

Agrifor and U.S. Plywood in the Congo

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Veröffentlichungsversion / Published Version

Monographie / monograph

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Empfohlene Zitierung / Suggested Citation:

Geiger, T. (1965). *Agrifor and U.S. Plywood in the Congo*. (Case Studies of Business Performance Abroad, 12). Washington: National Planning Association. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-90282-8>

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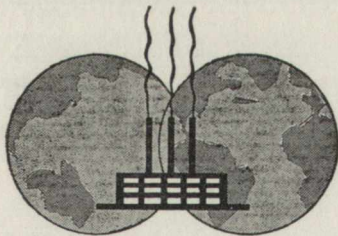
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*AGRIFOR AND U.S. PLYWOOD
IN THE CONGO*

(K13)

(051)

by THEODORE GEIGER



TWELFTH CASE STUDY IN AN NPA SERIES ON

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Library of Congress
Catalog Card Number
65-24366

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1966.6772



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ACKNOWLEDGMENT

This Case Study was made possible in part by funds granted by the Carnegie Corporation of New York and by the John Hay Whitney Foundation. These foundations are not, however, authors, owners, publishers, or proprietors of this publication, and are not to be understood as approving by virtue of their grants any of the statements made or views expressed therein.



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*These two Policy Committee members died prior to the publication of *Agrifor and U.S. Plywood in the Congo*.

PREAMBLE
TO
AGRIFOR AND U.S. PLYWOOD
IN THE CONGO

SO FAR IN THIS SERIES of NPA case studies of U.S. Business Performance Abroad, we have concentrated on studying a particular overseas operation of various U.S. business enterprises. This case, the twelfth in the series, breaks new ground as we report on the joint venture of U.S. and Belgian business interests in the fast-moving economic development of Africa south of the Sahara.

With rare exceptions, all of the economic development of Africa has been in European hands. Since the turn of this century, development has proceeded slowly, although two world wars did much to speed the introduction of Western ways and to accelerate the rise in economic and social expectations. The past 10 years have witnessed the increased tempo of independence for a large number of African states. The demands of these newly formed nations for capital and technical assistance placed an increasing load on the scarce resources of the traditional suppliers in continental Europe.

The combining of U.S. capital and technical resources with West European experience seems to be a natural and fruitful way to meet the needs of these emerging African nations. A report on such a dual approach may be particularly useful for a newly independent nation like the Congo.

The field research for this case study was undertaken in the winter of 1959-60, and it was written in 1960 immediately before the accession of the Congo to independence. Though subsequent events have delayed its publication, they have not been such as to change its conclusions in any major respect.

The year 1960 saw the eruption of many political problems which are still not resolved. While they have had a disruptive effect on numerous sectors of the economy, these difficulties do not prejudice the great natural wealth of the country nor need they necessarily neutralize in the longer run the foundation of social and economic progress achieved over the past half century. If Congolese leaders can find solutions to these pressing political problems, there is every reason

to believe that the nation could quickly resume its vigorous economic growth and social development.

The Agrifor-U.S. Plywood joint venture has continued to function normally with a minimum of disruption from political upheavals. The companies report that Congolese have been replacing foreign managers and technicians, and that production and productivity have increased substantially. The factories in the Mayumbe have been honored by visits from President Kasavubu and many other important officials who appreciate the constructive role this operation is playing in the Congolese economy.

Our author, Dr. Theodore Geiger, NPA's Chief of International Studies, is a specialist in the economics and sociology of the African continent south of the Sahara. Several trips to the region—one of which resulted in a previous study in this NPA series (*TWA's Services to Ethiopia*)—have sharpened his insight into the myriad of difficult problems facing these new states in their march toward economic viability and political stability, and into the constructive role played in this process by responsible private foreign investment. No better case in point could be had than this story of Agrifor and U.S. Plywood in the Congo.

Eugene W. Burgess

Eugene W. Burgess
Director of Research

April 1965



AGRIFOR AND U. S. PLYWOOD

IN THE CONGO

by

Theodore Geiger



I.

The People and Their History

IT IS CHARACTERISTIC of our times that one of the world's newest nations is still identified in the popular mind as "darkest Africa." Even today, the word Congo conjures up a vision of a mighty river wending its way through incalculable miles of tropical jungles inhabited by the most primitive of peoples. There are still parts of the Congo which fit this description. The post-independence problems of the Congo, which are reported by the mass media as riots and violence, have served to reinforce this image. What impressed Joseph Conrad as

the "heart of darkness" in the days of the slave trade and the violence that catches the eye of the modern reporter are but a few facets in the complex prism that is this large country. Today a visitor might be equally impressed by the traffic flow on Leopoldville's modern boulevards, the ultramodern copper smelters of the Katanga, or the mechanized port facilities of Matadi. He might take notice of the quest for education concretized in schools, training programs, and three universities, or in the search for new political institutions—all proofs that the Congo has changed radically and irreversibly since Conrad's time.

There are few other places on the planet where the contrast is as striking between civilization and primitiveness, between modern industry and preagricultural food gathering, between untouched nature and the transformations wrought by man. In part, this contrast reflects the physical potentialities and difficulties of the country—its varied terrain, climate and rainfall zones, its vast natural resources, the immense distances crossed by its lines of communication both internally and to the outside world. But, in the main, it arises from the sheer inertia of traditional ways of living and working, and from the difficulty of traversing in a short generation or two the vast distance between the tribal society and subsistence economy of the past and the urbanized society and market economy of the future.

That transformation in other countries has always been accompanied by ferment and tensions, sometimes constructively channeled, sometimes erupting in violence. Thus, the pace and effectiveness of this profound social and economic change in the Congo depend on many factors—some within deliberate human control, others which can be affected only marginally, if at all, by conscious decisions and actions. Among the former is the expression in the government of the forces desiring construction of a progressive, modern economy and the establishment of law and order. Another of the most important is the investment of financial capital, managerial talent, and technical skill in economic activities which increase productivity and help to improve living standards. In varying degrees, all three of these essential elements of economic growth can be obtained from more advanced economic regions under international, governmental, and private auspices.

During the 75 years of Belgian rule, private enterprise played a major role in the development of the Congo. The overwhelming proportion has been Belgian and the share of U.S. private investment, in particular, has been small. Since independence, this situation has been changing. In order for the Congo to achieve a rate of growth that

meets at least the needs of its people, if not always the expectations of its leaders, a broader base of investment is desirable. Most has been forthcoming from public sources in the United States and in Western European countries other than Belgium, and from international organizations. These assistance programs should not diminish the opportunities nor detract from the contributions of Belgian investors. However, to achieve satisfactory results in growth, even under favorable conditions, these initiatives must be complemented by private investment from the United States and other developed countries which is capable of undertakings beyond the competence of governmental aid programs. Knowledge of the experiences of the few examples of direct U.S. investment that have already been made can help to stimulate the interest of other U.S. investors in the Congo and assist them in planning and getting their projects under way.

An unusually good example is the experience of the United States Plywood Corporation. It is a good example in the sense that the operation has been successful from the company's point of view and has contributed significantly to the country's advancement. It is unusual in that the U.S. firm has been associated in an equal partnership with a Belgian company—the Société Forestière et Agricole du Mayumbe (Agrifor)—and the relationship has been eminently satisfactory to both parties. In the light of the Congo's need for capital from abroad and for the managerial and technical skills that accompany private foreign investment, this association of U.S. Plywood and Agrifor may serve as a pattern for future cooperation between Belgian and U.S. companies and as an example of the benefits that responsible and imaginative private enterprise can bring to a less developed country.

THE CONGO LIES ON BOTH SIDES OF THE EQUATOR, and it covers an area of more than 900,000 square miles, roughly equal to the United States east of the Mississippi River. The region is often called the Congo basin—a name it deserves, for it is indeed shaped like a vast basin or saucer. Its eastern rim is the high mountains which border the Great Rift Valley of Africa. Along the south and around to the southeast is a high plateau which stretches into Zambia and Angola. The western rim is formed by a range of hills that extends up the Atlantic coast into Gabon and through which the

Congo River bursts in 200 miles of rapids and gorges from Stanley Pool down to the head of its estuary at Matadi. On the north, the terrain slopes gradually upward to the plateau of the southern Sudan, whose highest ridge is the divide between the Congo drainage basin and the rivers flowing northward into Lake Chad and the Nile.

Within the vast circle formed by these mountains and plateaus lies the heart of the Congo—an immense rolling plain of tropical rain forest and grassy savannahs, cut every few miles by the innumerable streams and rivers that flow into the Congo proper. The altitude of the great central basin is about 1,300 feet above sea level.

The Congo's climate varies from region to region depending largely upon nearness to the equator and the altitude. Owing to its location along the equator, most of the central basin has rain throughout the year. There is no dry season—only two periods of somewhat lesser rainfall when the sun is furthest north and south. Elsewhere in the country, there is generally an alternation of rainy and dry seasons which follow the north and south movements of the sun through the year. The higher areas around the rim enjoy much cooler temperatures, particularly in the east and south, where hoar frost is not uncommon during cold nights. The higher peaks of the Ruwenzori mountains in the northeast—some of which exceed 16,000 feet—are snow-covered, although they are rarely seen owing to the almost continual mantle of clouds that conceals these "Mountains of the Moon," as they were originally named by early European geographers.

Yet, of all of the country's varied and extraordinary physical features, none can compare in sheer magnitude, in scientific and aesthetic interest, or in importance to the inhabitants, with the mighty river which has given the nation its name. Second among the world's rivers in volume of water brought to the sea and sixth in length, the main branch of the Congo River rises on the Zambian border, while many of its southern tributaries originate in central Angola. In the east, the river drains Lake Tanganyika and some of the smaller lakes of Central Africa. In all, the Congo traverses a great semicircle of 3,000 miles before mingling its waters with those of the Atlantic Ocean in an estuary nearly 100 miles long.

The Congo River system has been the predominant geographical feature of the country both for the traditional tribal society and for the emerging modern society. The river and its innumerable tributaries have provided the main means of transportation and communication, an important source of food, raw materials, and hydroelectric power, and an imponderable influence on culture and thought.

MAIN REGIONS OF THE COUNTRY

The Congo's political subdivisions may well be changed in the next few years as the country strives to create its political institutions. In any event, the present divisions now roughly correspond to the ethnogeographical areas which have existed for a long time and which will retain their importance. As the Congo River rises in the southeast and arcs northward, westward and southwestward to the Atlantic, it is a convenient point of reference for identifying the country's major subdivisions, many of which are defined by the tributaries of the Congo.

At the mouth of the river on its northern bank is the **MAYUMBE**. In this region of heavily forested hills are located the production facilities developed by U.S. Plywood and its Belgian partner Agrifor. Upstream and eastward from Matadi to the confluence of the Kasai and Kwango Rivers lies the **BAKONGO** region, and the country's capital city of **LEOPOLDVILLE**. Here, from the 15th to the 19th centuries, was located the kingdom of the Congo, whose memory inspired the Abako movement, the dominant political group in the region.

South of the Bakongo is the **KWANGO** region, an enclave into Angola, lying between the river of the same name and the Kasai River. Partly a semiarid extension of the Kalahari Desert, the Kwango has been becoming progressively drier in recent years. The Kasai River passes through the **KWILU** region in its middle reaches on its way from the **KASAI** region, due east of Kwango. The latter region contains some of the country's richest mineral resources and one of its newest cities, Luluabourg. North of Kwango and Kasai, respectively, are **LAC LEOPOLD II** and the **SANKURU**, both regions of dense rain forest and among the least developed in the country.

Proceeding up the mainstream of the Congo, we encounter the region of **MOYEN CONGO**, formerly the province of Equateur, and the country's northwesternmost region, named after its principal river, the **UBANGI**.

In the northeastern Congo, the territory around Stanleyville is known as **HAUT CONGO**. To the north is **UELE** region, named for the tributary that drains it, and, to the east, the region of the great **ITURI** tropical rain forest, famous for its Pygmy tribes and wildlife preserves.

Southward and upstream from Stanleyville—above which the Congo River is called the Lualaba—is the **MANIEMA** region which stretches as far as Lake Tanganyika. It was the last stronghold of the Arab slave

traders in the late 19th century and the region still remembers their raids and the struggles to suppress them. West of Maniema lies the LOMANI River region and, to the east, the KIVU region, which borders on the lake of the same name. An area of mountains and high hills with rich soil of volcanic origin, Kivu is noted for its beauty, pleasant climate, and productive farms.

Finally, the high plateau forming the southeast portion of the country is the famed KATANGA region. Here are located the copper, zinc, cadmium, and uranium deposits which provide so large a part of the country's export earnings.

BEFORE THE COMING OF THE EUROPEANS

IT IS A COMMON IMPRESSION that Africa had no history before the coming of the Europeans. In recent years, this illusion has been dispelled as far as West Africa is concerned, for independence has brought with it a new consciousness of its pre-European past and of the distinctive characteristics and achievements of the societies which flourished between the Sahara and the Atlantic Ocean prior to the region's conquest by the French and British toward the end of the 19th century. But in Central Africa, the discovery of the past has taken longer, and knowledge about the pre-European history of the Congo has been attained more slowly not only outside Africa but also within the country itself.

The oldest of the Congo's present inhabitants were probably the Pygmies. Their origin can only be conjectured, but tradition and archeological evidence indicate that the Pygmies were already living in the Congo before the coming of any of the Bantu and Nilotic tribes, who now constitute the great bulk of the country's inhabitants. Today, there are groups of Pygmies in all parts of the Congo where wildlife is still sufficiently abundant to enable them to exist by means of their traditional hunting and food-gathering activities. In the course of centuries, permanent working relations have evolved between Pygmy tribes and certain of their larger neighbors under which the former provide fresh game in return for agricultural products and handicrafts produced by the latter.

There is evidence that the Bantu peoples began to arrive in the Congo sometime during the first thousand years A.D. Most of these migrants are believed to have come from the northeast. However, there was also some influx of peoples from West Africa via the Camer-

oons and Gabon. These southward migrations continued throughout the following thousand years and were only brought to a halt with the establishment of European rule late in the 19th century.

In consequence of these long-continued population movements, the present inhabitants of the Congo are of very mixed ancestry. In the central and southern portion of the country, the great bulk of the people are of Bantu stock. In the north and east, many tribes and groups are wholly or partly of Nilotic origin. The diversity of languages is even greater, but there are several principal ones which are understood over wide sections of the country. Thanks to the Arab slavers, Swahili—the *lingua franca* of East Africa—is spoken throughout much of the eastern Congo from Lake Kivu west to Stanleyville and south to the Katanga. In the Katanga itself and westward into Angola, the Tshiluba language is generally understood. In the lower Congo region, as well as in the Kwango and the Kasai, the predominant language is Kikongo. Finally, Lingala—the language of the river—is generally understood throughout the middle portion of the Congo and along the banks of its northern tributaries, the Ubangi and the Uele. However, French provides the only nationwide means of communication.

The Congo region had a history of organized political life for several centuries prior to the coming of the Europeans. Three kingdoms were especially noteworthy:

- Best known is the kingdom of the Congo, which for several centuries ruled over the area from the ocean as far east as the Kwango River, and included large portions of present-day Gabon, the former French Congo, and Angola. This kingdom was already in existence when the Portuguese explorers reached the Congo estuary in the late 15th century. Unlike the great empires of West Africa, whose civilizations were in part dependent upon contact with the Mediterranean world, the Congo kingdom was almost completely an indigenous creation. Although its people never attained the stage of writing, it nonetheless possessed a capital city and the political mechanisms for controlling a large territory. During the 16th century, the kingdom of the Congo maintained formal political relations with the Portuguese court and even with the Papacy in Rome. Weakened by the incursions of migrant tribes in the late 17th century, the kingdom of the Congo disintegrated during the following century with the growth of the European slave trade, and its remnant finally disappeared in the 19th century.

- Probably the most ancient of the Congolese kingdoms is that of the Bakuba (also called the Bushongo), which still survives today. Situated between the Kasai and Sankuru rivers, the kingdom of the Bakuba is famous for its magnificent artistic achievements and for its tradition of unbroken royal succession which stretches back to the first millenium B.C. Bakuba sculpture, wood carving, pottery, house decoration, and basketry are ranked by connoisseurs with those of the great West African cultures and are eagerly sought and highly prized today. Any nation would be fortunate in possessing an artistic tradition as old and as rich as that of the Bakuba.
- Several indigenous empires flourished in the Katanga prior to the coming of the Europeans, the most recent of which was that of Msiri. A conqueror from Tanganyika, he ruled an area of more than 50,000 square miles covering much of the plateau. His capital, Bunkeya, was an important center of African trade in the mid-19th century, sending caravans of slaves, copper, ivory, and iron to trading posts on both the Atlantic and the Indian oceans.

THE PORTUGUESE AND THE ARABS

THE PORTUGUESE WERE THE FIRST EUROPEANS to reach the Congo country. In 1482, a Portuguese sea captain named Diego Cão (or Cão) discovered the mouth of the Congo River, returning in subsequent years to explore the estuary as far as the rapids above Matadi. A trading post was founded at Mpinda on the south (Angola) bank of the estuary and relations were established with the kingdom of the Congo, then at the height of its power. During much of the 16th century, the Portuguese continued to be active in the Congo estuary as traders and as missionaries. But as the power of Portugal declined, these settlements and trading posts were raided or captured by Dutch, French, and British adventurers, and by the 18th century the Portuguese had moved permanently southward to Angola.

Throughout the 18th and early 19th centuries, the Congo estuary was much frequented by European ships, virtually all engaged in the increasingly profitable slave trade. The Congo interior became one of the chief hunting grounds for slaves destined for the plantations of the southern United States, the West Indies, and Latin America. No one knows how many millions of Africans were enslaved during those

years, but it is estimated that the Congo basin supplied about one third of the slaves in the Atlantic trade. As only one slave in three survived the long march from the interior and the ocean voyage to the Americas, the total number of people enslaved in the Congo must be reckoned well into the millions.

The European slave traders did not penetrate deeply into the interior, but established posts at convenient places to which the more warlike tribes of the Congo basin brought captives whom they had obtained in wars or raids on their weaker or more peacefully inclined neighbors. Payment was normally in trade goods (cheap cotton textiles, pots and pans, iron utensils, jewelry, etc.) or in liquor. Thus, the rum produced from sugar cane grown by slave labor on the plantations of the West Indies and Brazil was used to buy more slaves in Africa.

Following the lead of Great Britain, the European nations one by one outlawed the slave trade during the first half of the 19th century. However, it took many decades of vigorous patrolling and police action, particularly by the British navy, to suppress this nefarious though profitable business. Indeed, the Atlantic slave trade did not completely disappear until the abolition of slavery in the United States and Brazil put an end to the demand.

However, as the hapless inhabitants of the Congo were relieved of the slave traders from the west, they began to suffer from a new group of slave hunters coming from the east. These were the Arabs who, long established on the East African coast and in the Indian Ocean trade, began to move inland in search of new sources of slaves to satisfy the growing demand in Arabia and other countries of the Middle East. The center of this Arab slave trade was the island of Zanzibar off the coast of Tanganyika. From there, Arab bands spread westward to the great lakes region of Central Africa. By the 1850s, they had established a base at Uvira at the north end of Lake Tanganyika and from thence moved westward to the Lualaba River. From there in the 1860s and 1870s, they and their African allies roamed through the great central basin burning villages, enslaving the inhabitants, and shipping them eastward to the slave market at Zanzibar.

The spread of the Arab slave traders through the eastern and central Congo coincided with the travels in the same region of the first European explorers. Following the routes blazed by the Arabs, many of these mid-century explorers made Zanzibar their point of departure and employed Zanzibaris as armed guards and guides. The principal object of most of these explorations was to establish the relationship

among the main rivers which were known to flow out of Central Africa, especially the Nile and the Congo. Thanks to such Englishmen as Burton, Speke, Baker, Cameron, Grant, Livingstone, and Stanley, the basins of the Nile and the Congo were finally distinguished from each other, the great African lakes were explored and charted, and the myths of centuries were finally dispelled.

For the Congo, the most important of these explorers was Henry Morton Stanley, an Englishman who went to the United States and rose to be star reporter of the *New York Herald*. Commissioned by his newspaper to search for Livingstone, from whom no word had reached Europe for over three years, Stanley set out from Zanzibar in 1871 and had his famous meeting with Livingstone at Ujiji on the eastern shore of Lake Tanganyika. After Livingstone's death two years later, Stanley was commissioned by the *New York Herald* and the *Daily Telegraph* of London to continue the famous missionary's exploratory work in Central Africa. Stanley returned to Zanzibar at the end of 1874 and for two years fought his way steadily westward despite the deaths of all of his European companions and almost all of his native escort from disease and hostile Arab slave traders and African tribes. In August 1877, Stanley finally reached the port of Boma at the mouth of the Congo, the first European to cross Africa and to go down the river to the sea.

THE CONGO FREE STATE

THE MODERN HISTORY OF THE CONGO begins with Stanley's subsequent activities. The wide publicity given to his dramatic search for Livingstone and to his subsequent crossing of the continent from east to west focused on the Congo region some of Europe's growing interest in African colonization. The 1870s and 1880s witnessed the division of Africa among the European colonial powers in consequence of their mutual rivalries and desire to pre-empt as much of Africa's resources as possible. With respect to the Congo region, the lead was taken by King Leopold II of the Belgians, who in 1876 sponsored an international conference in Brussels to organize the systematic exploration of Central Africa. An International African Association was formed under Leopold's leadership to carry on this work.

As agent of the International African Association (and its successor organizations), Stanley returned to the Congo in 1879 and established a post near the head of the estuary. Supplied with men and equip-

ment by his sponsors, Stanley pushed into the interior and in 1881 founded the city of Leopoldville above the rapids at the point where the river becomes navigable. Steamers were launched and during the ensuing years Stanley systematically explored the Congo River and its main tributaries. Agreements were made with many Congolese chieftains and tribes, who accepted European protection against the Arab slave traders in return for recognition of European suzerainty. A lucrative trade in ivory, agricultural products, and other natural resources was soon developed which enabled Stanley's European backers to meet the costs of his exploratory expeditions and to earn a profit for themselves.

Meantime, an international congress met at Berlin during the winter of 1884-85 to determine, among other questions, the legal status of the Congo. The International African Association and its successors were private organizations although they were exercising sovereign rights in the Congo region. The Berlin conference agreed that they should be superseded by the formation of a new state—called the Congo Free State—of which King Leopold II of the Belgians would be the ruler. The new state was not part of Belgium, and its only formal connection with that country was the fact that it had the same ruler.

From 1885 on, the Congo was under the personal rule of Leopold II, who pushed on vigorously with the work of exploration and of trade development that Stanley—by then retired in England—had initiated. These activities brought the Europeans into increasing contact and conflict with the Arab slave traders from the east, whose depredations were reported in Europe during the late 1880s. An anti-slavery society was formed in Belgium and increasing pressure was brought to bear upon Leopold and his subordinates in the Congo Free State to suppress the Arab slave trade. Action was finally taken in 1892 and, in the course of two years of bloody fighting against numerically superior forces, the troops of the Congo Free State and of the Belgian Anti-Slavery Society completely suppressed the slave trade.

Thereafter, the eastern and southern portions of the Congo were open to European penetration. The Free State rapidly extended its sovereignty into the copper-rich Katanga in the southwest, thereby forestalling the activities of Cecil Rhodes, who was becoming interested in annexing the region to his growing Rhodesian empire. An ambitious program of railroad building, port development, and metal and mineral prospecting was begun as a prelude to developing the Congo's natural resources.

However, the cost of the war against the Arab slave traders and of these ambitious development activities soon exceeded the financial resources of the Free State. In an effort to increase revenue, and to hasten the country's economic development, taxes were levied on the Congolese and concessions were granted to private groups and individuals for plantations and mines. The Free State itself undertook large-scale agricultural and mining activities. Lacking the required financial resources and trustworthy personnel, Leopold and his immediate subordinates were unable to supervise the State's local agents and the private concessionaires, and abuses soon crept into the system. Excessive taxes were levied. Many Congolese were impressed to work on the new plantations or in building roads and railroads, and mutilation or death was inflicted on some of those who resisted.

Rumors of forced labor practices and cruel punishments began to reach Europe during the late 1890s, and the situation culminated in an international scandal in 1904, occasioned by the publication of a British Government White Paper, citing details of the abuse of the Congolese population. Leopold II appointed a commission of inquiry which visited the Congo and made numerous proposals for reforms. These were instituted by the King in 1906. In the following year, the Belgian Parliament approved the annexation of the territories of the Congo Free State, and the latter passed out of existence when the new arrangements went into effect in August 1908.

THE PERIOD OF BELGIAN RULE

THE CONGO WAS GOVERNED DIRECTLY by Belgium for more than half a century and, indeed, was known officially as the Belgian Congo.

In its final form during the period after World War II, the Belgian administrative system was headed by a governor general, reporting to the Minister for the Congo and for the Trust Territory of Rwanda Urundi, who was a member of the Cabinet in Brussels. Under the governor general were the governors of six large provinces into which the country was divided for administrative purposes. These in turn were progressively subdivided into districts, administered by commissioners, and territories, governed by administrators. These officials were always Belgians and exercised full control over the areas assigned to them.

Laws for the Congo were made by the Belgian Parliament in Brussels or by the King with the consent of a Legislative Council of top-

level Belgian officials in the Congo. The Congo had its own system of courts with the right of final appeal to the Supreme Court in Belgium.

Certain traditional institutions continued to survive during the period of Belgian rule. The clan chiefs and tribal chiefs of the traditional society in most cases retained part of their customary authority over the members of their groups and the lands which they controlled. In addition, the Belgians instituted district councils composed of tribal chiefs and certain Congolese officials serving in the district administrations. In the last few years of Belgian rule, municipal institutions were established for the larger cities. Their officials were Congolese, elected by the Congolese inhabitants of the locality.

A basic principle of Belgian rule was the preservation of the prior rights of the Congolese to the ownership of the land. Safeguards were established to control carefully the leasing and sale of land to non-Congolese and these proved effective in preventing any substantial alienation of African lands. Although Congolese were permitted limited participation in the political process only after 1957, European and other settlers in the Congo were never granted any rights of self-government nor were they even permitted to vote.

As it evolved over half a century, Belgian rule came to be characterized by a notable concern for the social and economic advancement of the Congolese population. In contrast, it was not until the end of the colonial period that a similar concern began to be manifest for the training and advancement of Congolese in political and governmental affairs. This order of priorities reflected both a theory of colonial administration and a practical regard for the protection of Belgian interests. It was believed that social and economic advancement had to precede the transfer of political power to the Congolese if they were to be adequately prepared to exercise political responsibility. Such a sequence of development, it was thought, would also help to ensure that, under self-government or independence, the Congo would be ruled by men of mature social judgment and sufficiently wide economic experience to appreciate the benefits which would be derived from continued Belgian participation in the economic growth of the Congo.

The validity of this theory was never put to the test. The gradual transfer of political power to the Congolese, which according to the original Belgian theory should have been spread over 30 years, was in fact compressed into only three years. The Belgians had not anticipated that the steps taken in 1957 to permit the first Congolese political activity in city councils would result in a rapid acceleration of the process. When the Socialist-Christian Socialist coalition government of

Belgium took office in 1958, it announced the intention to "decolonize" but a gradual approach was meant and few concrete steps were taken. The last-minute banning of an Abako public meeting in Leopoldville by a local official in January 1959 precipitated extensive riots and caused the government to accelerate emancipation.

The next step in this process was the decision of the Belgian government to convene a Round Table Conference of Belgians and Congolese to plan the transition to independence. After a rapid search by the Belgian authorities for valid representatives of the Congolese people, the Round Table Conference started in January 1960. Few Congolese or Belgians expected the Round Table to result in immediate independence. Nevertheless, when it finished its stormy sessions in June 1960, it had set June 30, 1960, as the date for independence and had elaborated the 253-article Fundamental Law that was formally to govern the Congo until 1964.

As pressure for independence mounted during 1960, the Belgian government decided that the manpower and financial resources of its own small country should not and would not be used in attempting to maintain colonial rule over an area more than 80 times the size of Belgium. Once it became clear that only the large-scale application of force might contain the independence movement, the Belgians reached the conclusion that both the well-being of the Congo and their own interests in the country required them to cooperate with the growing movement for early independence.

Nonetheless, the rapid and largely unanticipated granting of independence on July 1, 1960, brought on a long series of political difficulties. The May 1960 elections for the Congo's first legislature were waged by political parties most of which were hastily organized and tribally based, and this lack of national unity and organization appeared first in factional disputes within the new Parliament and in tribal separatist movements and secessions. By 1961, there were—in addition to the central government in Leopoldville—effectively independent regimes in Stanleyville, Elisabethville, and even Bakwanga, not to mention regions not falling under the effective control of any of them. The mutinies of the *Force Publique* five days after independence brought Belgian military intervention to protect Belgian nationals. Later, UN troops entered the country to preserve order and to liquidate the secession movement in Katanga. The attention of the world press and of international conferences was further focused on these dramatic events by the unfortunate deaths of UN Secretary-General Hammarskjöld and former Prime Minister Patrice Lumumba, events

which have helped to make the Congo one of the best known and least understood countries in the world.

As these events suggest, the political and military efforts needed to restore unity and to find a workable system of government have left little time or energy for other pressing tasks of educational expansion, economic development, and social betterment. Large-scale UN technical assistance, as well as aid from Belgium, the United States, and certain other West European countries, have had significant impact in preserving public services and in reducing the disruptive effects of disorder on the economy. While certain sectors have suffered greatly during the political difficulties, others have continued to function quite normally. These aspects of the situation will be discussed in the next chapter.

Naturally, any fulfillment of Congolese economic and political aspirations depends on constructing political institutions that will permit a national government to function effectively. Some steps have been taken in this direction with the expansion by Parliament of the provinces from six to 21 in the summer of 1963, and with the adoption by referendum of the much debated national constitution in June and July 1964. Such achievements do not ensure political security, as remaining dissident movements demonstrate. It would be unwise to venture to predict the future state of Congolese political organization, but these indications are hopeful.

II.

The Social and Economic Development of the Congo

WHETHER THE CONGO WILL REALIZE its great potential depends on the political developments of the next few years. But the rate of social and economic progress will be an equally important influence in the long run. These factors are inextricably related. Current political trends reflect the limitations and possibilities produced by the social and economic advances already achieved. In turn, the country's political stability and effectiveness in the next few years will be major determinants of the nature and extent of its future social and economic progress.

To understand the Congo's problems and prospects, it is necessary to survey briefly the tribal society and subsistence economy characteristic of the country before the period of Belgian rule, and the extent to which these have been transformed since the beginning of the century.

THE TRADITIONAL SOCIETY

THE CUSTOMARY WAY OF LIFE of the Congolese people is, in its main outlines, similar to that prevailing throughout Africa south of the Sahara. And, as in most African countries, the great bulk of the Congo's inhabitants still live wholly—or for a substantial portion of their lives—within the traditional society.

The basic social unit is the extended family. This consists of many more persons than the father, mother, and children characteristic of the small Western-type family. In Africa, the extended family is usually headed by the senior living male (there are also some matriarchal societies) who has acquired the headship in accordance with the traditional method of inheritance or, in rarer instances, by election. The extended family includes his wife or wives and their children; his brothers, their wives, and children; his unmarried sisters and aunts; his surviving uncles and their wives; and often his male

cousins, their wives, and children. The extended family loses members mainly by marrying its females (sisters, aunts, daughters, and female cousins) into other families. It gains members outside the recognized bloodlines by adoption and by acquiring *clientes*—usually the husbands of female members of the family, who for various reasons prefer or must seek its protection rather than that of their own families. New extended families are continually being formed as uncles, brothers, male cousins, and sons not eligible for the succession are impelled by ambition, disagreement, or ostracism to move away and form units of their own. The typical extended family embraces three generations and may range in numbers from less than a dozen to as many as a hundred people.

The extended family is of basic importance to the traditional society not only because it constitutes the unit that lives and works together but also because it is the foundation of the system of values and loyalties. Indeed, these values usually persist for several generations after the traditional institutions have disappeared or have been left behind.

For example, a person who has left the tribal society to live in one of the Congo's burgeoning cities and to work for wages in factory, mine, or office, may cease to have physical contact with the family home and may become completely independent of the family's subsistence economic activities. However, the standard of values which the family inculcated in him and the ties of personal loyalty to its other members may govern his attitudes and actions until his death and may even be passed on, though in steadily weakening forms, to his children and grandchildren.

Persistence of the values and loyalties of the traditional extended family explains a great many of the social and psychological problems in the adjustment of Africans to urban living and to modern forms of economic activity as well as the differences between the African morality system and that of the West. For example, adding brothers, cousins, or nephews to the payroll of a government agency or business beyond the strictly economic requirements of work efficiency, or using public or company supplies to feed or clothe an indigent relative are not necessarily immoral, much less criminal, by the standards of the traditional society. Indeed, failure to do so may be considered immoral, since obligations to the other members of the extended family take precedence over all other loyalties and responsibilities.

Within the traditional society, the extended family generally lives together in groups of contiguous houses, often surrounded by a hedge

or fence. Each extended family belongs to a clan—usually defined as the descendants of a common historical or legendary ancestor. Most villages consist of extended families in the same clan, and each clan may embrace a smaller or larger number of villages depending on its size. The chief purposes of the clan are to provide a local government organization and to indicate the limits within which marriages may not occur. (In most cases, the men of a clan are required to find wives outside of it.) Each clan has a chief—hereditary or elected—who, with the assistance of a council composed of heads of families, governs the clan village or the group of villages belonging to it.

In turn, the clans are grouped into tribes, speaking a common language or dialect, practicing certain distinctive customs and rites, and usually claiming descent from some legendary hero, god, or conquering invader. Hereditary or elected tribal chiefs govern each tribe, assisted—or in some cases controlled—by a council of elders, who are usually the heads of the most important constituent clans. Where the tribe is large and its territory very extensive or where other tribes have been conquered and have submitted to its rule, the tribe may evolve into a kingdom in which the ruler and his council and court form a rudimentary state.

Subsistence Agriculture

The economy of the traditional society is for subsistence purposes and consists of a shifting agriculture supplemented by hunting, fishing, and the gathering of wild produce. While in other parts of Africa subsistence economies based on pastoral activities are widely prevalent, they have been significant in the Congo only in the savannah lands of the northeast.

The particular crops produced are determined by whether the tribe lives in the forest or the savannah and by considerations of altitude and rainfall. The typical forest crops are cassava (varieties of Amazonian manioc introduced by the Portuguese in the 16th century) and bananas, especially plantains (a type of banana that has to be cooked or steamed before it is edible). In the more open woodlands and the savannah country, the main crops are maize, introduced by the Portuguese; rice, introduced by the Arabs; and such bread-grains as will grow in a tropical climate—millet, sesame, sorghum, etc. Peanuts are also an important food crop outside the heavily forested areas. In addition, sweet potatoes—also introduced by the

Portuguese—and soya and other beans are grown where terrain and altitude are favorable. Tobacco—another Portuguese innovation—is widely raised for family use, as are various condiments and herbs, especially the small, very hot, red peppers called *pili-pili* in the Congo.

For eating and cooking oil, the traditional subsistence economy depends principally on the oil palm, which grows wild in incalculable numbers throughout the Congo except in the higher regions. From the plentiful nuts of this useful tree is extracted a nutritious oil that has also become a main export from Africa in the 20th century.

As elsewhere in tropical Africa, the subsistence economy generally provides a quantitatively adequate diet except in the event of crop failures due to natural catastrophes or social disruptions. It is able to do so despite its very low productivity because the population of tropical Africa is relatively small and, on the whole, thinly spread throughout the available food-producing areas. However, the diet is qualitatively inadequate because of the insufficiency of protein foods except in the pastoral regions. In this respect, the Congo has been somewhat better off than West Africa, since supplies of wild game and freshwater fish have not been overexploited, as in the latter. In addition, the Belgian administration did a great deal during the past 50 years to foster cattle and poultry raising by Africans, to maintain the stock of fish in rivers and lakes, and to assist Africans in constructing thousands of fish ponds for local use.

So long as land is available, virtually all African forms of subsistence agriculture practice a shifting cultivation. Each village has a generally recognized area of the surrounding forest or savannah which it uses by immemorial custom. Within the village lands, custom also regulates the manner in which each family uses land to meet its own needs. Generally, each family has a recognized area within which it locates the plots it wishes to cultivate each year. Two or three consecutive crops may be raised on a particular plot before its fertility falls so low that the family is again willing to undertake the more arduous work of clearing a new plot in the forest or bush. The old plot then reverts to trees or grass and its fertility is gradually restored over a period of years—the longer the better.

Shifting cultivation requires a large amount of land—the ratio of the cultivated to the uncultivated portion should be at least 1 to 7 and ideally should be 1 to 20—since considerable portions of the land will never be susceptible of cultivation. Shifting agriculture also makes permanent improvement of the land impossible and discourages

the adoption of more efficient methods of cultivation. Since its primary motivation is to produce only enough for direct family consumption, subsistence agriculture inhibits, if it does not completely prevent, the accumulation of capital necessary to change to a more productive system of fixed agriculture using scientific methods of crop cultivation and soil improvement.

The shifting subsistence agriculture of the Congo has generally used hand tools only—either the prehistoric digging stick or, in more advanced areas, the mattock or hoe. Harvesting is done by hand, assisted if necessary by a knife or machete.

It is not easy to distinguish a plot under cultivation from the surrounding forest or savannah. In the wooded areas, the big trees are girdled so that they will die, and the smaller ones are cut down and burned along with the underbrush. Among the stumps and half-burned, fallen tree trunks, seeds are planted at random in the soil, temporarily enriched by the ashes of the fire. In the case of seeds that must be planted beneath the soil, holes are made with the digging stick or mattock, but usually not in regular rows or furrows. Hence, when the crop springs up, the plot continues to have a wild appearance, especially after the first few months when the weeds begin to return. In the savannah regions, the process of clearing is easier, as the few large trees need not be killed or cut down.

The productivity of this type of agriculture is extremely low and only the equability of the country's climate and rainfall ensures that the minimum output will be raised in most years.

Handicrafts and Petty Trade

In addition to agricultural products, the subsistence economy also provides such handicraft goods as it requires. These usually included cloth made of bark, raffia, or other similar fibers; pottery; basketry and matting; knives, scrapers, and other hand tools; weapons; etc. However, since the coming of the Europeans, some of the need for such products has been supplied by the outside world. Cheap cotton cloth has tended to supersede that made of native fibers except in the remotest parts of the country. Inexpensive metal goods—such as pots and pans, knives and spoons, etc.—are displacing those made by local handicrafts. But a considerable amount of handcrafted products is still produced today.

Subsistence economic units are usually thought of as self-sufficient, and in most respects they are. But, since the dawn of organized

societies, there have always been products necessary for life which could not be produced by the subsistence unit or obtained within its local area. These include metals, such as iron and copper, minerals, such as salt, and dyes, that can be found only in certain localities. In addition, a demand always exists for high quality weapons and tools and for materials—both natural and fabricated—used for religious and medicinal purposes.

These needs have always formed the basis for petty trade, which is an integral part of most subsistence economies. Insofar as local products are involved, the trade is generally carried on by the local people—usually the women—at specified market days and places, where they exchange small surpluses of various goods with one another. In contrast, the trade in commodities that come from long distances is usually in the hands of a particular tribe, whose males specialize in transporting and marketing the products involved. Both types of petty trade have existed within the Congo for centuries, although the long-distance type has never been on the scale practiced in West Africa.

TRANSITION TO AFRICAN COMMERCIAL AGRICULTURE AND OTHER MARKET ACTIVITIES

IN ORDER FOR ECONOMIC DEVELOPMENT to occur, a number of related social, political, and economic factors must combine to produce a significant increase in productivity, which in turn makes possible a substantial amount of new capital formation each year. Historically, certain subsistence economies have in favorable circumstances been able to generate enough of a surplus over and above minimum needs to make economic advances possible. Ancient Egypt and Mesopotamia are examples. However, in contemporary societies, where economic progress requires much larger and more diversified capital investment, subsistence methods are wholly inadequate to achieve much, if any, economic progress.

This was recognized at the beginning of Belgian rule in the Congo, and it was soon concluded that the Congolese would have to be encouraged to shift from subsistence to commercial agriculture for the country to achieve a significant rate of economic growth. As early as 1910, an agricultural service for the Congo was established. Its first task was a survey of the country's agricultural resources and potentialities in order to make possible the selection of areas and crops with the best prospects for yielding fruitful returns to Congolese

farmers. In 1917, a law was passed requiring members of tribal communities to grow certain minimum quantities either of food crops or of other marketable products which were to be sold for their own profit.

During the interwar period, considerable progress was made in explaining to local communities the advantages of fixed commercial agriculture and in demonstrating the types of crops suitable for each area and the methods by which they could be raised. This program was greatly benefited by the establishment in 1933 of the Institut National pour l'Etude Agronomique du Congo Belge (INEAC) to undertake research not only into the biological aspects of agriculture in the Congo but also into the technical, economic, and social problems involved in commercial farming by the tribal people. Over the years, INEAC became a key factor in the development of the Congo. At its main research station at Yangambi, west of Stanleyville on the Congo River, and at its many local stations in all parts of the country, INEAC's scientific staff took the lead in developing plant and animal varieties best adapted to the physical and social conditions of each region, in devising agricultural techniques and equipment suitable for Congolese use, and in helping the Africans to master the unfamiliar requirements of commercial farming activities.

The policy of encouraging fixed farming based on production of commercial crops received new impetus after World War II as part of the country's general development plans. Considerably larger sums than during the interwar period were allotted for encouraging the transfer from subsistence to commercial farming. The staffs of the agricultural service and of INEAC were increased; money was provided to enable Congolese to purchase seeds, tools, fertilizers, and other requirements for raising agricultural productivity; and improved arrangements were developed to facilitate marketing, transportation, agricultural credit, etc. The work of surveying and of dividing the most fertile parts of tribal lands into plots for fixed farming was accelerated. In consequence, several hundred thousand Congolese families became either wholly or partly engaged in producing commercial crops for sale and enjoyed a level of living substantially above that of the subsistence economy.

Another major factor stimulating the transition to market agriculture has been the presence of European commercial farms and plantations. During the period of colonial rule, there was a substantial development of modern agriculture by European entrepreneurs. Some have been large international corporations, such as the Huileries du

Congo Belge, an affiliate of the Unilever organization; others were individual planters who settled in the Congo. The former tended to be established in rain forest regions close to export facilities, and were particularly instrumental in introducing oil palm, banana, and rubber production. The European settler-farmers were concentrated mainly in the higher altitudes of Kivu, where they created and managed their own plantations. There, under climatic and soil conditions quite different from those of the lowland Congo, they introduced and developed the production of high-priced *arabica* coffee, tea, tobacco, pyrethrum, and other crops.

European commercial farms and plantations played an important role in diversifying the Congo's agriculture. They had—and still have—an important demonstration effect, passing on skills and knowledge that help Congolese farmers start commercial operations of their own. European-directed agriculture furnished a significant portion of Congolese exports, and the lowland plantations—much less affected by recent disruptions than the European farms in the Kivu—still do.

Chief among the commercial crops raised by Congolese farmers have been cotton and *robusta* coffee. Oil palms, natural rubber, cocoa, and tea have also been produced in suitable localities. In addition, many Congolese farmers raise substantial quantities of food crops—rice, peanuts, cassava, maize, fruits, and vegetables—for sale in local markets or in the rapidly growing towns and cities. Progress has also been made in encouraging Congolese farmers to raise livestock and poultry both for their own use and for sale to local and urban consumers.

While commercial farming by Congolese has increased greatly in the past two decades, it is for many Congolese still only a part-time or intermittent activity. For them, the raising of crops for sale is an adjunct of subsistence agriculture and is carried on by subsistence methods and land use. Others may farm for only a limited time during the year, or at longer intervals when cash money is required for one purpose or another. Only a comparatively small minority of the Congolese as yet make the raising and selling of crops a full-time, continuous, and permanent way of life.

This situation reflects the difficulties of the transition from shifting subsistence agriculture to fixed commercial farming using scientific methods. Each expresses a different value system—different patterns of satisfaction and activity. The subsistence economies of the traditional tribal societies reflect an attitude which regards productive labor as of lesser importance than noneconomic occupations such as religious observances and other activities associated with religion,

cultivation of personal, family, and other human relationships, traveling and visiting, etc. Innovation and enterprise have no honorific value in these societies. Socially sanctioned forms of saving (for example, cattle) and the division of the tribal output in accordance with hierarchical status patterns militate against the use for productive purposes of such surpluses as the economy may produce. The traditional division of labor among sex and age groups also inhibits the growth of productivity.

The attitudes and values required to achieve a minimum degree of success in fixed, continuous, commercial farming are in marked contrast to those of the traditional tribal society. Productive labor must have some positive value, if not for its own sake as in the Protestant ethic, then at least for the things which the money earned would enable the farmer to buy for himself and his family. The well-being of the land—its protection against erosion and other soil damage and the maintenance of its fertility by scientific methods—must come to be identified in the farmer's mind with his own personal well-being. There must be willingness to invest both labor and a significant part of the proceeds from the farm's output in increasing its productivity in preference to maximizing the time and money spent in noneconomic activities. Honorific recognition needs to be given to innovating and enterprising activities.

The material and psychological rewards resulting from the higher productivity of commercial farming usually provide the main incentive for leaving the subsistence economy, in whole or in part, and engaging in fixed agriculture. But, to this "carrot" there is often added one or more "sticks." Sometimes—although not very often as yet in tropical Africa—it is the pressure of a rapidly growing population on the slender resources obtainable from subsistence methods. More frequently, it is the need to obtain some money income in order to pay taxes, interest on loans, and other economic obligations which are instituted in part to bring pressure on the tribal people to raise commercial crops or to work for wages in plantations, mines, or factories. In Africa generally, the positive incentives have predominated over the negative ones, but the latter incentives have not by any means been negligible.

Today, in consequence, the Congo possesses a growing group of African commercial farmers who constitute one of the country's most important assets for the future. Not only does their output make a significant contribution to the Congo's total production, but other activities essential for economic growth depend upon it. By raising

agricultural productivity, fixed commercial farming using scientific methods can feed much larger numbers of people at a more adequate standard of living with much less labor than can subsistence agriculture. In consequence, it releases labor from the countryside for urban industrial and commercial activities; it provides resources over and above basic consumption which can be used for productive investment; and its more prosperous participants form a growing market for imported, and later for domestically produced, manufactured goods. A flourishing and expanding commercial agriculture has always been one of the preconditions for industrialization and substantially increased living standards. The Congo is no exception to this general experience.

PRODUCTS OF COMMERCIAL AGRICULTURE

THE PRODUCTION OF COMMERCIAL FARMING has been chiefly for export and is, therefore, important to the Congo as an earner of foreign exchange. In 1958, the last normal year before independence, agricultural exports accounted for nearly 40 percent of foreign exchange earnings. Although they were particularly hard hit by the post-independence disruptions, agricultural products still made up over one quarter of exports by value. Moreover, some of the commercial crops are consumed in the country, e.g., soap produced from palm oil, and tea, whose consumption by Congolese has been increasing because it aids in the control of intestinal parasites causing dysentery, diarrhea, and similar disorders through its active ingredient, tannic acid.

The *oil palm* is the source of the most valuable agricultural products, making up from 10 to 14 percent of total exports by value. It grows wild in the rain forest of the central basin, and hence this area also contains most of the plantations on which improved strains are cultivated. On well managed plantations, the output of palm oil, of the more valuable palm kernel oil, and of oil cake is very high.

Two varieties of *coffee* are grown in the Congo. The higher-priced *arabica* coffee flourishes in the highlands around Lake Kivu and in nearby mountain valleys. It was cultivated chiefly by Europeans before independence, but a combination of departures of plantation owners and transportation difficulties has cut production drastically. *Robusta* coffee, used principally for solubles, is grown at lower altitudes in the Congo basin and in the hilly country of the Mayumbe. Production of this variety was not so greatly affected by post-inde-

pendence disruptions, since it has always been grown chiefly by Congolese cultivators. *Cocoa* flourishes in the same altitude, soil, and rainfall conditions as coffee.

Natural *rubber*, too, is a lowland crop requiring high rainfall conditions and is chiefly raised on large plantations. Rubber production expanded rapidly after World War II and rubber was among the crops least adversely affected by post-independence disorders. *Bananas* are another crop grown under similar conditions for export. Many rain forest trees are suitable for *timber* production, and a considerable industry has been developed both for export and for home consumption.

Mining and Manufacturing

ALTHOUGH LARGE PARTS of it are still unexplored, the Congo is already one of the richest countries in the world in terms of its known metal and mineral deposits. With respect to a number of metals, it ranks among the world's leading producers. Others are known to exist in commercial quantities, but their production has not yet been developed.

The Congo's unusual geological formation is responsible not simply for the existence of this vast mineral wealth, but also for its accessibility. The highlands which surround the great central basin on all sides are composed of old rocks much folded by geological processes and deeply eroded by countless millennia of tropical rain and sun. Hence, rich mineral deposits are near the surface in many places; indeed, so close are some that they are worked by strip methods and do not require underground mining. This accessibility helps to keep down the costs of production.

Of the mineral resources now being exploited, copper and associated minerals rank highest in importance. The high plateau of the Katanga is rich in copper, most of it accessible from surface workings. Other deposits of copper are known to exist in the western hills between Leopoldville and the ocean. The copper in the Katanga deposits is associated with zinc, cobalt, cadmium, germanium, and small quantities of gold, silver, platinum, and palladium. All of these metals are obtained in the process of refining the copper ore and provide a valuable supplement to the main metal.

The development of the Katanga's copper and associated metals has been the responsibility of the Union Minière du Haut Katanga, which has a concession that runs until 1990. The Union Minière engages not only in mining the ore but also in smelting and refining the metals it

contains, and in producing the large amounts of electric power required for these processes. Its mining and smelting activities are located in and around the Katanga's two chief cities—Elisabethville and Jadotville—which it also supplies with electric power for industrial and household purposes.

Not far from Jadotville is one of the world's richest uranium mines; its output makes the Congo a leading producer. A refining plant concentrates the ore before it is shipped for export, principally to the United States.

While the Katanga is the country's leading producer of metals and minerals, other regions also contain important deposits. In the Maniema—the region northeast of the Katanga between Lake Tanganyika and the Lualaba River—considerable tin-bearing ore is found. Production from these deposits makes the Congo the fourth largest producer of this metal in the world. Contained in the ore are important quantities of tungsten, tantalum, and niobium—metals of increasing importance in the manufacture of materials and equipment for the aerospace, electronic, and other new industries. Northwest of the Katanga is the Kasai region, where most of the Congo's known diamond deposits are located. These are predominantly industrial stones, of which the Congo is the world's leading (90 percent) supplier. Gold is also found in the Kasai, but the chief deposits of this precious metal are located in the uplands around Lake Kivu and in the Ituri region to the north.

The concentrating and refining of the ores containing these metals constitute the Congo's largest industry in size of capital investment, value of output, and number of employees. These operations—with their attendant hydroelectric installations, machine and repair shops, and mechanical, electrical, and transportation services—have for the past generation provided opportunities on a growing scale for the Congolese to learn skilled trades of all kinds. Owing to its size, complexity, and international aspects, the mining industry has also required large numbers of clerical, bookkeeping, and accounting employees, virtually all of whom are Congolese specifically trained for these occupations. Thus, particularly in the Katanga, there is already a growing group of Congolese who now possess many of the skills—technical and clerical—required for staffing modern industries.

In addition to the basic industries associated with the country's mineral wealth, the Congo possesses a number of lighter industries, mostly producing consumer goods, which have been developed over the past two decades. A textile industry, using locally-grown cotton,

manufactures dyed and printed fabrics suitable for garments, knitware, and blankets. In addition, rope, cordage, and burlap are made from sisal and other locally-grown fibers. Soap and related products are produced in large quantities from palm, peanut, and other vegetable oils. An important woodworking industry has been developed which produces not only sawn timber and plywood, but also doors and windows, furniture, cabinets, and other construction and household items. There is even a chemical industry using by-products of the metal-refining factories to make such industrial chemicals as sulphuric and hydrochloric acids, caustic soda, glycerine, and related compounds. A number of factories produce paints and varnishes, powder and explosives for mining and construction purposes, insecticides, and other products.

Most numerous of all are factories, usually small, engaged in all types of food processing and in the making of beverages, cigarettes, clothing, hand tools, pots and pans, cutlery and household utensils, etc. These are located in the large cities, such as Leopoldville, Elisabethville, Stanleyville, Bukavu, and Matadi. The population of these and other towns has been growing substantially in the past decade, and more and more of the products of these light industries are being bought by Congolese, whose incomes have risen in consequence of their urban or industrial occupations.

TRANSPORTATION AND POWER

IN THE ECONOMIC DEVELOPMENT of a country the size of the Congo, transportation can be a major bottleneck. This was recognized at the beginning of Belgian rule and continuous efforts have been made over the years to extend and improve the country's transportation system.

In effect, two separate transportation systems have been developed. The great bulk of the country's agricultural and mineral products are moved by a unique combination of rail and river transport. In contrast, passenger travel and priority freight movements over substantial distances have depended upon a highly developed air transport system. Highway traffic for both freight and passengers lags far behind the other two means of transportation except in a few sections.

The heart of the country's rail and river transport system is the Congo-Lualaba River and its main tributaries—the Kwango, the Kasai, the Ubangi, and the Uele. Navigable for nearly a thousand

miles from Leopoldville to Stanleyville, the middle Congo carries the largest volume of river traffic.

The main parts of the Congo river-railroad system are:

- From Leopoldville to Matadi, a railroad connects the river system with the ocean.
- Above Stanleyville, there are alternate stretches of river and rail transport as far as Albertville on Lake Tanganyika (where a ferry connects with the Tanganyikan railway) and Elisabethville in the Katanga.
- A shorter river and rail route known as the national route links Elisabethville more directly with Leopoldville via Luluabourg, Port Francqui, and the Kasai River.
- In addition, the rich mining areas of the Katanga have direct all-rail connections to ocean ports. In the west, the Katanga railroad links at the Angolan border with a railway that runs westward to the Angolan ports of Benguela and Lobita. In the southeast, the Katanga rail system connects with that of Zambia which continues eastward through Mozambique to the port of Beira and also southward to join the rail system of the Republic of South Africa.

Elsewhere in the country, there are comparatively short stretches of rail lines which are either subsidiary to the river transport system—as, for example, the railroad operated by the Vicicongo company in the Uele—or feed a port, such as the Mayumbe railway, serving the area north from Boma.

A complete air network links all parts of the Congo with each other and with the outside world. Before independence, the largest carrier was Sabena, the Belgian airline, which not only joined the country with Europe, but also flew domestic routes connecting all major Congolese cities. The national company, Air Congo, now assures international service and has increased domestic service, though routes have been partially disrupted during the years following independence. Several private companies also provide internal service, and many foreign airlines stop at Leopoldville and Elisabethville. The international airport at Leopoldville is large enough to accommodate the newest jet planes of the sixties.

Problems of terrain and of maintenance, as well as the sheer dis-

tances involved, have made the development of an adequate highway network both expensive and slow. There are comparatively few paved all-weather roads in the Congo. The chief hard-surfaced roads are those linking the main mining centers of the Katanga with one another, joining Leopoldville and Matadi, and serving the Mayumbe north from Boma. Elsewhere, there are very few stretches of hard-surfaced roadway, and most of the unpaved highways are very difficult, if not impassable, during the periods of heaviest rainfall. However, the development of a more adequate highway system was made a major priority during the later years of Belgian rule, and this work should continue to be pushed vigorously by the Congolese government when order is restored.

Aside from the abundance of wood, which is burned not only for household purposes but also by many industries and by some of the railroad engines, the Congo does not seem to be well supplied with natural fuels. Mineral fuels so far located have been disappointing. Only occasional traces of petroleum have been found—no deposits as yet of commercial size. There appears to be a substantial natural gas deposit beneath Lake Kivu, but it has not yet been developed. Congolese coal is of poor quality and is produced in comparatively small amounts. Hence, for fuel, the Congo depends upon imported petroleum and coal.

However, the country's extensive river system, so important for its transportation, is also of major significance as a source of energy. Most of the electricity generated in the country is produced at hydroelectric installations, and only a small fraction of the country's potential has as yet been exploited. Indeed, one of the largest potential hydroelectric sites in the world is located on the lower Congo River, about 25 miles above Matadi. This is at Inga, where the river descends more than 300 feet in the course of traversing a series of rapids and small falls around a great bend. Part of the water could be diverted above the rapids into a parallel valley whose end, just below the bend, could be dammed to create an electricity-generating potential estimated at up to 10 million kilowatts. Use of all of the Congo's water would require a high dam across the river which could produce an estimated 30 million kilowatts. However, it is not planned to develop Inga's full capacity in one stage, owing both to the expense and to the lack of use for so much power within the foreseeable future. Plans have been prepared for a two- or three-stage development depending upon the availability of funds and the growth of the need for additional electricity.

FOREIGN TRADE

WHILE THE SUBSISTENCE ECONOMY of the Congo is by its nature independent of world trade, the country's market economy is very dependent upon exports and imports. A large proportion of its total production is exported, and imports supply virtually all of the capital goods and most of the manufactured consumer goods required. In consequence, both the levels of internal activity and of government revenues are directly influenced by the state of world demand for the Congo's exports.

Minerals and agricultural raw materials provide virtually all of the country's exports in about equal volume, although the former substantially exceed the latter in value. The chief export by value is copper and the metals found in association with it, such as zinc, cobalt, cadmium, and germanium. Next in importance are industrial diamonds, tin, and other nonferrous metals. Among agricultural exports, the largest are palm oil and palm kernels, coffee, cocoa, cotton, and rubber.

The Congo's largest trading partner has normally been Belgium, which usually takes about half of the Congo's exports and supplies more than one third of its imports. While the United States has temporarily taken first place as a supplier because of tied loans coordinated with the UN peace-keeping operation, the United States is usually second as both supplier to and importer from the Congo. The country's other major trading partners in order of their importance are Germany, France, the United Kingdom, and the Netherlands.

Exports have usually exceeded imports during the past three and one-half decades. During World War II, the Congo was able to build up monetary reserves, and during the Korean War primary products boom, the surplus on merchandise account more than offset deficits in the invisibles. However, when raw material prices have been low, the country's external payments tended to be in deficit. The current account deficit was offset by loans and subsidies from Belgium and international organizations, by foreign private capital investment, and by the use of monetary reserves.

The disturbances which followed independence had an adverse effect on the Congo's external payments situation since they reduced export earnings at the very moment when the country was incurring the costs of independence, some of them external. Until the end of the Katanga secession, foreign exchange earnings from the Katanga's mineral exports (calculated at 60 percent of the entire Congo export

earnings in 1961) did not accrue to the central government. Exports held firm for agricultural products, such as rubber, wood products, and palm oil, but the ensemble of agricultural exports dropped over 40 percent in the two years following independence. This resulted partly from disruption in production, partly from illegal exports that were not accounted for, and partly from increased local consumption. Coffee, tea, and cotton were particularly hard hit. The inability to finance imports led the government to introduce exchange controls, and the temporary difficulties in raising revenue forced it into an expansive monetary policy. Coupled with the existing shortage of consumers' goods of foreign and domestic origin, these measures induced inflation, and the price index rose four and one-half times in three years.

All of these untoward circumstances hampered, but did not destroy, the Congolese economy. Devaluations of the Congolese franc from 50 to the dollar to 65 in the fall of 1961 and to 180 in November 1963 reduced smuggling and stabilized internal prices by early 1964. Financing for continuing deficits has been found in governmental—especially U.S.—aid, which is allotted specifically to assist the reconstruction and growth of Congolese industry. Thus, essential imports of machinery and spare parts are normalized through the USAID open license system. At the same time, the government has retrieved its revenues, with 1964 showing a budget surplus. By 1964, exchange controls were still in effect, but—as order has been restored in the country—exports have returned to their normal level, with the exception of those coming from the ravaged highland districts.

ECONOMIC DEVELOPMENT PLANS AND PROSPECTS

UNDER THE STIMULUS of wartime demand during the early 1940s, the Congo achieved not only an extraordinary acceleration of its economic growth but also a better understanding of the obstacles to continued economic development under normal peacetime conditions of world trade and investment. In consequence, a 10-year economic development plan was prepared after the war to help overcome these obstacles by investing in specific capital projects the Congo's wartime and immediate postwar surpluses, and other funds obtained from Belgium and from international organizations and foreign lenders.

The first 10-year plan, which covered the decade of the 1950s, was

not a comprehensive economic program for the economy as a whole, but concentrated on the specific areas in which the main bottlenecks to economic growth existed. These were: transportation (including the rail and river system, highways, airports, and air navigation facilities) and harbor improvements; expansion of hydroelectric output; agricultural development, particularly of commercial farming by Africans; improvement of public services; social progress (by which is meant expansion of educational facilities, public health services, and low-cost housing); and, finally, scientific research for development purposes, particularly by the two institutes established for this purpose, INEAC in agriculture and l'Institut pour la Recherche Scientifique en Afrique Centrale (IRSAC) in tropical medicine, earth sciences, sociology, and anthropology.

Prior to independence, a second 10-year plan was prepared for the decade of the 1960s. Designed to move forward from the base provided under the first plan, the second focused directly on increasing the productivity of specific economic activities in the Congo—notably agriculture and small and medium industry. In addition, it sought to correct the only major shortfall of the first 10-year plan—highway construction. In order to take account of the upheavals that followed independence and of the new perspectives of the independent country, the Ministry of Planning and Industrial Development elaborated a five-year economic and social development plan effective from 1963. The general principles of this plan were published in 1963 but, needless to say, military and political uncertainties have made it impossible to follow plan discipline.

Outside the six sectors specifically reserved for government action in the 10-year plans, economic advancement has largely been due to private initiative and investment, mostly Belgian. From the very beginning of Belgian rule, it was the policy to encourage private investment and entrepreneurial activities in the Congo. In consequence, the great bulk of manufacturing, commerce, finance, commercial agriculture, and the construction and service trades have been in the hands of private entrepreneurs—Belgian, Congolese, and foreign.

Under the stimulus of the 10-year plans and of the expansion of the world market in the post World War II period, private investment boomed in the Congo, with corresponding growth of the economic sectors in which it was significant, until the late 1950s. Thereafter, the rate of new capital formation in the private sectors declined substantially due to the uncertainties which arose in 1957 regarding the Congo's political status. Residential and commercial construction

stagnated, but some industrial construction and plant expansion and modernization continued.

Small European investors, particularly those in the service trades and in the production of light consumer goods for European consumption, and some of the individual European planters, began to withdraw their capital from the Congo on an increasing scale after 1957. However, the large Belgian companies engaged in mining and manufacturing showed continued faith in the Congo's future by maintaining their existing investments, and in some cases, by increasing them. The Cominière group of companies—of which Agrifor is a member—was among the leaders in affirming its confidence in the Congo, and it increased its investment substantially during 1959-60 by building a new factory to make plywood materials on the outskirts of Leopoldville. Another Cominière subsidiary, the Vicicongo railway, is extending its lines in the Uele region by about 75 miles.

This situation has not substantially changed since independence. Investors, large and small, but especially small, have waited to see whether the government would be able to solve its basic problems. Many more small European investors withdrew their investment, where possible, and themselves from the Congo as a result of the violent upheavals. However, again, the large corporations have affirmed their confidence in the temporary nature of the disturbances. A surprisingly large portion of the economy has functioned normally in spite of the fears of small investors. Union Minière has opened up new ore deposits and moved to improve operational efficiency. In the Mayumbe, Agrifor-U.S. Plywood operations made opportunity of necessity. Finding their European staff reduced by half, they filled the positions with Congolese whom they have trained. Production has doubled since independence.

This combination of public and private investment has given the Congo the largest commercial agriculture and the largest mining and manufacturing sectors of any economy in Africa south of the Sahara and north of the Republic of South Africa. The progress made so far provides a more extensive economic base for further advancement than that possessed by any other country in the region. From a strictly economic point of view, the prospect for continued economic growth in the Congo is excellent, especially if the lags in transportation, power development, and the public services can be overcome. These will require continued help from foreign sources—Belgium, international financial institutions, the U.S. government, and private investors in the United States and Europe.

The major uncertainty is not economic but political. The Congo can look forward to continued substantial economic development over the decades to come if it can:

- Maintain internal security and order;
- Achieve a stable central government capable of enforcing an effective and progressive national economic policy for the entire country;
- Foster the evolution of commercial agriculture by Congolese and the development of Congolese enterprise in commerce and smaller industry;
- Encourage foreign experts and technicians to continue to participate constructively in the country's development in both the public and private sectors of the economy; and
- Provide a favorable climate for private foreign investment from the United States and Europe.

Whether these preconditions for economic progress will be met depends mainly, if not completely, upon the political decisions and actions of the Congolese themselves during the next few years.

SOCIAL PROGRESS

SOCIAL SERVICES in the Congo have been provided by the cooperative efforts of private philanthropic organizations—both religious and secular—business, government, and semi-public agencies. The semi-official institutions include the Welfare Fund, which has operated many social services for the benefit of tribal communities; the Office of African Cities, which has carried on housing and town-planning activities for Congolese living in urban centers; and IRSAC, which has long contributed to the improvement of public health and the solution of social adjustment problems.

Education

The struggle against illiteracy in the Congo was originally carried on by religious missions, both Catholic and Protestant. First on their own, later—in the case of the Catholic schools—subsidized by the gov-

ernment as long as they conformed to its educational standards, these mission schools developed a program of basic, elementary education for the Congolese. After World War II, pressure mounted for making at least part of the educational system independent of any religious faith. Accordingly, 1952 saw the beginning of a network of government schools, which today offers schooling from kindergarten to the university, is staffed by qualified teachers who are civil servants, and operates parallel to the many thousands of parochial and private schools. The organizational pattern of education is as follows:

- A two-year elementary course is the same for all Congolese children. It is followed by either a standard or a selective program, depending upon the age and potentialities of the pupil. The standard program, usually spread over three years, is designed to equip the average Congolese with the skills he needs to lead a better life in his environment. It teaches him agricultural methods and livestock raising if he lives in the tribal areas and villages; it also teaches the trades relevant in urban centers. The selective, four-year course leads directly into a program of secondary education, general or specialized.
- Secondary education may open the way to university studies or to advanced vocational training. In order to qualify for the university, the Congolese student takes a general course, which includes instruction in the humanities and sciences and is followed by a one-year pre-university course designed to ease the adjustment to a university program patterned after European models. Other secondary schools prepare the student for a variety of careers, including civil service, teaching, surveying, and as medical aides in hospitals and dispensaries.
- Courses for students at different levels of accomplishment complement these primary and secondary schools. This additional, specialized training permits the young Congolese to become craftsmen, stockbreeders, nurses, midwives, medical technicians, public health assistants, or to acquire mechanical, electrical, and clerical skills.
- The 1950s saw the opening of two universities: Lovanium, a subsidized Catholic institution near Leopoldville, and the secular State University at Elisabethville. Both institutions have built up faculties and facilities for teaching and research in the social and physical sciences, philosophy, literature, languages, social

work, law, medicine, veterinary medicine, agriculture, engineering, and other disciplines. The university at Elisabethville managed to weather the complications of the Katanga secession, and, in 1963, a new university was founded at Stanleyville under Protestant auspices. In addition, there are national institutes at the university level for training in law and administration, education, building and public works, medical education and architecture at Leopoldville, and mining at Bukavu. Receiving increased attention from the government and with the benefit of aid from the UN, the missionaries, the United States and other governments, the university education facilities of the Congo are growing rapidly. The same applies to enrollment.

- Education for Congolese women lags behind that for men by at least a generation. Schooling for girls met with resistance in the villages and tribal settlements for it was thought to interfere with the time-honored practice of having young girls work alongside their mothers in the fields in preparation for their role in the family. Today, elementary schooling for girls is more generally accepted, but its emphasis is on domestic skills. If their aptitude warrants it, girls may take the same secondary and advanced education as their brothers, though they are still more likely to seek intermediate training in obstetrical nursing, child welfare, dressmaking, crafts, and homemaking.
- Social and educational centers serve the adult Congolese. For the city woman there are homemaking centers whose aim is to help her acquire basic domestic skills and to adjust to the demands of a life in which she lacks the support of the familiar tribal society. There are social centers for men which offer vocational training, athletic activities, and study and play groups to fill their leisure time.
- Formation of educational foundations by business enterprises was stimulated by a wartime law which exempted excess profits from taxation if used for the promotion of workers' welfare. As a result, many industrial, agricultural, and commercial companies now support social clubs, mother and child welfare centers, athletic fields, as well as homemaking, vocational, and elementary schools for workers and their families.

Housing for Congolese

A vigorous government program did much to improve conditions throughout the Congo during the later decades of Belgian rule. Aided by a broad-gauged educational campaign—which brought information to even the most remote tribal settlements on ways and means available for replacing grass, twig, and mud huts with dwellings of more durable materials—better housing became a reality for many thousands of Congolese. It was achieved mainly by the work of several government trusts and of the Welfare Fund, which made loans and grants to Congolese to help them build or acquire houses. More and more adobe houses with corrugated tin roofs can now be found in Congolese villages, and structures of cement blocks and brick have become increasingly prevalent in urban centers.

Decent housing for workers has long been a concern of the government and is encouraged by law. However, numerous private employers have taken the initiative in surpassing basic governmental requirements either by paying a supplementary housing allowance to their workers or by constructing housing for them. In many places, company-built dwellings have grown into distinct districts, sometimes attached to the enterprise and often constituting an integral part of adjoining communities. At Lemba, its main manufacturing center in the Mayumbe, the U.S. Plywood-Agrifor partnership has undertaken an extensive housing program.

Public Health

Even in the early days of Belgian administration of the Congo, the health improvement of the population was considered one of the government's major obligations. In 1879, the first doctors arrived in the Congo; two years later the first hospital was built at Boma; and in 1909, the first medical laboratory was established in Leopoldville. Official public health efforts benefited greatly from the experience in medical work of religious missionaries, who had visited outlying areas long before they were reached by government services.

Malnutrition, poverty, superstition, and ignorance—combined with climate and customs that readily spread parasitic diseases—were responsible for a high death rate of infants and adults alike. General resistance to infectious diseases and to physical strain was low, as was labor productivity. Two health problems had to be attacked simul-



taneously: the treatment of the sick and the improvement of sanitary conditions. Among steps taken were the following:

- As a means of spreading the effective range of its trained public health staff and to enable it to serve a population scattered over a wide area, the Belgian administration supplemented its urban hospitals and health centers and its permanent rural dispensaries with mobile medical teams. These were prepared to traverse savannah and forest in order to reach distant tribal areas where they carried out a complete health program—from teaching elementary personal and community hygiene to testing for the chief endemic diseases and giving preventive vaccinations.
- Combating sleeping sickness, which had decimated the Congo's population, became one of the chief goals of Belgian medical researchers after the turn of the century. Their studies of the development and transmission of the disease—together with the methods subsequently adopted for early detection and treatment—led the way for action by other Central African countries faced with the same problem. Not only had sleeping sickness in the Congo almost ceased to exist, but other epidemic diseases—such as smallpox, yellow fever, and bacillic dysentery, as well as yaws and relapsing fever—were no longer major threats to public health. Early detection by special medical survey teams, together with proper care and treatment (often dramatically aided by newly discovered drugs) in health centers and institutions, have also cut down on the incidence of leprosy and tuberculosis.
- Malaria is the target of a continuous campaign. Prophylactic action begins in maternity and child-welfare clinics and is continued in schools, as small children have been found to be especially vulnerable. Other health measures in this program include spraying with DDT and the drainage of stagnant waters and swamps.
- A healthful and adequate water supply is a major element in maintaining good public health. Urban water supplies have been the responsibility of a semi-public agency, which constructs and maintains pumping installations, filtering and chlorine equipment, and brings piping to waterless areas. Urban districts are provided with public fountains and washhouses. In rural areas, the water supply program has included well-boring and catchment work as well as water purification.

- Private entrepreneurs engaged in mining, industry, agriculture, and commerce have been obligated by law to provide medical care for their employees. In many localities, these companies have exceeded the government's minimum requirements by extending the benefits of their free medical services not only to the employees' families but to the whole neighboring population as well. The U.S. Plywood-Agrifor operation is especially noteworthy for its medical facilities and programs.

The achievements in the three fields of education, African housing, and public health are a permanent legacy left by Belgian administrators to their Congolese successors. They constitute valuable social assets which make a major contribution to the Congo's future progress. Although the breakdown of order in certain parts of the country following independence and the pressing task of correcting this situation have interfered with the functioning of the social services and impeded their extension, the social infrastructure inherited from the past will give the Congo a head start over its neighbors when it shall have developed its own stable political system.

* * *

There can be no question about the Congo's enormous development potential. With its great natural wealth, its industrious population, and the capital equipment and technical proficiency provided by half a century of Belgian rule and European investment, the Congo possesses the resources necessary to achieve a high and sustained rate of growth in the years to come. Capital and technical assistance from public and private sources abroad will, however, continue to be needed on a substantial scale for an adequate rate of development. Congolese exports will have to continue at a level which can finance needed imports of the capital goods essential for future growth. However, as already noted, the major uncertainty regarding the Congo's future development does not lie in the economic field, important as it may be. Rather, it is whether a political and social climate conducive to economic growth can be achieved and maintained by the new nation. If this can be achieved, the Congo will have comparatively less difficulty in meeting the strictly economic requirements for development than will any other African country south of the Sahara.

III.

The Agrifor-U.S. Plywood Operation and Its Importance for the Congo

THE JOINT VENTURE IN THE CONGO of the United States Plywood Corporation and the Société Forestière et Agricole du Mayumbe has been unusual in a number of respects:

- It was the first partnership in the Congo between a U.S. company and a Belgian firm.
- It was the first instance of direct U.S. private investment in manufacturing in the Congo.
- There has been an extraordinarily successful and harmonious relationship between the two companies involved.
- It has significantly helped the Congo's economic advancement by enhancing its foreign exchange earnings, particularly of dollars; by providing domestically-produced materials for the construction, furniture making, and other industries; and by training Congolese in supervisory mechanical, electrical, and other skills required for their own personal advancement and for their country's economic growth.

Not the least unusual feature of this pioneering operation in the Congo is the fact that the personalities of two men played so significant a part in it. The late Lawrence Ottinger, founder and builder of U.S. Plywood, and Martin Theves, the dynamic and far-sighted head of the group of Belgian companies to which Agrifor belongs, were largely responsible for establishing the relationship and fostering its growth and continued prosperity.

By the mid-20th century, most large U.S. business firms had ceased to be identified by a dominant personality at their head. Today, even the ablest top executives tend to be cloaked in corporate anonymity; company policies are commonly made by an impersonal institutional process; and the emphasis is generally on the work of the team rather than of the individual. In European business firms, dominant per-

sonalities are still of greater importance than in the United States, but they are not likely to differ markedly from a common norm in their personal attitudes and policies, nor are their distinctive characteristics generally known to the public at large. Each in his own way, Ottinger and Theves have not been typical of their respective business environments.

Hence, it was not an accident that a joint venture which involved so large a measure of pioneering should have been undertaken by precisely the two companies headed by such unusual individuals as Ottinger and Theves. Few other Belgian business firms active in the Congo during the 1940s would probably have even contemplated, much less embarked upon, a joint manufacturing enterprise with a U.S. company. Few other American corporations in the plywood business would have been likely to have had the imagination to foresee how small the risks and how rewarding the returns would be of a joint venture with a Belgian firm in the Congo.

Moreover, beyond the personal contributions of their dynamic heads, each company brought something distinctive to the relationship in addition to its share of the financing involved. Agrifor had its timber concessions in the Mayumbe, its long experience of managing Congolese labor, its unrivaled knowledge of Congolese woods, and its long tradition of Belgian carefulness and thrift. U.S. Plywood designed the manufacturing facilities, provided the latest American equipment and techniques, ensured that the products would conform to the quality standards of the U.S. market, and virtually guaranteed the profitability of the enterprise because it possessed the largest distributive network of any plywood company in the United States and an aggressive sales philosophy.

Thus, to understand the nature and contribution of the joint U.S. Plywood-Agrifor operation in the Congo, it is necessary to look briefly at the backgrounds of the two companies and the distinctive roles played by their respective chief executives.

THE UNITED STATES PLYWOOD CORPORATION

U.S. PLYWOOD was founded in 1919 by Lawrence Ottinger and a number of associates who had acquired an excellent practical knowledge of plywood production and distribution from training in this field which they had received in government service during World War I. For its first dozen years, the company was a

jobber, buying plywood and related products from manufacturers and selling them to wholesale and retail distributors both in the United States and abroad.

Under Ottinger's leadership, U.S. Plywood soon made a name for itself in the trade. The company soon acquired sole distribution rights for products used in the manufacture of plywood—for example, bonding glue—and of related materials.

Fortunately for U.S. Plywood's future growth, the company was able to resist the temptation during the 1920s to acquire its own plywood-producing facilities and timberlands. After the onset of the Great Depression of the 1930s, some of the mills built during the preceding boom were unable to meet their fixed charges at low rates of operation and later closed down. As a result of one such financial crisis involving a large plywood factory in the Pacific Northwest, the company acquired its first interest in manufacturing facilities. Knowing Ottinger's reputation for good management and vigorous sales promotion, a group of Seattle bankers persuaded him to take over the output of this factory. U.S. Plywood first acquired a sales contract, then a controlling financial interest in it. Despite the Depression, the mill prospered under U.S. Plywood's management.

By 1937, Ottinger and his associates were convinced that it would be to the advantage of the company to broaden its activities into the manufacturing field. Accordingly, full ownership of the Seattle mill was acquired, and U.S. Plywood began to look around for timberlands, additional productive facilities, and locations for new mills. It also continued to diversify the variety of products which it marketed and produced.

World War II provided a major stimulus to the company's activities. Plywood proved to be one of the most versatile and economical materials used directly in the war effort and for civilian purposes prerequisite to war production. Molded plywood parts were fabricated for aircraft and ships, especially the famous PT boats. Methods were found for making molded plywood tubing and pipes to substitute for increasingly scarce metals. A new process was devised for bonding a metal skin to plywood backing and the new combination was used to make ammunition boxes and containers for many other types of war material and supplies. Other products of the company made possible the production of radomes for use in high-speed aircraft. In addition, vast quantities of plywood were produced for military construction purposes, both in training areas and on the fighting fronts, as well as for housing war workers and factory construction.

To meet these wartime needs, U.S. Plywood had to increase its production facilities and its research and development work. This growth continued during the postwar years as the company diversified the products it manufactured and expanded its production and distribution facilities.

It makes a wide variety of products, including hardwood and softwood plywood, veneer, sawn timber, flooring, woodtrim, doors, pre-finished plywood panels and parts, plywood combinations with metals, cloth, plastics, and kraft paper; laminated plastics and plastic materials used for construction; upholstery, counter-tops, luggage, and the like made of synthetic materials produced from wood and wood waste; asbestos mat and other asbestos products; bricks and cinder blocks; and many other products made of wood, plastics, asbestos, adhesives and glues, and ceramic materials.

U.S. Plywood has been the world's largest enterprise in its field. According to its 1964 Annual Report, it owned in whole or in part 78 plants, and owned or controlled over 16 billion board feet of timber in the United States and Canada. Its products were sold through 158 warehouses and sales offices located throughout the United States and Canada. Net sales grew from under \$70 million in 1950 to \$382 million in 1964. The company employed 15,000 people in the United States and Canada.

The fact that U.S. Plywood was originally engaged in the distribution of plywood and related products plus Ottinger's own commercial orientation and marketing skill have in large part determined the company's basic attitude and business philosophy. Though it is today the world's largest manufacturer of plywood and related products, the company is still primarily oriented toward sales. As its slogan "First Come Sales" indicates, the major emphasis of company policy is on expanding the range and improving the marketing of U.S. Plywood products.

The comparative abundance of U.S. and Canadian timber supplies and the company's cautious policy about acquiring expensive assets with heavy fixed charges combined to discourage U.S. Plywood from engaging in overseas investment until after World War II. However, the postwar boom in the housing, furniture, and home and office furnishing industries created a rapidly expanding demand for the company's many products. Accordingly, U.S. Plywood became interested in finding additional supplies of inexpensive materials for making the cores of plywood panels and of new and unusual types of wood for

making a wider variety and higher quality of veneers for plywood and other uses.

Ottinger and his associates were in a receptive frame of mind when, in 1946, they were presented with a proposal from the French government to design a plywood mill in Gabon (then part of French Equatorial Africa). This proposal for developing Equatorial Africa's immense timber resources was part of the plan for reviving the war-devastated and disrupted economy of France and its dependencies. The French government formed a corporation—with a minority of shares sold to private investors—to construct a large plywood mill at Port Gentil in Gabon. As the largest plywood company in the world, U.S. Plywood was asked to design and engineer the mill, which was constructed in 1947 by the French in accordance with the company's plans. Although the mill was technically very modern and efficient, it was not a financial success during the early years of operation owing to the inexperience and management difficulties of the French corporation. In 1952, the experienced Dutch timber firm of J. P. Bruynzeel acquired an interest in the corporation and undertook to operate the factory. It soon became a profitable activity.

U.S. Plywood has no financial interest in the Port Gentil factory nor did any of its personnel participate in management after the initial designing and engineering stage. However, the company has long-term contracts to purchase a large part of the mill's output of plywood. This export of plywood to the United States has provided a significant portion of Gabon's dollar earnings and has contributed to that country's development both under French control and more recently since achieving independence.

AGRIFOR

AGRIFOR (the Société Forestière et Agricole du Mayumbe) was incorporated in the Belgian Congo in 1924 to produce, process, and market various forest and agricultural products of the Mayumbe. It was originally established by, and has remained part of, a complex of Belgian and Congolese companies known as the Cominière group from the top holding company, the Société Commerciale et Minière du Congo.

It has been customary in Belgian business administration to form separate companies for each individual economic activity, in contrast to the U.S. practice of often having a single large corporate entity engage in a wide variety of different operations. Under the Belgian

system, policy control and integration are ensured by stock ownership in and careful supervision of the member companies by the management of the top holding company in the group. Most Belgian investments of substantial size in the Congo are members of groups of this type. The largest and best known of these groups is the Société Générale de Belgique, which controls the Union Minière du Haut Katanga and in which the government of the Congo has a large financial interest.

Although not nearly as big as the Société Générale, the Cominière group is wholly owned by private investors, mostly Belgian. Among its leading constituent companies have been: Socol (Société Continentale et Coloniale de Construction), a well-known engineering and construction company, which operates not only in Belgium and the Congo but in many other countries as well; Colectric (Société Coloniale d'Electricité), which distributes electric power in Leopoldville and vicinity; Vicicongo (Société des Chemins de Fer Vicinaux du Congo), which operates a narrow-gauge railroad in the northeast and engages in general road haulage in the Congo; Comuele (Société Commerciale et Minière de l'Uele), which grows coffee, rubber, and oil palms in the Uele and Ubangi regions of the northern Congo; T.C.L. (Société des Transports en Commun de Leopoldville), which operates the public transportation system in Leopoldville (Cominière in Elisabethville and Vicicongo in Stanleyville also operate the public transportation systems of those towns); Immoaf (Société Immobilière et Hypothécaire Africaine), an insurance and travel service company; and other subsidiary companies engaged in producing and marketing forest products, tropical agricultural products, cattle, minerals, construction materials, plywood, paints, furniture, etc., and in operating hotels and service centers of various kinds in the Congo, Belgium, and other countries. The Cominière group is also interested in the great hydroelectric and industrial potential of Inga and participated in the research and planning activities for this project. In addition, Cominière has minority holdings in many other groups of companies active in the Congo and in other parts of Africa.

One of the oldest companies in the Cominière group, Agrifor possesses extensive concessions to cut timber in the forested hills of the Mayumbe. In addition, it owns or manages several plantations producing bananas, palm oil, cocoa, and coffee in or near its timber concessions. Transportation of the company's products from the producing areas to the port of Boma has been by means of the narrow-gauge Mayumbe railway and also by the recently hard-surfaced road which

parallels the railway from Boma to its terminus at Tshela near the northern border.

During the interwar years, the company was not notably successful, primarily because of the low level of world demand for its products during the Great Depression and of comparatively high costs of transportation. Only after Martin Theves personally assumed charge of Agrifor in 1947 was the company able to overcome its difficulties and to become increasingly profitable. It was as part of Theves' solution for Agrifor's problems that the relationship with U.S. Plywood was first established.

When Martin Theves became president of Agrifor, he had already had a long career in the Cominière group. Born in the Grand Duchy of Luxembourg, Theves was trained as an engineer and first went to the Congo in 1921 to work on the Katanga Railway, then under construction. Joining the Cominière group in 1929, he worked initially for Socol, which was building the port of Boma, and later became general manager of Comuele. Made resident manager in the following year of all Cominière operations in the Congo, Theves had the task of adjusting these companies to the impact of the Depression and of guiding them through the difficult years of reduced economic activity. By the mid-1930s, he had demonstrated not only his technical skill as an engineer but his business acumen in the management of very diverse economic operations under unusually trying conditions.

Thereafter, Theves was made responsible for solving a number of particularly difficult problems confronting one or another company in the Cominière group. For example, Cominière—through a subsidiary—had built and was operating a railroad in Colombia from Bogotá to Sogamoso in the northeast. Traversing difficult mountain country, this Andean railroad had cost far more to build than Cominière had originally anticipated, and the company's investment eventually swelled to a total larger than the value of all the holdings it possessed in the Congo during the early 1930s. By 1935, the railroad had lost so much money that Cominière decided the time had come for drastic action. Theves was selected to solve the problem and he was eventually successful in negotiating the sale of the railroad on favorable terms to the Colombian government.

It was on such a "trouble shooting" assignment that Theves became president of Agrifor in 1947. After carefully studying the company's operations and the problems which it faced, Theves decided that two remedies were urgently required. The first was to develop new markets for the company's products, particularly to gain an entrance for it

into the very large and lucrative U.S. market for tropical timber. The second was to reduce substantially the high costs of transportation and handling within the Mayumbe and at the port of Boma, in order to enable the company to compete in these new markets. Though Theves' efforts to gain a foothold in the U.S. market took place prior to the solution of the transportation problem, they will be described after the latter, in the next section of this chapter.

An on-the-spot study of Agrifor's transportation and handling costs was undertaken in 1949 by Theves. Both the Mayumbe Railway and the port facilities in Boma were owned and operated by Otraco (Office d'Exploitation des Transports Coloniaux), an autonomous government agency which also controlled the rail and river systems of the Congo and its tributaries as far as Stanleyville and Lake Kivu. Though ocean shipping rates from Boma to Europe and the United States were quite expensive, Theves found that the high cost of moving Agrifor's products to market was mainly the result of the peculiar system of railway freight rates and port handling charges employed by Otraco.

In effect, Otraco charged progressively higher rates as the size and weight of the logs and timber products increased. These rates were so steeply graduated that it was impossible to ship the larger sizes of logs, which were the most desirable and which commanded the highest prices in overseas markets. Indeed, the freight and handling charges levied by Otraco sometimes exceeded the price at which the highest quality logs could be sold in Europe and in the United States. This situation forced Agrifor to ship comparatively small logs, for which Otraco's charges were not prohibitive.

The task of inducing an all-powerful and self-responsible government agency to change a long-established practice is a formidable one in any country. The difficulty was compounded in the Congo by the fact that the highest authority to which appeal could be taken was located thousands of miles away in Brussels. Yet, Theves proved equal to the task. He not only demonstrated to the authorities in Brussels that Otraco's rates were depriving the country of substantial export earnings, but he also uncovered serious inaccuracies in the equipment used to weigh freight and in the methods employed for calculating charges. After a struggle lasting 18 months, Agrifor won a substantial reduction of freight and handling costs and, in addition, Otraco had to reimburse the company for excess charges previously collected.

Combined with Theves' parallel success in gaining entry into the U.S. market, this victory marked the turning point in the fortunes of Agrifor.

FORMATION OF THE PARTNERSHIP

IT IS CONCEIVABLE that, on the basis of its experience in Gabon, U.S. Plywood might eventually have become interested on its own initiative in the Congo's timber resources. Be that as it may, the actual impulse came from Martin Theves as part of his solution for Agrifor's problems. He decided that the best way to establish a foothold in the U.S. market was by American rather than European sales methods.

Shortly after assuming the presidency of Agrifor, Theves made a trip to the United States to explore the market possibilities for the species of timber that Agrifor could supply. Agrifor had occasionally in past years sent small samples to the United States but had never received any orders. Theves soon realized that to sell on a regular basis in the U.S. market, Agrifor would have to convince its American customers that it was capable of regularly and reliably supplying large quantities of timber of uniform quality. The problem was to persuade potential American buyers that Agrifor was in fact able to meet these requirements.

Theves concluded that the way to make an impact was to send so big a sample of Agrifor's timber to the United States that there could be no question in the minds of possible U.S. customers of the company's ability to supply large enough quantities. Accordingly, he cabled Agrifor's general manager in the Congo to ship immediately to New York a "sample" of 250 tons of Agrifor's best and most uniform logs—a quantity equivalent to a month's orders from a medium-sized U.S. mill. In Theves' judgment, such a "sample" would discourage the technical managers in U.S. factories from telling their purchasing departments that the quantities likely to be supplied were too small to warrant the adjustments in their machinery and production methods required to process previously unused species of timber.

Pursuant to Theves' cable, a "sample" of 270 tons of high-quality logs arrived a few weeks later in New York. Resolved in the American fashion to start at the top with the biggest U.S. company in the field, Theves immediately approached U.S. Plywood and persuaded Lawrence Ottinger, then president, S. W. Antoville, then vice president, and C. P. Setter, then executive vice president, to inspect the Agrifor sample. Its size and uniformly high quality had the desired effect. Extensive tests of the logs proved that the timber was satisfactory in all respects. In consequence, two contracts were soon signed at the end of December 1947 by Setter and Theves. Under the first

contract, Agrifor was to supply a substantial quantity of high-grade logs, and under the second an even larger quantity of lower-priced, second-grade logs. These were the largest contracts that Agrifor had so far obtained in any market.

U.S. Plywood was equally pleased with the arrangements. Agrifor proved to be a reliable supplier in every respect—the quantities, qualities, and shipping dates specified in the contracts were always scrupulously met and often exceeded.

Moreover, the species of wood involved soon proved to be a major success in the U.S. market. This was the wood of the limba tree—a native of the Mayumbe forest—from which is produced a beautifully grained, blond, high-quality veneer for plywood and other uses. Marketed under the trade name *Korina* (meaning corn-colored), this veneer both profited from and helped to stimulate the fashion for light-colored paneling and furniture in homes, offices, commercial premises, and other buildings during the late '40s and early '50s. Tastes in the United States have shifted toward darker woods in recent years, but during the 1950s *Korina* was one of the most popular of the high-quality veneers.

Mutual satisfaction with the contracts induced both parties to think about a more enduring and efficient relationship. It was clear both to Agrifor and to U.S. Plywood that the transportation of large, heavy limba logs over long distances was comparatively wasteful, since only about 35 to 40 percent of each log yielded usable veneer. Hence, it would be much more efficient to pay the substantial shipping costs involved on only the usable portion of each log. In addition, the color was better if the logs were sliced into veneer within a few days after the trees were cut. The inevitable conclusion was that the logs should be processed as close as possible to the forests from which they came.

In the spring of 1948, Theves returned to the United States to ascertain whether the limba contracts were going well and also to obtain U.S. Plywood's reaction to the possibility of processing the timber in the Congo before shipment to the United States. Aware that the U.S. company was already importing plywood from the French mill at Port Gentil, Theves believed that he could interest Ottinger and Setter in a similar arrangement with Agrifor. However, Theves' proposal was a far more ambitious one than an ordinary long-term contract to buy the output of an African factory. He had in mind the then unprecedented step of proposing to U.S. Plywood that it become

an equal partner with Agrifor in the ownership of a plywood materials mill to be located in the Congo.

This idea was unprecedented in a number of respects. It would be U.S. Plywood's first overseas investment in manufacturing facilities. More important, it would be the first investment in manufacturing by any U.S. enterprise in the Congo. And, it would be one of the first, if not the first, equal partnership arrangement between Belgian and U.S. enterprises in the Congo. Usually, the Belgian interests preferred to retain control in their own hands.

Theves knew that his proposal, if accepted by U.S. Plywood, would be breaking new ground. However, he was motivated by two main considerations:

Although Belgium had been able to do a great deal for the development of the Congo, it was nonetheless a small country with limited resources. The participation of U.S. capital, both public and private, in the development of the Congo would constitute a valuable supplement to Belgian efforts to provide the country with the many different facilities and services required to raise productivity and living standards. Theves was one of the first Belgian businessmen with foresight to recognize the desirability of encouraging U.S. investment, private as well as public, in the development of the Congo.

Nor did Theves agree with the narrow and shortsighted view that U.S. private investment in the Congo would reduce Belgian opportunities. On the contrary, he knew that the faster an economy grows, the more numerous, diversified, and productive are the opportunities for investment. Far from being detrimental to Belgian interests, U.S. private investment in the long run would greatly enhance their growth and security.

While these ideas were in the back of Theves' mind when he returned to the United States in the spring of 1948, corresponding considerations had been occurring to Ottinger, Antoville, and Setter. The postwar housing boom and the increasing popularity of *Korina* plywood and veneers naturally interested them in ensuring a continuing and adequate supply of the necessary raw material. The company's customary attention to reducing costs and improving quality had already suggested the possibility of processing the limba logs in the Congo, with corresponding substantial savings in transportation and handling charges and improved ability to preserve the attractive color.

Hence, Theves found an immediate response to his rather tentative suggestion that consideration might be given to the possibility of processing the limba logs before shipment to the United States. Over

a weekend spent at Ottinger's suburban home, the main features of a partnership agreement were easily agreed upon in outline form. Two days of drafting by the lawyers sufficed to produce the detailed formal agreement, which was signed by Ottinger and Theves as presidents of their respective companies.

Under the terms of the agreement, which was to run for 30 years, a new corporation—called *Compagnie des Placages et Contreplacages du Congo*—was formed in the Congo for the purpose of constructing and operating a veneer-slicing mill contiguous to Agrifor's existing productive facilities. U.S. Plywood and Agrifor would each provide half of the capital required to construct and equip the new factory. Total capacity of the mill would be 4 million square feet a month. U.S. Plywood would have the right to at least 25 percent of the factory's monthly output of high-quality veneer, with the remainder to be sold to other buyers in the United States or Europe, if not desired by the company. The limba logs and other species required were to be furnished by Agrifor from its timber concessions in the Congo. Each of the partners would have half of the membership on the board of directors, with Ottinger becoming chairman of the board and Theves president of the new corporation. A similar corporation—called the *American Korina Corporation*—was simultaneously formed in the United States for the purpose of marketing the sliced veneers not required by U.S. Plywood.

U.S. Plywood prepared the plans for the new mill and provided the machinery, while Agrifor constructed the buildings and installed the equipment under the supervision of U.S. Plywood's engineers. The new factory was completed toward the end of 1950 and production began on January 1, 1951.

Two additional agreements between U.S. Plywood and Agrifor have subsequently been made, both at Theves' initiative. On a visit to U.S. Plywood's factory at Orangeburg, S.C., in the fall of 1952, Theves noticed that considerable quantities of okoume—a large tree native to Gabon—processed at the Port Gentil mill were being used as corestock in the manufacture of plywood. He suspected that trees with similar qualities for use as corestock could be found in Agrifor's timber concessions in the Mayumbe. If he were correct, a new and much needed source of supply for corestock could be developed for U.S. Plywood.

Early in 1953, U.S. Plywood sent an expert to the Mayumbe to search for a species suitable for corestock. A large tree called fuma was found, which met all of the technical requirements, but U.S. Plywood's expert doubted that corestock could be produced from it at an

economical price. Theves was nevertheless convinced that the possibility was financially as well as technically feasible, and he persuaded U.S. Plywood to enter into a new agreement with Agrifor for corestock production in the Congo. However, U.S. Plywood was reluctant to acquire an ownership interest in the new corestock installation but agreed instead to loan Agrifor half of the cost, with reimbursement out of earnings over 10 years.

As the popularity of blond woods in the U.S. market declined somewhat after the mid-1950s, the production facilities for *Korina* veneer, jointly owned by U.S. Plywood and Agrifor, were not fully used. At the same time, U.S. Plywood's need for corestock continued to grow. On another trip to the United States in 1956, Theves accordingly suggested that a second corestock production facility could be installed contiguous to the veneer-slicing operation and employing some of the latter's unutilized space, machinery, and staff. A third agreement was soon prepared under which U.S. Plywood again lent to Agrifor half of the cost of the additional equipment necessary to increase the production of corestock in this manner.

U.S. Plywood was given the right to purchase the entire output of corestock from these two productive facilities. However, as the output of the two production lines was so great as to exceed the company's needs, part of the corestock has been regularly sold in England to Formica, Ltd. As Theves had forecast, fuma proved both technically and economically to be a very successful corestock material.

The arrangements between Agrifor and U.S. Plywood continued unchanged for several years after Congolese independence in 1960. However, more recently, new legal requirements in the Congo and other considerations, including the greatly reduced market for *Korina* veneer in the United States, have brought about a change in financial relationships regarding the veneer-and-plywood-producing facilities in the Mayumbe. In effect, U.S. Plywood exchanged its 50 percent ownership in these facilities for an equivalent value of shares in Agrifor, amounting to slightly over 4 percent of the latter's stock. The long-term contract under which U.S. Plywood had the right to purchase the entire output of corestock was renewed for a further period of five years. In addition, Agrifor and U.S. Plywood are now actively exploring a new joint venture to produce corestock from timber in the Libenge Forest, on the left bank of the Ubangi River, a tributary of the Congo.

In the following pages, a detailed description is presented of the operations, policies, and achievements of the Agrifor-U.S. Plywood

joint venture in the Mayumbe. This description is based upon the field study conducted shortly before independence during the winter of 1959-60. Since then, no further field research has been done. However, information supplied by the two companies indicates that production in the Mayumbe was interrupted for a period of only a week during the disorders immediately after independence in 1960, and has continued without stoppage ever since. The companies state that production is now twice what it was before independence, and productivity has also increased substantially. More modern and efficient slicing equipment is now being installed in the corestock facilities which will further expand output and significantly reduce costs. Whereas there were 70 European managers and technicians in the Mayumbe prior to independence, 40 of them have now been replaced by Congolese trained for these jobs by Agrifor. Both companies continue to be pleased with their relationship and optimistic regarding their own prospects and those of the Congo.

OPERATIONS IN THE MAYUMBE

THE PRODUCTION FACILITIES made possible by these three agreements were built at two sites in the heart of the Mayumbe adjacent to existing Agrifor facilities.

The chief operation is at Lemba, about 25 miles north of Boma, contiguous to the Mayumbe Railway and the hard-surfaced road connecting the port with the town of Tshela on the northern frontier. Lemba is by Congolese standards a comparatively large and diverse industrial center. Here are located Agrifor's sawmill, the veneer slicing mill owned by U.S. Plywood and Agrifor, and the corestock peeling mill owned by Agrifor but partly built with funds lent by U.S. Plywood. In addition, Agrifor operates a diesel-powered electric generating plant, owned by Colectric, another Cominière company, to supply current for these factories, for Agrifor's hospital, for the houses of its European and Congolese employees, and for the schools, clubhouses, shops, and other nearby installations built by Agrifor for its employees. These facilities employ about 1,500 unskilled and skilled Congolese workers.

Twenty-five miles further north on the railroad and highway is the town of Lukula, a settlement of some 6,000 people, the administrative center of the district. Here are located a plywood factory owned by Agrifor and the other corestock peeling mill also owned by Agrifor but

partly financed by a U.S. Plywood loan. Power for these two factories is produced by Agrifor's own diesel generating station. The plywood factory and the corestock peeling mill employ about 500 unskilled and skilled Congolese workers.

The raw materials for the factories at Lemba and Lukula come from the hundreds of square miles of surrounding forests in which Agrifor has timber cutting concessions. In addition, logs are purchased from smaller companies with concessions elsewhere in the Mayumbe. Limba and fuma are the chief trees involved but nearly 40 other species are cut in smaller quantities for veneer purposes or for processing into sawn timber.

On the Agrifor concessions, the lumbering activities are carried on by teams of semi-skilled Congolese workers under the supervision of a trained European logging expert. The latter approves the selection of trees for cutting, ensures that safety regulations are maintained throughout the logging process, and marks the points on the trees at which they are to be sawn into logs for transportation to the factories at Lemba and Lukula. The logs are loaded by mobile power cranes onto large trucks, which are so constructed and powered as to be capable of driving on the roughest of logging roads.

Some of the logs are shipped by rail or road to Boma for export to European buyers who wish to process their own raw materials. However, the great bulk of logs cut or purchased by Agrifor are processed at either Lemba or Lukula, depending on the species and the end use for which the wood is intended—veneer, corestock, sawn timber, etc.

Five main processing operations are carried on at Lemba and Lukula:

- The highest-quality logs of limba and other suitable species are selected for slicing into veneer. First, the logs are dry-steamed in large steam pits for three or four days to ease internal tensions and prevent acids in the sap from discoloring the wood. The bark and surface defects are removed and the log is rough hewn into a flitch for slicing. The flitch is positioned in the slicing machine so that the carefully honed blade will cut thin sheets bearing the most desirable grain patterns obtainable from the wood. The slices are dried in a large automatic dryer and are then packaged for shipment to Boma, and thence to the United States. All of the usable slices from the same flitch are marked in order and are packaged together, so that they can be manufactured into plywood or other products using veneer which will have identical grain patterns.

Samples of each flitch are kept at Lemba for record purposes in the event that questions should arise. Additional samples from each flitch are sent to U.S. Plywood so that the company can determine the portion of the output which it wishes to buy for its own use and the portion to be sold to other U.S. consumers. Slices unsuited for the U.S. market or in excess of its needs may be shipped elsewhere or used by Agrifor's plywood factory at Lukula.

- At the two corestock operations, fuma logs are trimmed into suitable flitches and are inserted into the peeler, a machine which revolves the flitch around its long axis while holding it against a cutting blade that peels off a continuous sheet of wood until the unusable heartwood is reached. The long sheet is immediately clipped into widths suitable for plywood panels; these are assorted for size, color, and other characteristics; and are then passed into the dryer. The best qualities are packed for shipment to U.S. Plywood, while the remainder is shipped to Europe or is used by Agrifor's plywood mill at Lukula.
- At the plywood factory, the locally-produced veneers and corestock are glued together in hot presses to form plywood, cut to the required sizes, and sanded. Some of the plywood is shipped to Agrifor's European markets; the rest is marketed in the Congo to local buyers.
- Plywood pieces in unsalable sizes and shapes and unused veneer and corestock panels are processed in a division of the Lukula factory into laminated boardwood and other plywood-type products. Some of the output is manufactured into unassembled chairs, which are shipped to local Congolese markets. The remainder is supplied to furniture makers, construction firms, and other local fabricators of products made from such laminated materials.
- The sawmill at Lemba makes a wide variety of timber sizes and shapes out of the unused portions of logs and from other lumber specifically cut for the purpose. Most of the output of the sawmill is marketed in Europe.

MANAGERIAL POLICIES AND RESULTS

U.S. PLYWOOD PERSONNEL were stationed in the Mayumbe while the veneer and the first corestock factories were under

construction and during the early phases of their operation. The mill's first general manager was a U.S. Plywood engineer who lived at Lemba until July 1954. During this period of active U.S. Plywood participation in the operations at Lemba and Lukula, American equipment and production techniques were adapted to Congolese conditions; technical assistance was provided for the training of Belgian supervisors and Congolese workers; and U.S. Plywood's quality consciousness and quality control techniques were successfully transmitted. So quick were the Belgians and Congolese to master these new activities that the number of U.S. Plywood people resident in the Mayumbe could be steadily reduced. Beginning in 1955, only the factory's chief accountant was an American stationed at Lemba, and even he could be withdrawn toward the end of 1956.

Since then, no U.S. Plywood personnel have been stationed in the Congo and only occasional short visits have been made by U.S. Plywood executives. Close contact is maintained by correspondence between the Mayumbe and the United States, both at the level of routine production and shipping operations and also at the top managerial level. In addition, Martin Theves makes periodic visits to the United States on Cominière business.

The fact that no Americans need now be stationed in the Mayumbe attests not only to the aptness and skill of the Europeans and Congolese at Lemba and Lukula, but also to the large measure of mutual confidence and trust that has grown up between the two companies. Each has received sufficient proof of the other's trustworthiness and goodwill to be convinced that its own interests are being given due regard. In consequence, the joint venture is spared the expense of maintaining U.S. personnel in the Congo, and the operations in the Mayumbe have achieved results of which neither company by itself would have been capable.

Today, all of the production facilities at Lemba and Lukula are operated on a fully integrated basis regardless of whether they are owned by Agrifor alone or in partnership with U.S. Plywood. This integration has helped to make possible the achievement of a very high degree of efficiency and an extraordinarily economical use of materials. Every log is made to yield as much as possible of the highest quality materials that can be sliced, peeled, or sawn from it. That part which cannot be used to make some salable material or product is charged into the furnaces that provide heat to the dryers, steam pits, and hot presses. Even the bark, wood shavings, sawdust, and other odds and ends are carefully collected for the same purpose.

Equal attention is given to the handling of the products while they are being processed, as well as to their packaging, storage, and shipment, so that as little as possible will be damaged or will have to be downgraded to lower qualities.

The quality control exercised throughout every stage of the process, from the selection of trees for cutting to the packaging together of slices from the same flitch, is of great importance to U.S. Plywood and also constitutes one of the company's chief contributions to the partnership. In accordance with its basic policy, U.S. Plywood emphasized from the beginning the need to meet high standards of quality in order to ensure continued and growing consumption in the United States of the products made from the materials processed in the Mayumbe. In turn, insistence on these standards has made both the management and the workers in the Mayumbe quality conscious—a benefit not only to the products which they make for U.S. Plywood but one which inevitably extends to everything else produced by Agrifor.

Achieving these standards of operating efficiency and product quality has not been an easy task, and the difficulties to be overcome have required patience and persistence. The technical problems were usually the least difficult to solve—for example, finding the materials required to make the various types of glues; integrating the speed and output of the many different processes carried on in the factories; adapting temperate-zone machinery and techniques to very different physical conditions of humidity, heat, water, etc.; and fabricating needed replacement parts unobtainable in the Congo.

However, it was the human obstacle that proved hardest to overcome. The labor force available in the Mayumbe had neither the mechanical skills nor the experience of coordinated work required for modern factory operations. Prior to the building of the mills at Lemba and Lukula, there were no other comparable industrial operations in the region. Most of the initial supply of labor—and their replacements ever since—have come from the villages of the Mayumbe, which were then and have continued to be integral parts of the tribal society and subsistence economy. The transition to factory employment for these people involved some radical changes in their customary ways of living and working, which will be described in the next section. That these have been successfully overcome is a tribute both to the adaptability of the Congolese workers and to the patience and instructional skill of the European managerial staff.

Since 1950, productivity has nearly quadrupled and total produc-

tion has steadily increased. Three eight-hour shifts are worked in all producing departments, which generate sufficient tasks for the maintenance, shipping, and clerical personnel to operate on two shifts. The producing departments have a six-day week while the others work five and a half days a week.

At present, about 45 percent of total output is shipped to U.S. Plywood (mostly sliced veneer and corestock), while some 5 percent is sold to other U.S. buyers. Approximately 40 percent—mostly logs, plywood, and sawn timber—is shipped to purchasers in Western Europe (particularly Belgium, England, the Netherlands, Germany, and Sweden), with small quantities beginning to be sold in other markets. The remainder of the output—mostly plywood, doors, chairs, and other laminated products—is marketed within the Congo.

EMPLOYEE POLICIES AND BENEFITS

THANKS TO 50 YEARS of social and economic progress under Belgian rule, all employers in the Congo must observe at least the minimum standards regarding wages, hours, allowances, and other employee benefits originally set by Belgian legislation. Most employers, particularly those whose labor forces exceed a dozen or so workers, substantially surpass these minimum standards. Such progressive employee policies and practices resulted not only from the solicitude of Belgian administrators for Congolese social and economic welfare, but they have also been fostered by the traditional paternalism of Belgian business and by the corresponding—and much older—expectation of the Congolese population for paternalistic treatment, which is inherent in the tribal society's hierarchical system of social obligations. Another important factor has been the influence of Catholic and Protestant missionary groups, whose own example and direct pressure on employers have helped to broaden the range and increase the benefits of the welfare programs carried on by private business firms.

The policies followed at Lemba and Lukula rank among the best in the Congo. The main types of employee policies and programs are briefly described below.

Labor Supply

As elsewhere in the Congo, there is no difficulty in obtaining unskilled labor, while workers with already acquired skills and semi-

skills are very hard to find. Under the circumstances, Agrifor has followed the practice of most industrial employers in the country of training for more advanced jobs those workers among its unskilled labor force who demonstrate the greatest interest in and aptitude for acquiring mechanical, electrical, clerical, and other skills.

Special recruitment efforts are not needed to obtain the required numbers of unskilled workers. Young men are always leaving the tribal settlements for the higher incomes to be obtained by working for wages and the greater attractions of urbanized ways of living. Initially, women were also employed, particularly for tasks in which their greater manual dexterity was advantageous. However, it was found that industrial productivity significantly declined if male and female workers were located in contiguous or mutually accessible areas. Eventually, it was deemed advisable to discontinue the employment of women within the mills, although they are still used for a great variety of tasks in Agrifor's hospital, clinics, and social welfare programs.

About half of the work force at Lemba and Lukula is permanent. The other 50 percent turns over roughly every two years. The latter leave for a variety of reasons, chief among which are opportunities (or the expectation of opportunities) elsewhere to work at skilled trades—such as carpentry, masonry, and other construction jobs—and desire to return to their native villages, although once there they do not usually remain for very long. Many leave the factories to work as drivers of the increasing numbers of trucks and automobiles using the recently hard-surfaced road from Boma to Tshela. Even though wages are lower and hours are longer, the social prestige and personal satisfaction of driving a truck or car are sufficient to attract young Congolese from factory jobs.

The rate of absenteeism varies from 10 percent at the beginning of a pay period to 5 percent at the end. This is not regarded as a high rate in Africa and is hence not a source of concern. Nor is tardiness much of a problem either. Virtually all workers are at the gates when the whistle blows for their shift and, consequently, the penalties for lateness are small.

Orientation, Training, and Advancement of Congolese

Congolese newly come from tribal settlements and accustomed only to the work patterns of the subsistence economy must adjust to

rather different ways of living and working when they obtain employment at Lemba and Lukula. There they encounter a variety of new experiences and requirements, which include:

- Working for wages, with the attendant necessity of learning how to budget expenditures from one payday to the next, and making choices among the much larger varieties of foodstuffs, beverages, and consumer goods available as a consequence of their higher incomes and accessibility to shops and markets.
- Work patterns and disciplines directly determined by complex, high-speed machines, integrated teams, and continuous, repetitive production processes in contrast to those which are indirectly determined by the tradition-based cooperation of the tribal society and the few simple hand tools and intermittent, seasonal tasks of the subsistence economy.
- Urban-type living arrangements as isolated individuals or in small, isolated families instead of as integral parts of an all-embracing and psychologically-reassuring folk society.

Like other progressive employers in the Congo, Agrifor has tried to ease the psychological and social adaptations required by these and other profound differences between the traditional society and the modern world. Its health, housing, and social service programs are in the first instance directed toward helping Congolese newly arrived from tribal settlements to orient themselves to the strange patterns of living and working which they encounter at Lemba and Lukula. Once the orientation process has produced results, the objective of these programs then becomes to assist the worker and his family to obtain maximum benefits from the higher incomes and broader opportunities made possible by the new employment.

An important part of the adjustment process is on-the-job training for the specific task which the worker is to perform. Assigned to a team speaking the same dialect as his own, the worker is instructed by a Congolese foreman, who is responsible for teaching him the required movements and rhythm and for gradually integrating him into the work team.

Training sometimes extends to aspects of the work process which are assumed as already within the worker's capacity in countries of more advanced technology. For example, many of the traditional tribal cultures in the Mayumbe ordinarily distinguished among only a few colors, usually black, white, and red. Nor are there any concepts

for shades within the colors distinguished. Such limited color perception would not be an impediment in many instances, but it is a serious disability at Lemba and Lukula where the shades of veneer slices and plywood panels are major criteria in assorting and grading. Hence, many workers have had to be taught to distinguish shades, as well as to make many more distinctions among colors than was customary for them.

Thanks to the many primary schools operated by missions and the secular administration, it has not been necessary for the company to conduct its own classes in basic literacy for workers and their families. However, it does continuously engage in teaching higher skills to its employees. As a result, there is now a trained corps of mechanics, electricians, and other skilled workers who are capable of doing virtually all of the maintenance and repair required by complex production machinery, heavy-duty trucks, electric generating equipment, and numerous buildings and other structures. Indeed, so skilled have these Congolese workers become that they have been able to build under the supervision of European designing engineers some of the new machines and equipment required for plant expansion.

Success in transmitting industrial and clerical skills to its employees has been a necessary part of the company's policy of advancing Congolese as rapidly as they can acquire the qualifications and experience necessary to fill positions of greater responsibility and higher pay. In recent years, Congolese have replaced Europeans in an increasing number of jobs both in the production departments and in the personnel, accounting, and other service departments at Lemba and Lukula.

For example, the highly important activity of making glue for the plywood factory at Lukula is in charge of a Congolese who is also responsible for supervising the teams operating the glue-spreading equipment and the hot presses in the plywood production line; and the machine shop at Lemba is completely staffed by Congolese who are capable of doing very advanced mechanical and electrical work, including designing and pattern making.

Wages, Allowances, and Benefits

Minimum standards for employee compensation are fixed by laws and procedures initially established during the period of Belgian rule. These controls cover not only wages proper but also supplementary allowances paid in money or in kind; rents and the prices charged for

food, clothing, and household furnishings in local stores; pension retirement arrangements; and other types of allowances and benefits.

At Lemba and Lukula, the following wages and benefits are provided:

- Workers are grouped into three main categories—unskilled, semi-skilled, and skilled. The semi-skilled and unskilled categories are in turn subdivided into several classes. A minimum wage rate is fixed by the government. However, the company consistently pays its workers higher rates than specified by the government.
- Regional committees composed of representatives of the government, local employers, and employees fix certain minimum rations per worker which are to be paid either in kind or in their money equivalents. In the Mayumbe, these rations include fixed weekly quantities of rice, dried fish, white beans, manioc, manioc flour, palm oil, fresh vegetables, salt, and sugar. The company allowed its employees to decide whether they wished to receive their rations in kind or in their money equivalents. In elections held at Lemba and Lukula, the workers voted overwhelmingly to be paid in money. The government fixes the maximum prices that can be charged by local shops and market traders for these rations as well as for clothing, firewood, rent, and other items in an official cost-of-living scale.
- The company also pays an allowance for rent if it does not provide housing free of charge to its employees and their families.
- Family allowances must also be paid by the employer under laws passed during the Belgian period. The minimum fixed by law is a family allowance of 50 percent of the worker's ration and rent payments for his wife and 25 percent for each child. The company's family allowances significantly exceed these minimums.
- The government operates a compulsory pension retirement system under which contributions must be paid by both employers and employees, the latter as a payroll deduction.
- In the Congo, there are more than a dozen legal holidays, for which workers must be paid, and all employees are entitled by law to six days of paid vacation. Although legally required only to pay the basic wage rate for these holidays and vacation periods, the company voluntarily pays all of the supplementary ration, rent, and family allowances. Many Congolese who work only for two-year periods prefer not to take their paid vacations but to

accumulate the money equivalents, which are paid to them when they leave.

- Workers are entitled by law to sick leave with pay at the rate of 50 percent of their basic wage and total allowances. This legal minimum is substantially exceeded by the company, which pays two thirds of the basic wage and 100 percent of the allowances. Sick leave with pay requires the approval of the local hospital or clinic.

Health Services

Free medical care is provided for all employees and their families covering illnesses, operations, child birth, medicine, and treatments of all kinds. Agrifor has well-equipped clinics at each of its two factory sites and, in addition, has its own hospital at Lemba. Lukula has a town hospital which is used by the company on a reimbursement basis. Agrifor's clinics and the hospital at Lemba are staffed by trained European doctors and Congolese medical technicians, and the nursing and dispensary services are provided by an order of Catholic nuns. All expenses of the clinics and hospital are paid by the company.

The medical staff treats the usual infectious and contagious tropical diseases—such as malaria, parasitic infections, yaws, dysentery, and various fevers—as well as metabolic and degenerative illnesses and surgical cases. A great deal of time and attention is devoted to maternal and infant care. The hospital at Lemba has a separate maternity wing containing a scientifically equipped delivery room, private labor rooms, and special wards for post-natal care of infants and mothers.

Wives and female relatives receive complete pre-natal and post-natal care. During the period of pregnancy, the expectant mothers attend classes at which they learn to clean, feed, and dress infants. Each baby gets a gift package at birth which includes a complete supply of infant clothes, towels, diapers, soap, and other necessities. These are purchased by the company or are made under its social service program.

Until the baby reaches a weight of 24 lbs., it must be brought once a week to the clinic where it is bathed, weighed, given a preventive dose of quinine or other anti-malarial drug, and any illness, loss of weight, or other abnormality is diagnosed and treated. After the baby reaches 24 lbs., the initiative is left to the mother to bring the child to the clinic for periodic check-ups or for treatment in the event of illness. The weekly visit of mother and child to the clinics has become

a major social event at Lemba and Lukula. Mothers and infants are dressed in their best clothes; the former take great pride in their children's appearance and progress, and the latter are exceedingly well-behaved during the ordeal of being bathed, weighed, and examined.

Although officially intended only for the company's workers and their families, the clinic and hospital at Lemba treat a substantial number of Congolese who have no connection with the factories and related activities. These are mainly people from the surrounding tribal settlements who are unable to travel to the public hospital at Lukula.

Housing and Social Services

The factories at Lemba are surrounded by housing developments constructed by the company at suitable distances from one another. Each development contains several dozen houses spaced along regular streets. Wherever possible, workers and their families from the same tribal settlements or speaking the same dialects are housed in the same development.

The houses are mostly single-family type, containing two or three rooms, usually with an additional structure some yards to the rear for the cooking facilities. Several houses share common bathing and other sanitary facilities. Single men live in dormitory-type houses, but there are very few workers who are bachelors. The occupants are responsible for the cleanliness of their houses and surrounding grounds and for light maintenance and repairs. Major repairs and all new construction is undertaken by teams of construction workers on the company's payroll.

Housing is not provided for Congolese employees at Lukula. By the standards of the Mayumbe, Lukula is a large town and is hence considered an attractive place in which to live. Despite the fact that the company's houses are superior to those available in the town, the workers prefer to live in Lukula, especially since the distance from their homes to the factory is in any case not very great. Therefore, rental allowances are paid at Lukula in lieu of free housing.

The workers at Lemba do not have the same option, as there is no town located anywhere within commuting distance of the mills. At Lemba, the company provides space in its housing developments for local traders to operate the necessary retail shops. In addition, there is a central store operated by Agrifor where a wide variety of staple

foods, clothing, and household goods are sold at cost to the workers and their families.

As part of its social service program, Agrifor has built clubhouses and recreation facilities for the use of its Congolese workers at both Lemba and Lukula. Chief among these are the *foyers sociaux*, where many types of social service functions, particularly involving the women, are carried on. For example, regular classes are conducted in cooking, sewing, personal hygiene, child care, dressmaking, and other homemaking skills. It is at these regular classes in the *foyers sociaux* that the women and older girls make the baby clothes, towels, diapers, and other articles given as gifts to newborn infants. The company provides all of the materials required and pays the salaries of trained Congolese instructors.

Skilled workers have their own clubhouses and arrange their own social and educational activities, which Agrifor assists, as requested, in a variety of ways. All workers may use the football (soccer) fields and equipment and other recreational facilities provided by the company at both Lemba and Lukula.

Many of the wives of the European managerial and technical staff assist in the clinics and hospital and help to conduct the wide variety of social service programs provided for Congolese workers.

BENEFITS TO THE COMPANIES AND THE COUNTRY

THAT THE RELATIONSHIP between U.S. Plywood and Agrifor has been directly and immediately beneficial to both partners is beyond question. The U.S. company has obtained a reliable source of supply for the materials it requires to manufacture some of its major products; the Belgian company has an assured market for nearly half of the total output of its productive facilities in the Mayumbe. Both derive tangible profit from the partnership. But there are intangible benefits which are also of considerable significance.

Of importance not only to the companies but to the Congo as well is the fact that the U.S. Plywood-Agrifor relationship proves the correctness of Martin Theves' original view that collaboration with U.S. private capital would increase, rather than restrict, the profitability and growth of Belgian investment in the country. Agrifor's own operations have expanded considerably during the past decade and it has ambitious plans for future growth which do not directly involve or depend upon U.S. Plywood. Nevertheless, the activities in which it collaborates with U.S. Plywood have helped to make possible the

actual and projected expansion of Agrifor's other operations in a variety of ways:

- They have provided materials needed for Agrifor's own production of plywood and related products and have helped Agrifor to improve its technology, quality control, and other technical operations and standards.
- They have helped to increase Agrifor's income and thereby to provide part of the capital required for expansion.
- They have enhanced Agrifor's prestige in the Congo, in Belgium, and in the United States, and—by providing reassurance to potential U.S. investors—have made it easier for the Cominière group to obtain the participation of other U.S. business firms in new ventures in the Congo.

Thus, the U.S. Plywood-Agrifor partnership serves as a pioneering example of the benefits of, and the requirements for, the successful collaboration of U.S. and Belgian private capital in an underdeveloped country. As such, it can help to foster similar cooperative ventures by other U.S. and European companies. This is particularly appropriate for Africa, whose recently and soon-to-be independent nations are more lacking in the financial resources and the managerial and technical skills required for advancement than are the lesser developed countries of other continents. While Europeans have much greater experience in Africa than do Americans, U.S. investors have much larger amounts of capital potentially available for African development as well as the necessary related skills and technology. Hence, joint ventures of the kind pioneered by U.S. Plywood and Agrifor are particularly appropriate for fostering African development.

Not the least significant aspect of their relationship is the large measure of mutual trust and confidence that has been achieved. In a sense, this mutual trust is both a necessary precondition for and a consequence of the success of the partnership. Despite different nationalities and business attitudes, the two companies have evolved a degree of confidence in each other which provides an example to be emulated and a guaranty that it is possible of achievement.

Over the long run, the most significant benefit that the country may derive from the U.S. Plywood-Agrifor operation is the encouragement it may give to other U.S. and European investors to undertake similar joint ventures in the Congo. From the point of view of Congolese policy, such partnership arrangements are desirable not only because

they increase the total investment capital and related skills available to the Congo, but also because they help to diversify the national origins of the foreign-owned enterprises in the country.

Also, the Congo obtains more immediate and tangible benefits from the U.S. Plywood-Agrifor operation. True, relative to the total economy of the Congo, the activities carried on at Lemba and Lukula are quantitatively small; nor can they be compared, for example, to those of the Union Minière du Haut Katanga. Nonetheless, they yield returns to the Congo commensurate with the relative role they play within the country's economic system.

Of particular importance to a developing nation like the Congo is the improvement of its export earnings, which provide most of the foreign exchange required to finance the import of capital equipment, fuel and other supplies as well as the major portion of the government's tax revenues. Export earnings can be raised not only by increasing the quantities of products involved but also by augmenting their value before they are sold to other countries. Previously exported as raw materials, the forest products of the Mayumbe are now processed at Lemba and Lukula into intermediate materials of much higher value before being shipped abroad. The export of such semi-processed forest products marks a step forward in the Congo's economic development and brings to the country a substantially higher proportion of their value. The latter is reflected both in larger foreign exchange earnings, particularly of dollars, and in increased employment and corporate and personal incomes in the Congo, which in turn augment tax revenues and raise living standards.

Another direct economic benefit is the fact that the manufacturing activities at Lemba and Lukula provide the country with semi-processed materials directly important for increasing its own economic growth and living standards. Plywood, laminated products, and sawn timber are needed by the construction, furniture making, and many other industries. The output of the factories in the Mayumbe is an important supplement to the supplies of these materials available in the Congo.

Finally, by training Congolese and advancing them to positions of increasing skill and responsibility, the U.S. Plywood-Agrifor operation also helps to disseminate in the country many of the technical and managerial skills required for economic and social development. Congolese trained at Lemba and Lukula constitute valuable additions to their country's slender resources of people capable of playing increasingly productive roles in the nation's economic growth.

In sum, this case study provides a useful example of a successful, private, tripartite collaboration among Americans, Belgians, and Congolese. Their joint experience constitutes a proven method whereby private employers and employees from different nations and cultures can cooperate both to their own direct advantage and to the benefit of their countries.

THE POLICY COMMITTEE'S STATEMENT

IN UNDERTAKING THIS PROJECT the National Planning Association is not attempting to assess or describe how U.S. business enterprises generally operate abroad. Rather we are concerned with an objective study of some selected cases in which U.S. business management has, in pursuance of normal and profitable operations abroad, taken positive steps toward raising living standards and helping to integrate into countries less developed than the United States the foundations of a more mature economy. We are attempting only to sketch out those aspects of typical managerial efforts that contribute to the general economic and social progress of a host country. In confining ourselves to this facet of the problem of U.S. private enterprise abroad, we are not deprecating or belittling the other side of the coin, nor are we trying to write the "success" stories of nonprofit operations.

Underlying this project are the following assumptions concerning the relationships between U.S. private enterprise and the interests of the countries in which this private enterprise is operated:

First Assumption

We assume that certain, though not all, U.S. private enterprises operating in foreign countries have made contributions to the welfare of those countries and that these contributions have resulted from the foresight of management. We are convinced, therefore, that well-operated and profitable businesses abroad can establish patterns of behavior that contribute materially to the welfare of the countries involved without unduly disturbing native cultures, living patterns, and ideologies.

Second Assumption

Properly managed private enterprise abroad contributes to its market and economic area an organizational pattern, within which new enterprises are developed by people native to the host country. This chain reaction helps to create a manageable, more productive economy. In other words, well-run U.S. enterprise abroad not only can be self-sustaining, but also can give birth to or stimulate the development of corollary enterprises as a result of the private enterprise pattern taking hold.

Third Assumption

A basically private enterprise economy in less developed countries, of which well-managed U.S. private enterprises can well be a part, provides strong insulation against Communism, totalitarianism, and political instability. Therefore, it is to the national interest of the United States to have "policies" that promote enlightened and well-managed U.S. enterprises abroad. Conversely, it is in the best interests of all parties concerned that the United States Government use its influence to promote cooperation between U.S. private enterprises abroad and democratic countries in which they operate.

Fourth Assumption

The soundest way of assuring continued access in the less developed countries to those vital raw materials which the United States needs is to take cooperative measures to help those countries improve their standards of living and strengthen their economies. One of the most practical ways of doing this is to provide encouragement to U.S. private enterprises to help these countries develop their resources insofar as they want the assistance of U.S. management organization, private capital, knowledge, experience, and technical skill.

Fifth Assumption

In the long run, the "success" of an enterprise abroad must be judged in the light of its relations to the host country. The ultimate success and permanence of the enterprise must necessarily be related to the importance of its contributions insofar as the host country is concerned, since enterprises typical of those we are studying do not exploit host countries, but create wealth which is shared by their citizens. If U.S. private enterprises abroad are managed in such a way that the host countries are convinced they are also promoting their economic and social development, then it is most likely that they will receive the cooperation essential to long-run survival.

Since the above assumptions are general considerations, it is unlikely that any specific *Case Study* will bear directly on all these points. All *Case Studies*, however, will be measured against the fifth basic assumption. Our inquiry, therefore, is an area that until now has been almost wholly neglected.

The files, information, and services of our governmental departments, numerous agencies and special commissions, the Export-Import Bank, and the International Bank for Reconstruction and Development are replete with current and historical information helpful to the businessman contemplating operations in foreign lands. In addition there are many private agencies—particularly commercial and investment banks maintaining foreign departments—engaged in counseling on legal, financial, trade, transportation, and local political conditions throughout the world. Our *Case Studies* will not aid the student or businessman seeking out specific answers to questions in the legal, financial, political, and related subjects. We are under no illusions as to the many difficulties that beset management in initiating and maintaining operations abroad.

We do not assume that U.S. enterprises will go abroad unless they believe they can return a satisfactory profit on the capital placed at risk, although collateral considerations may be involved. In pursuing profits, however, the “successful” enterprise finds it pays dividends to strive consciously to contribute to the social and economic life of a host country. For this reason, there should be no misunderstanding of what we are studying. We are not delving into the business transactions of any company under study except as they may relate to these contributions in our area of inquiry.

We frequently hear these days of the unsettled conditions abroad, that little or no basis exists for private investments in foreign countries, and particularly that the world is hostile to U.S. capital and our production methods (though not to our achievement!). This may be true among certain segments of the world’s population, but an increasing number of foreign governmental and private leaders are consciously trying to create and maintain an economic climate favorable to such ends. Most of the world is short of capital and very short of dollars—yet at present it is only from the United States that they may obtain both to a degree necessary to their continued growth.

Capital that goes abroad without management—as much of it did in the early twenties—often constitutes a poor risk. That which goes abroad under American management—through U.S. business firms establishing branches or subsidiaries—usually shows better results both from a profit standpoint and in terms of economic and social contributions to the host countries. Governmental guarantees by this country are not nearly as effective

in safeguarding such investments as the enlightened attitudes of the U.S. businessmen who manage the investments. This country has much to offer the world in business organization, technical know-how, and creative capital. The building of economic units in foreign countries that are not only profitably managed but also provide a positive economic and social contribution to their host countries are the surest guarantees that such capital will not be subject to abnormal risks.

The rapid expansion of industrial capacity here and abroad has enormously increased the need for raw materials throughout the world. On this basis alone, it is in our self-interest to encourage private capital to seek profitable opportunities in underdeveloped areas. And in so doing, we can demonstrate that we are creating new outlets for electric power, transportation and port facilities, increased industrialization, greater demand for U.S. capital goods, and contributing to the increase in international trade in general. However, unless we can come to a more realistic "import" policy, the export of U.S. capital will shrink and with it will go one of the principal ways to meet the present critical "dollar gap." This dollar shortage abroad is already seriously threatening our nondefense export trade.

Because we live in a world of state trading, exchange controls, export subsidies, import quotas, and intensified nationalistic aspirations there is special need for correlating private and governmental action in the exportation of U.S. capital. Everyone, including the taxpayer, benefits when governmental action constructively complements the flow of private capital abroad, when such action anticipates and helps create the appropriate climate, and when it fosters the long-range development of economic and trade relations of this and responding host countries.

The fact that we are only studying successful companies certainly implies that they have been profitable to their stockholders, and therefore we will not concern ourselves directly with this facet of their success. Our concern is rather how these selected though typical companies have earned the title "successful" insofar as they have benefited the host countries. For convenience, we may outline these principal possible benefits in the order of greatest ease in ascertaining their existence:

I. Contribution to the basic economy

- A. Additional resources (land, minerals, etc.) brought into use for the country.

- B. Transportation, energy, communications which are built, fostered, subsidized, or otherwise created by the company or by virtue of its operations and available to the use of the country in whole or in part.
- C. Products of the company consumed or used in the host country.
- D. Related industries developed with company assistance or which are attributable to the company's operations.
- E. Service industries and trades dependent on and arising because of the operations of the company and the additional purchasing power of the labor force.

II. *Contributions to living standards*

- A. Improvement in wages, hours of work, and employment conditions.
- B. Better housing.
- C. Improved health and sanitation.
- D. Greater opportunities for education and recreation.
- E. Higher levels of nutrition.

III. *Institutional benefits*

- A. Formation of and use of local capital.
- B. Improvement in skills.
- C. Changes in patterns of doing business.
- D. Tax, social, and other legislation encouraged or fostered.
- E. Changes in public administration.
- F. Greater civic responsibility.

IV. *Cultural*

- A. Are the company operations as a whole tending to increase the middle class?
- B. Is initiative passing to more responsible groups?
- C. Are class conflicts decreasing?
- D. Is there greater respect for human rights?

Unfortunately many of these broad areas of benefits cannot be measured or even detected except over a considerable period of time. They will be present or absent in varying degrees according to the type, size, and purpose of the capital investment and the stage of the country's development at the time the initial investment was made. Certainly the cultural benefits will emerge gradually and probably only will be measurable by the influence of the total impact of all managed capital—foreign and local—rather than any one part of it.

In addition to these external factual areas, we are vitally interested in studying the relationships and attitudes that have made these practices successful:

How has the company met the obstacles which it has encountered?

To what extent has the company introduced U.S. managerial skills and methods cut to fit the operating picture abroad?

How has the company sought and obtained the cooperation of employees, government officials, and community; and have the views of these people changed markedly since the company first started operations?

Has the company sought to identify itself with the community as a friendly institution?

Has it sought to train native labor for the higher skills, for supervisory and executive positions, and have such efforts resulted in higher productivity, greater responsibility, and understanding on the part of labor?

Have the company's practices in investing capital and securing return of profits been made progressively easier?

Has the company brought know-how, technical assistance, and business management that could not have been provided at all—or as effectively—by government programs?

Above all, we shall be describing U.S. business management attitudes toward its job of conducting successful operations abroad, its flexibility and patience in meeting the great obstacles that are presented in so many fresh and challenging ways. Let no one be deceived by these studies into believing that the way of business management abroad is all romance, huge profits, and success, purchasable in the market place. The rewards are adequate, the work is hard but interesting, and, as at home, the results are created, not bought.

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A voluntary association incorporated under the laws of the District of Columbia
1606 NEW HAMPSHIRE AVE., N. W., WASHINGTON, D. C. 20009

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THE CONGO

The Setting of the Study



SOME OF THE TRANSFORMATIONS which have occurred in the Congo's economy are symbolized by these modern port and rail facilities on Stanley Pool at Leopoldville.



THE LEMBA PLANTS of the Agrifor-U.S. Plywood partnership, shown above, are part of this modern sector. Their scientific exploitation of the Congo's forest resources provides jobs, training, and valuable foreign exchange for the country.



ECONOMIC ACTIVITY in the Congo takes a wide variety of forms. Here, a Kivu craftsman makes his pottery, another craftsman engraves the plates for cloth printing, and workers in a Leopoldville textile mill help fulfill the nation's demand for cloth.



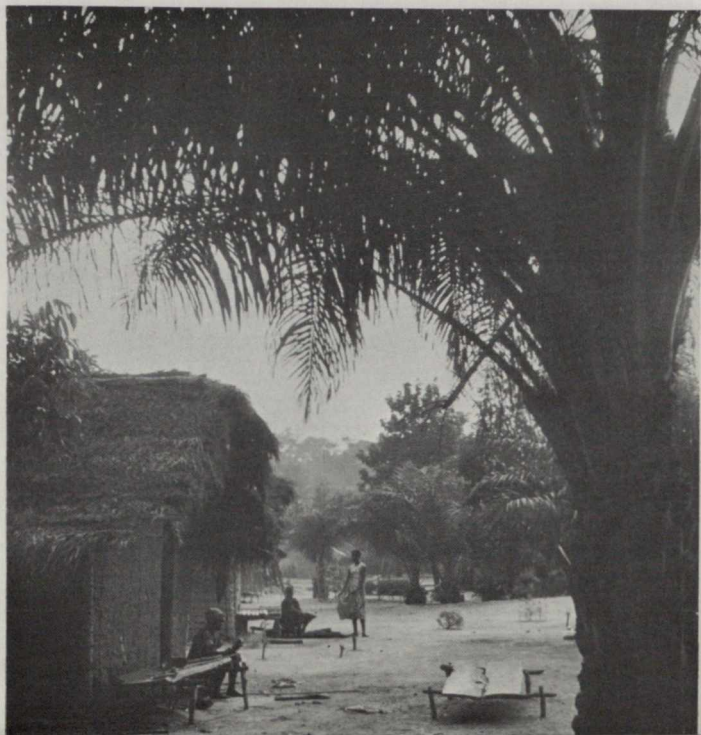


SALES may be made in a modern department store or in nearby open-air markets where shells still circulate side by side with the national currency.





MODERNIZING
economies are characterized by striking contrasts in other aspects of life as well. Here are the modern capital and a traditional village.





PART OF THE CONGO'S wealth is in her extractive and ore refining industries, like the Union Minière du Haute Katanga complex at Jadotville, pictured above and to the left.



ANOTHER PART is Congolese desire to build for a better life of tomorrow. To the left, villagers at Nyanga erect their own houses as part of a village self-help effort. Below, the Congo trains its future leaders and technicians at Lovanium, one of its three universities.



JOINT VENTURE IN THE CONGO
Agrifor-U.S. Plywood



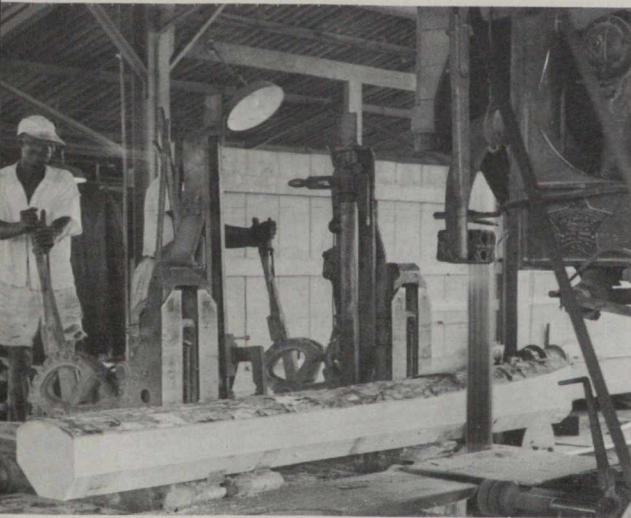
THIS BELGIAN-AMERICAN partnership in manufacturing is based on the timber resources of the Mayumbe region. At left, a limba is felled. Trees are then trimmed, sectioned, and hauled by bulldozer to the nearest road.



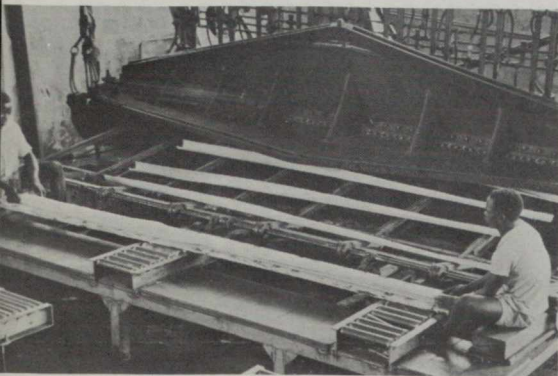


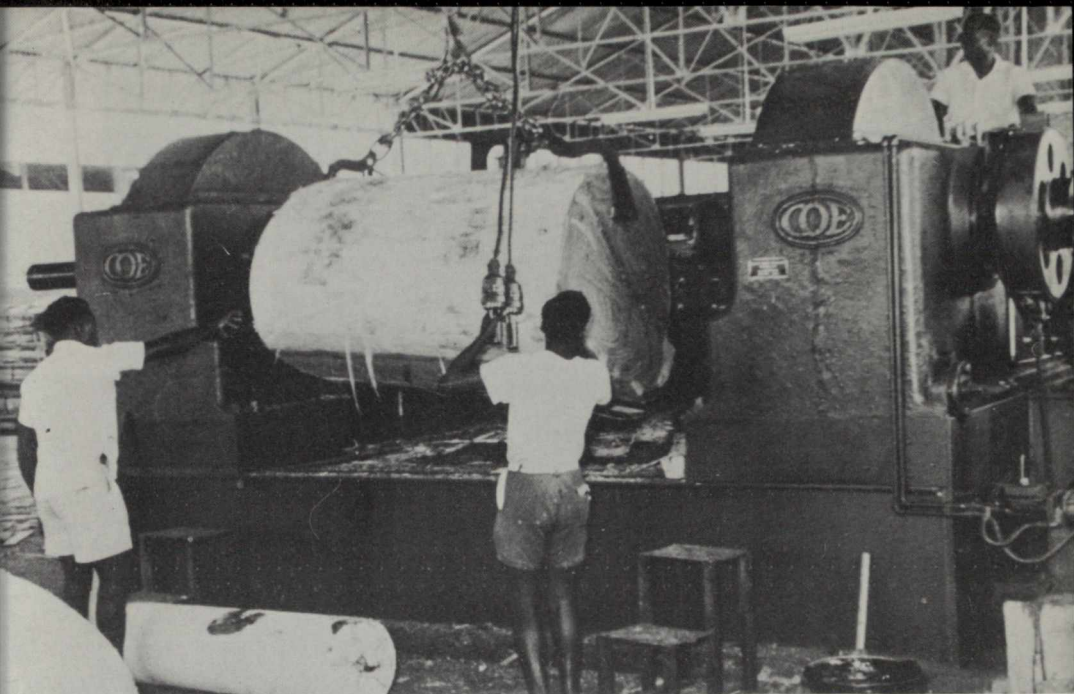
TRUCKS then transport the logs over roads, many of which the company has developed. The logs are delivered to one of the partnership's two mill centers: Lemba, where about 1,500 workers are employed, and Lukula, where there are jobs for about 500 Congolese. A portion of the logs are converted into sawn lumber at Lemba, mostly for sale in the Congo. By-products of other operations are suitable for the construction of furniture by local artisans.



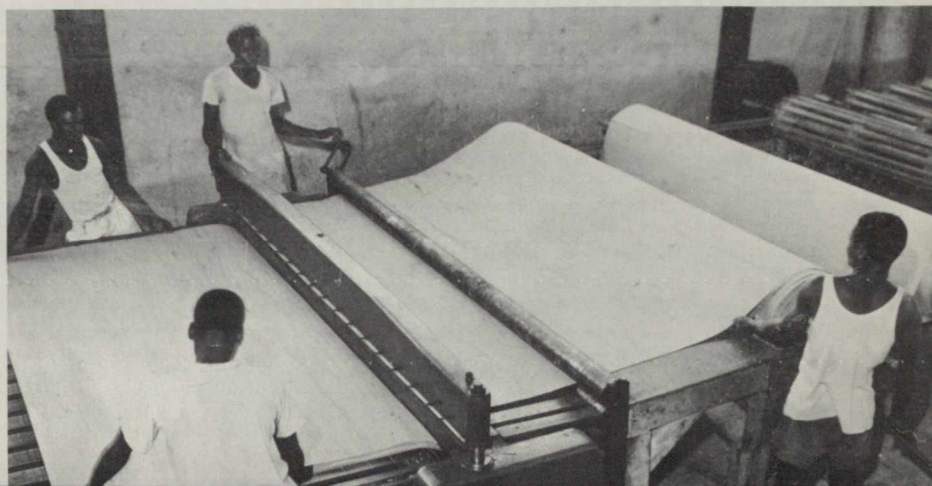


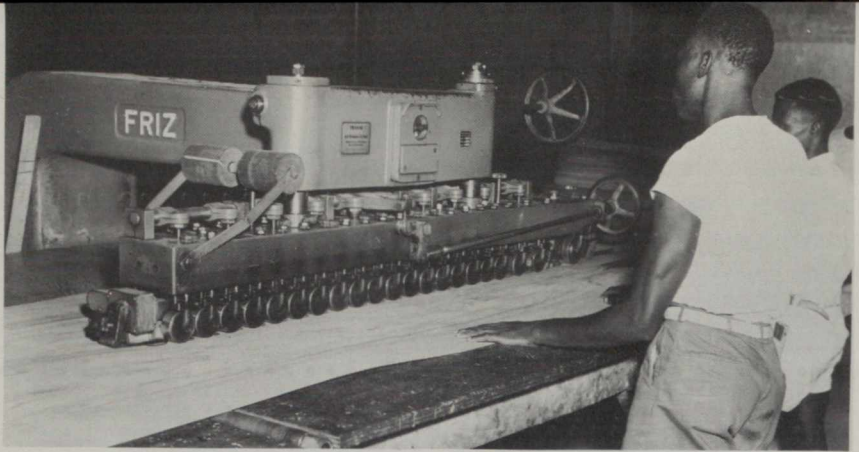
LEMBA is also the site of the veneer mill of Korina, a corporation jointly owned by Agrifor and U.S. Plywood. The highest grade logs are selected, barked, and trimmed by skilled workmen. Then they are cut into the veneer slices, seen below, and exported, chiefly to the United States.





AT THE CORESTOCK peeling mill, owned by Agrifor and partly financed by U.S. Plywood, other selected logs are processed. Rotating the carefully prepared log, called the flitch, on its long axis, the machine cuts a continuous sheet of wood suitable for plywood panels. These are then cut to size, sorted, dried, and either exported or sent to Agrifor's plywood mill.





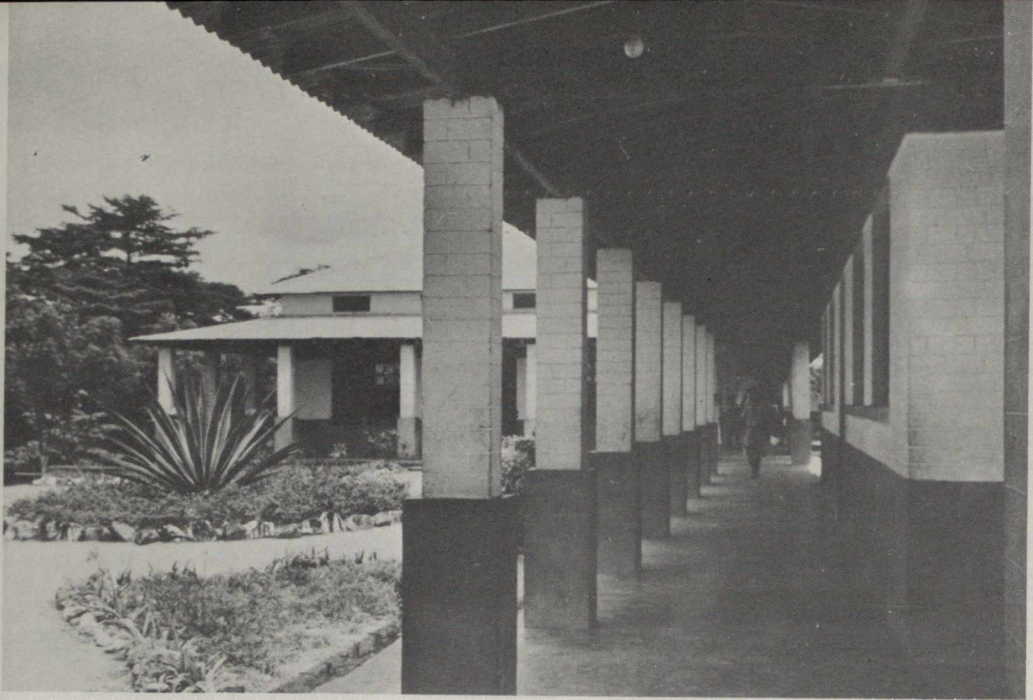
AT NEARBY LUKULA the sheets of corestock and veneer are glued together to form plywood. This factory is also owned by Agrifor and was built with the aid of U.S. Plywood. The plywood is finished and packaged for shipment to customers in the Congo, in Europe, and in the United States.





THE PARTNERSHIP'S OPERATIONS are not limited to its mills. It also provides a wide spectrum of social services to its employees and neighbors. Neatly arranged workers' houses, each having its own papaya tree, are shown here. At Lemba, since no village is near, the company has built an entire town, providing space for shops and recreation, and has constructed health and educational facilities. The families of workers have access to training programs, athletic clubs, and child-care centers such as the one shown here. At Lukula, workers preferring to live in the town are given a housing allowance.





THIS HOSPITAL at Lemba provides medical care, not only for all employees but also for local people not directly connected with the Agrifor-U.S. Plywood operations. At Lukula, the company reimburses the town hospital for care of its employees.

Hilaire Dewulf

