGOs – e.g. the German Voluntary Service (SVA), the Association des Volontaires Français pour le Progrès (AVFP), the Dutch Volunteer Service (SVN) and the American Peace Corps – embarked upon village forestry initiatives in the provinces of the north, north-west, north-east, centre, central-east and south-east. Other international NGOs (Voisins Mondiaux, OXFAM, AFRICARE, 6 “S”, SOS Sahel) and national NGOs took part in the project.²⁰ The aims of the initiative, which involved establishing mini- village nurseries and plantations in the areas of intervention, were to: 1) reduce excessive woodcutting; 2) restore damaged eco-systems; 3) provide the populations with enough firewood, timber and construction materials.

The initiative contributed to the production and distribution of fast-growing and drought-resistant species, in particular *Eucalyptus*, *Azadaraeta-nidica*, *Prosopis juliflore*, etc. A number of communities now have populations of these species, which offer the combined advantage of protecting the soil and providing firewood and timber. To standardise their SWC initiatives, the NGOs formed an "agro-ecology network" to provide a framework for discussion and the exchange of experience. These exchanges facilitated the development of strategies to promote the coherent integration of agricultural-production and environmental-protection initiatives with a view to creating a system of sustainable agriculture. The main lines of approach of this strategy are as follows: (i) The development of traditional techniques of soil recovery; (ii) The integrated application of techniques; (iii) A choice of techniques suited to the agricultural and climatic context.

The total contribution of NGOs in the production sector (Agriculture, Environment, Stock farming) in 1986 was US\$ 5,196,200. Soil erosion is a major cause

²⁰ *Directory of the Member NGOs* (SPONG, Ouagadougou), p. 36.

of concern among the farmers of Burkina Faso, who have always had their own soil and water conservation techniques. Most of the local methods of SWC reflect their multi-functional nature, i.e. combating erosion, maintaining organic matter and the physical properties of the soil. The emphasis placed on soil conservation and the collection of water may vary according to the average rainfall, soil type and geographical location of the land in question. For example, in relatively wet areas, the leaching of nutrients and the erosion of the surface soil can represent a serious problem for agricultural production, and soil conservation measures are therefore paramount. By contrast, in drier areas where water is the main constraint on agricultural production, the techniques developed focus on the collection of water and the irrigation of crops.²¹

Because of the different agro-climatic regions of Burkina Faso, there is a wide variety of traditional SWC techniques, which are more or less effective in the preservation, and recovery of natural resources. The more or less integrated application of the various SWC techniques has made it possible to obtain the following types of results:

- The restoration of bare soil by the appearance of a vegetation cover consisting of a more or less dense covering of grass depending on whether it is a low-lying or elevated area. This natural regeneration has made it possible to recover uncultivated soils and use them for growing crops.
- The protection of the relatively sparse vegetation covers still existing in the regions of the south and southwest. There have been efforts to protect the forests and allow it to recover from the destructive actions of humans and animals.

²¹ A Young, *Agro-forestry for Soil Conservation* (Wageningen University of Agronomy, Netherlands, 1994), p. 67.

- The development of new approaches towards the environment. An enhanced – collective and individual – awareness of the environment has in fact led to a reduction in bush fires and excessive woodcutting, even though these destructive practices still continue to a lesser extent.²²

This is not an exhaustive list of results. They are also fragile and must be strengthened and consolidated to ensure that desertification in Burkina Faso is combated more effectively.

Several factors influence the implementation of SWC initiatives.

- Demographic pressure constitutes a major factor in the degradation of natural resources. Between 1985 and 1995, the population of Burkina Faso increased by 2.7%. Since then, the increase has been in the order of 2.6%. In the near future the population is expected to reach almost 16 million. This rapidly expanding population automatically requires a greater area of cultivated land, which in turn means more land clearance. And this inevitably contributes to the destruction of the small amount of available vegetation cover. According to the Ministry of Agriculture, the high population density on the central plateau and the high levels of intensive farming (between 50% and 70%) mean that the agro-demographic threshold has been reached, if not exceeded, and has led to a process of land degradation.
- Another important factor is cash crops and the use of chemical fertilizers. In Burkina Faso, the main cash crops are cotton and groundnuts, which are the also the principle products exported. They are produced using modern techniques

²² C. Reij, J. Scoones and E. Toulmin, *Traditional Techniques of Water and Soil Conservation in Africa* (Karthala, Paris, 1996), p. 152.

(mechanised soil preparation, improved seeds, chemical fertilisers, pesticides). Mechanisation has the disadvantage of making the structure and texture of the soil more fragile, especially the surface layers, which makes them more vulnerable to various natural forms of erosion (wind, heat and water). Furthermore, the use of chemicals (fertilisers, pesticides) can contribute to the destruction of the micro-flora and micro-fauna and thus destroy the balance of the ecosystem.

- Migration of the work force also affects the above-mentioned cause. Many Burkinabés are currently migrating from one region to another or from rural to urban areas. Three types of migration have been identified:²³ (i) The rural exodus of young people towards urban centers in search of paid work. This uncontrolled migration leads to the over-exploitation of land and deforestation around the large towns, and creates problems in terms of urban development. Between 1975 and 1985, the urban growth of Ouagadougou and Bobo-Dioulasso was 156% and 101% respectively. (ii) Migration to other countries. This type of migration is characteristic of rural areas, usually in regions with poor financial resources. The migrants move mainly towards Côte d'Ivoire and, to a lesser extent, towards Ghana. The departure of these members of the working population depopulates the villages and deprives them of the workforce required to implement SWC and other labour-intensive initiatives. (iii) Rural migration. Migration within the country involves the individual or collective, spontaneous or organised, migration from regions that are usually infertile and/or over-populated to regions that are under-populated and under-exploited, with the intention of settling temporarily (during the rainy season) or permanently. Rural migrations within the country have increased since the drought of 1970–72. They are regarded as a purely temporary solution to the

²³ J. J. Kessler and C. Geerling, *Environmental Profile of Burkina Faso* (Wageningen University of Agronomy, Netherlands, 1994), p. 54.

problem of over-population and the absence of cultivable land. The problems experienced in the central region will soon be repeated in the colonised regions since the settlement of the migrant populations and the cultivation of these new areas occurs in a haphazard way that results in the –exploitation of the land and vegetation cover.

- Cultivation Methods is another factor that affects SWC initiatives. Burkina Faso is inhabited by a large number of different ethnic groups characterised by widely varying cultures, methods of land management, cultivation and use of natural resources. According to tradition, women do not, generally speaking, have any land-tenure rights, even though they represent over half of the agricultural workforce. This has the effect of limiting the number of SWC initiatives that women are able to implement. However, there is a nation-wide customary right of land tenure, represented by the land chief responsible for religious and legal functions. He is responsible for ensuring that the community's rules for the exploitation and cultivation of land are respected. Each man, whether he belongs to the village community or comes from outside the village, is entitled to a share of the land. However, this system of distribution makes it impossible to meet the needs of the entire population due to the increasing pressures caused by its expansion, with the result that many farmers can only obtain land by virtue of the loan or lease system. In the event of a loan, customary land tenure rights forbid the planting of trees or the construction of anti-erosion sites.²⁴

With regard to the above, many factors contribute to the continued degradation of natural resources, in spite of the efforts made via the SWC policies. However, in view of the sociological, cultural and ecological context of Burkina Faso, and the factors that

²⁴ *Farmers Management of Soils and Crops in Burkina Faso* (SAFGRAD, Ouagadougou, 1987), p. 28.

favour the implementation of SWC initiatives, it is essential to consider ways of achieving a sustainable solution to the phenomenon of the degradation of natural resources.

The concept of the Burkina Faso's government policy for combating desertification²⁵ is extremely appropriate. However, for this policy to be operational and achieve the anticipated results, a number of associated measures must also be introduced:

- The establishment of a permanent dialogue between the different ministry/departments (Ministries of Agriculture, Environment and Water, Planning) so that technical services operating in the field can coordinate their initiatives;
- The education of farmers, in particular to improve their ability to diagnose their own problems, identify and plan activities with a view to enabling them to implement SWC initiatives;
- The improvement of traditional SWC expertise and the dissemination of new techniques which are simple and inexpensive.

Taken overall, the action taken by NGOs to combat desertification and achieve sustainable development has achieved positive results. The local schemes set up by these organisations have proved successful in specific areas of the country. Their models for the population's involvement in the process have been tested in the field. They also have considerable experience of labour-intensive programmes and the use of local techniques and materials. In the provinces of Yatenga, Soum, Bam, Sanmatenga

²⁵ R. M. Rochette, *The Struggle of Sahel Against Desertification-Lessons Experienced* (Weikersheim, Germany, 1996), p. 364.

and Passoré, NGOs have taught the local organisers and populations to build their own contour lines in the fields using water pipes and to construct terraces. To make these terraces perennial, the NGOs have also developed nurseries and taught farmers to plant trees. They have introduced contour sowing and ploughing and rafting. Anti-erosion sites have made it possible to increase the level of water infiltration into the soil by damming ravines and wadis and building micro-dams. The rise in the groundwater table in the wells below these dams has provided the basis for the intensification of irrigated crops, in particular market gardening.²⁶

Farmers have been the beneficiaries of a number of support initiatives from government organisations, government projects and NGOs designed to improve their ability to effectively implement SWC initiatives. They have also been trained in the use of such techniques as anti-erosion sites, organic manure, and integrated agriculture, forestry and grazing.

They have also received support in the form of agricultural equipment (picks, spades, crowbars, carts) to enable them to implement the various techniques. Although considerable efforts have been made by farmers in the most degraded regions in the north of the country, it is regrettable that, in the south and south-west, where there is still a full vegetation cover, farmers are still reluctant to apply SWC techniques. Furthermore, it appears that the majority of farmers do not adopt an integrated approach to the application of SWC techniques, which means they do not always achieve the results anticipated.

²⁶ C. Reij, J. Scoones and E. Toulmin, *Traditional Techniques of Water and Soil Conservation Africa* (Karthala, Paris, 1996), p. 263.

It therefore appears to be a matter of some urgency that, with the help of the support agencies, they develop strategies for a more integrated approach to SWC initiatives in the northern regions, and techniques for preserving the environment in the south and southwest.

The natural resources of Burkina Faso are subject to a constant process of degradation due to the climate, destructive farming methods, and the pressures of the human and animal populations. The policies for restoring the environment implemented by development agencies (government departments, projects, NGOs) have proved beneficial in certain regions where the populations have become sufficiently aware of the need for them to take an active part in combating desertification.

However, for a more effective application of the SWC initiatives advocated, it is necessary to establish associated measures, in particular, by reinforcing the farmers' capacity for self-help.

INTERNATIONAL AND REGIONAL CO-OPERATION

All this was done at the domestic level to modernize the agriculture sector. But there have also been efforts to cooperate with other countries and world financial institutions to bring transformations in the agrarian structure of the country.

In recent years, growing demands have been made on Ministry of External Affairs, Government of India, through ITEC (Indian Technical & Economic Co-operation) Programme to transfer knowledge and skills gained under India's Green Revolution, by developing countries, especially in Africa.

The first experiment in transferring such technology was launched in Burkina Faso. Under an MoU signed between the Governments of India and Burkina Faso, six

farmers, from Punjab traveled on the night of 7th /8th October, 1999 to Burkina Faso to demonstrate their skills based on their long experience, in cultivation of rice and other food crops. The selection was made from among small and marginal farmers who possessed the skills and the education, but not the capital to expand their base in their home villages in Punjab.

On May 6, 1999, a Tripartite Agreement was signed between Government of India, Government of Punjab and the farmers. Government of India, in addition to supporting the farmers with a monthly stipend, had undertaken to supply farming equipments and machinery such as tractors, disc harrows and ploughs as well as consumable inputs such as seeds, fertilizers and pesticides. The Government of Punjab had undertaken to meet certain supplementary costs of equipment and services to ensure the viability and smooth operation of the project. The implementing agency for this project was the Punjab Agri. Export Co-operation Ltd. (PAGREXCO), Chandigarh.

Government of India had sent experts in various agricultural fields on short-term assignment to advise the farmers and sort out any problems that they encounter, during the three-year period.

The Government of Burkina Faso on its part, placed 30 hectares of contiguous developed land with irrigation facilities at the disposal of the project at Douna, a village located about 500 kms. west of the capital city, Ouagadougou. It had also undertaken to provide accommodation, transport and medical facilities in Burkina Faso, to the farmers. The Government of Burkina Faso expressed its happiness at the launching of the project and looked forward to receiving more farmers from India in the years to come.

Government of India is presently engaged in formulating its response to requests for agricultural assistance from Governments of Namibia and Tanzania, decision regarding which would, to some extent, will be determined by the success of this first experiment in Burkina Faso. Eventually, it is hoped that such projects will open the way for private commercial enterprise by numbers of Indian farmers in Africa, where there is an urgent imperative for skilled agricultural activity to meet the growing needs of food security.

Cotton cultivation is another area where Burkina Faso has taken initiatives with other developing countries to fight out the discriminatory agricultural policies of the developed world at the forums like WTO. In the 1990s, Burkina Faso along with Mali and Benin turned swathes of agricultural land over to cotton cultivation and thought they had discovered the key to economic growth. But today, the developed world's taste for agricultural subsidies is pushing Africa cotton farmers out of the world market. And while Africa is usually on the receiving end of lectures from the industrialised world about the benefits of market reforms, the continent is now turning the tables on its mentors. Several West African governments are denouncing the US and EU for ruining their cotton exports. They made the cotton and other agricultural subsidies the main focus of WTO trade talks at Cancun in Mexico.

In the CFA zone (Communauté Financière de l'Afrique / Cooperation Finanzière en Afrique centrale) representing 14 francophone countries in West and Central Africa, one million tonnes of cotton is produced every year by about two million small farmers. Some 95 percent of this production is exported, giving the region roughly 15 percent of the world cotton market with a yearly turnover of around \$ one billion. Taken together, the region is the world's third biggest cotton producer behind the USA and Uzbekistan

with the difference that little irrigation is used and thus scarce water resources are not diverted as in Central Asia. Cotton exports constitute half of the export earnings of Mali and Burkina Faso and around 80 percent of those of Benin.

It was in the mid-90s that West Africa turned to cotton as a main source of export earnings. Produced under forced labour during French colonial rule and mismanaged by state enterprises during post-colonial dictatorships, the democratisation of most West African countries after 1990 favoured pro-market reforms in agriculture and eliminated some corrupt practices which disadvantaged farmers in favour of bureaucrats. The devaluation of the African CFA franc by 50 percent in 1994 made African cotton internationally competitive on a large scale for the first time. In the four main producer countries Benin, Burkina Faso, Chad and Mali, cotton yields doubled between 1990 and 1998, and so did producer prices. The CFA zone's world market share increased from 8.8% to 13.9% between 1991 and 1997.

But around 1998, the international context changed. China, India, the US and the EU moved into cotton farming on a large scale, the latter two using massive subsidies for their own farmers allowing them to undercut developing countries productions although African cotton farmers produce at half the cost of American ones. World cotton harvests rose beyond world demand, with a surplus of nine million tonnes in 2001 and 15 million in 2002. From 1999 to 2002, the world market price for cotton thread slumped from 71 US cents per kilo to only 38 cents. This plunged African cotton farmers, most of whom live barely beyond subsistence level, into severe crisis – and their governments, heavily reliant on cotton export earnings, were also severely affected by it.

CFA zone countries said that they were losing \$ 150 million a year because of the subsidy-induced price. In 2001, Mali received \$ 37 million as development aid – and lost \$ 43 million export earnings due to the cotton slump. In April 2003, the governments of Benin, Burkina Faso, Chad and Mali submitted a formal complaint about US and EU cotton subsidies to the World Trade Organisation. At a ministerial meeting in Burkina's capital Ouagadougou in June 2003, all 14 CFA zone governments joined this complaint and resolved to seek alliances on the pan-African level and other multilateral institutions. They demanded the progressive elimination of subsidies and compensation for their producers. EU and US had reacted with the claim that the WTO was not the right forum to address such issues.

This proposal was formally submitted to the Cancun WTO conference in Mexico on 10 September 2003 and looked set to dominate parts of the proceedings – never before had African governments teamed up to this extent to challenge the rich world's agricultural subsidies on the WTO level. It commanded widespread support within the countries concerned. At the recent African counter-summit to the G-8 Evian meeting in the Malian village of Siby, the cotton question became a symbol of Africa's resolve to secure itself a level playing field on the world economic stage.

However, African governments know that they must do more than simply engaging in a populist fight with the great powers. The successes of export strategies lie in their capacity to generate sufficient revenues to engage in sustainable development and reduce dependence on world market prices. For African cotton, this means moving from raw to finished exports. Here, the onus is on the African governments concerned to act.

At the June ministerial meeting, it was agreed that by 2010, roughly a quarter of the CFA zone's cotton yield should be processed before export – at present it is just 5 percent. This looked like the kind of overambitious goals set by governments who prefer laudable intentions to sound practical. Specifically, the challenge consists in producing more cotton thread locally, which means lots of textile factories. It makes economic sense, as African cotton thread is assumed to be 44 percent cheaper than that of the US and 54 percent cheaper than that of the EU. Increasing its production is thus more promising than producing more finished garments for export, where Africa cannot compete with Asian cheap labour. Current policy proposals range from reducing value-added-tax (VAT) on local textile products and modernising the Textile Industry College in the Malian town of Ségou.

But at a seminar in the Togolese capital Lomé in July 2003, cotton producers warned that these ideas might not be enough. Increased use of synthetic fibres and the introduction of genetically modified cotton in the US were identified as threats to the very survival of indigenous cotton farmers in Africa. The producers demanded that African countries urgently look into improving training of farmers, extending rural infrastructure and marketing local products more effectively in their own countries.

So the kind of agrarian transformation Burkina Faso has underwent in the last decade or so has a character of its own. But it is not totally delinked from what has been done in the past, rather these characteristics are more pronounced now. How the various issues discussed in this chapter and others are linked has been summarily told in the next chapter, which will also conclude the whole study.

Chapter – 5

CONCLUSION

The analysis of agrarian transformation in Burkina Faso raises a number of issues, which have also been examined in the context of agricultural production and food supply crisis in Africa. Although, there is no simple explanation of the ongoing crisis of African agriculture, it has frequently been attributed to mismanagement by governments, whose policies have discouraged or inhibited productivity and output ratio.

Consequently an attempt has been made to revitalize the agricultural sector by getting 'crop prices right'. It is based on the privatization of agricultural market and the liberalization of trade. However, it can be pointed out that structural problems such as deficient research, transport, input supply and credit system have significant effects on agricultural productivity in Africa.

There is a need to increase the output of food and cash crops, improve the level of food security and income and employment in rural communities. For this, development strategies for agriculture should be based on enhanced rural investment combined with improvement in production techniques, credit system and marketing arrangements. In Burkina Faso, we can see the implementation of these strategies since 1970s onwards.

Furthermore, many African countries derive much of their foreign exchange earnings from export crops. Balance of payment deficits had its impact on the declining levels of commodity prices on world market. This shift in terms of trade, together with increasing debt repayment burdens, has forced many governments to introduce austerity measures. These had been done by structural adjustments programmes advocated by International Monetary Fund and the World Bank. But it must be mentioned that many of the policy reforms, introduced in Africa since the end of the 1970s, have dealt with the

effects rather than the causes of agrarian problems. Apparently when international or external constraints are taken into account the problem of African agricultural development, and by that measure the agricultural underdevelopment of Burkina Faso in particular, becomes more glaring.

Role of government in introducing transformations in the agricultural sector, specifically in the post colonial decades, have become more contentious. The kind of transformations brought by postcolonial governments in Burkina Faso has to be analysed for completely restructuring the agricultural scenario. The agricultural policy making in Burkina Faso shows that a powerful alliance of urban based industrial and bureaucratic interest groups has exploited politically marginalised rural producers by distorting prices, exchange rates and resource allocation. The policies which discriminate against the agricultural sector are the logical consequences of an urban bias in the development strategies.

The solutions that have been proposed in such conditions have initiated a debate on the politics of the state intervention in Burkina Faso agriculture. These debates are based on the assumption that correcting price distortions by reducing government control will generate the conditions required for improvements in production and living standards in rural areas. But paradoxically, market oriented policies that have been frequently stressed has required successive governments to sack public officials or increase consumer food prices. In this way we see that market oriented policies have not conferred the desired agricultural transformation in Burkina Faso. It could be said at this point that structural transformation in the governance model along with strategic transformations in the agricultural sector might have brought the desired outcome.

It could also be said that economic mismanagement in Burkina Faso is due to the concentration of power in the hands of the urban elite. The economic policies introduced by various governments in Burkina Faso have been determined by a complex set of political forces and alliances as well as class relations. Thus explanations of the agrarian crisis have begun to focus on the struggles which have taken place between post-colonial states and peasants, revolving around the access to resources and political power.

Along with this, other important elements can also be identified in the analysis of agrarian transformation in Burkina Faso. It can be argued that government schemes to transform agricultural production and parastatal intervention in agricultural markets have failed to capture the misery of the peasantry. Moreover, agricultural productions and exchanges are based on an economy where peasants have resisted the incursion of a bureaucratic state apparatus. More so, these have been resented by peasants because of the foreign ideology of modernization. There has also been a failure to account for the incorporation of peasants in monetary and market exchanges.

Agrarian crisis in Burkina Faso reflects a pattern of accumulation of wealth. This is characterized by efforts to exert control over resources. Privileged access to the resources of the expanding public sector in the post-colonial Burkina Faso developed through patronage and kinship relations have led to black marketing, smuggling, corruption and tax-evasion. In order to govern and hold together unintegrated peasants, political patronage and military domination have evolved. Moreover Burkina Faso has been plagued with one other paradox. The state is simultaneously strong and weak. Strong in the sense that public sector comprises a large proportion of the national

economy. And it is weak in the sense that the political leadership lacks legitimacy among its citizens.

Gradually there is a resurgence of interest in the conditions for the emergence of democratic system of government in Africa. But the idea that 'less state means better government', which has been forcefully promoted by the international financial institutions during the 1980s, detracts from the fundamental debate about the role and functions of the state agencies and institutions in economic development.

It can also be pointed out that the privatization of parastatal marketing boards in Burkina Faso have done little for the bargaining power of the agricultural producers or to improve the food security of the poorest farmers. On the other hand, the debt problems and resource constraints faced by Burkina Faso may offer an opening for populist strategies to encourage innovations at local level and to increase agricultural production.

This is what happened under the regime of Thomas Sankara. In attempting to restructure the relations of power and to take the part of peasants, the CNR government under Thomas Sankara inevitably faced numerous contradictions. This ultimately led to the rectification of the revolutionary strategy. Simultaneous attacks on the power and privileges of urban workers, civil servants, and merchants as well as efforts to subvert the traditional hierarchy in the rural communities gradually destroyed the initial support for the revolution.

Dissatisfaction among these powerful groups was reinforced by growing resentment towards the control and restrictions imposed through the network of CDRs. Furthermore, the CNR government emphasized the intention to reduce dependence on

foreign aid and imports as well as continued recourse to food imports which increasingly compromised the rhetoric of self-reliance.

By abandoning the populist strategy, the FP government has reverted to a modernization approach relying on the transformation of production and exchange by strengthening the commercial classes. In this process the familiar practices of patronage and corruption resurfaced. But although the new policies appeared to have encouraged private sector investment, severe environmental degradation and food insecurity in many rural areas threatened to undermine the long-term development potential.

APPENDICES

APPENDIX - 1

Agricultural Production and Yields

Cereals, 1999-2001

	Burkina Faso	Sub-Saharan Africa	World
Average production (000 metric tons)	2,594	87,715	2,075,387
Percent change since 1979-81	122%	54%	32%
Per capita production (tons per person)	225	135	343
Percent change since 1979-81	34%	-11%	-4%
Average crop yield (kg per ha)	880	1,221	3,096
Percent change since 1979-81	53%	9%	41%

Roots and tubers 1996-1998

	Burkina Faso	Sub-Saharan Africa	World
Average production (000 metric tons)	65	132,744	638,438
Average crop yield (kg per ha)	5,664	7,694	12,958

Pulses, 1996-1998

	Burkina Faso	Sub-Saharan Africa	World
Average production (000 metric tons)	65	6,499	55,469
Average crop yield (kg per ha)	815	481	808

Meat, 1999-2001

	Burkina Faso	Sub-Saharan Africa	World
Average production (000 metric tons)	130	8,124	233,218
Percent change since 1979-81	144%	49%	71%

Agricultural Land,

Total cropland (000 ha), 1999

Hectares of cropland per 1,000 population, 1999

Arable & permanent cropland as a percent of total land area, 1998

Percent of cropland that is irrigated, 1999

Agricultural Inputs

Average annual fertilizer use, 1999

Total (thousand metric tons)

Intensity (kg per hectare cropland)

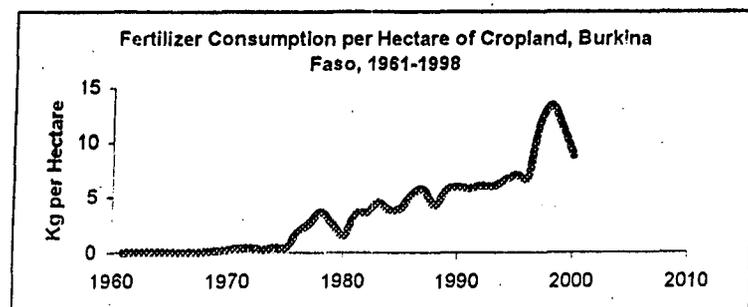
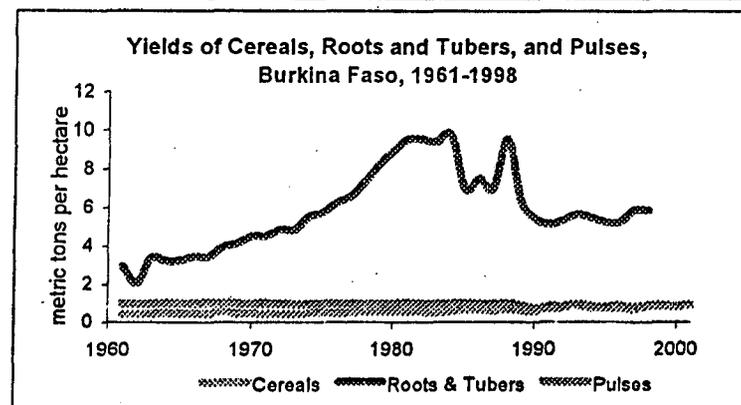
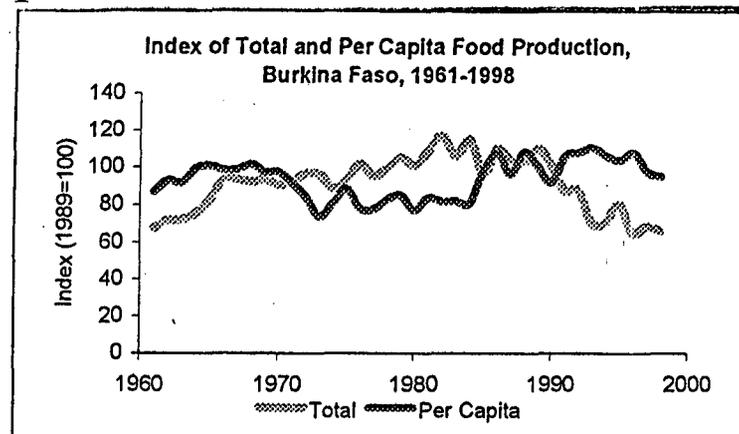
Pesticide use, 1994-1996 (kg/ha cropland) (c)

Number of tractors, 1997

Agricultural workers as a percentage of the total

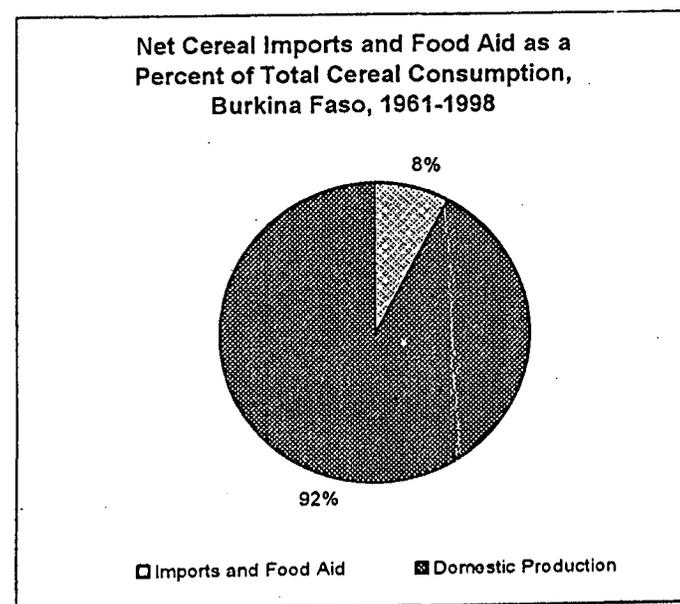
Percent of GDP generated from agricultural activities, 2000

	Burkina Faso	Sub-Saharan Africa	World
Total (thousand metric tons)	51	2,124	141,360
Intensity (kg per hectare cropland)	15	12	94
Pesticide use, 1994-1996 (kg/ha cropland) (c)	1	X	X
Number of tractors, 1997	1,993	261,984	26,334,690
Agricultural workers as a percentage of the total	92.4%	X	X
Percent of GDP generated from agricultural activities, 2000	34.5%	16.7%	5.0%



APPENDIX – 2

	Burkina Faso	Sub-Saharan Africa	World
Food Security			
Variation in domestic cereal production, 1992-2001 (average percent variation from mean)	4.3%	6.5%	3.5%
Net cereal imports and food aid as a percent of total consumption (b), 1998-2000	7.9%	13.5%	X
Food aid as a percent of total imports, 1998-2000	19.4%	19.9%	X
Average daily per capita calorie supply, 1999 (kilocalories)	2,376	2,238	2,808
Average daily per capita calories from animal products, 1999 (kilocalories)	113	152	460
Percent of children that are underweight, 1995-2000 (c)	34.0%	30.0%	27.0%



Source: <http://earthtrends.wri.org>

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