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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

AFRICAN TRANSPORT PRIORITIES

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Economic Department
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SUMMARY

Intergovernmental conferences were recently held at Johannesburg (Union of South Africa) and Dschang (French Cameroun) to discuss the improvement of transport facilities in Central and Southern Africa.

The participants included European colonial powers (Belgium, France, Portugal, and the United Kingdom), self-governing African countries (Southern Rhodesia and the Union of South Africa) and various Belgian, British, French and Portuguese dependencies.

It was decided at these Conferences that prompt action on three broad groups of projects would be most valuable, both in terms of world needs and African development. In order of priority, they are:

A. Improving the transit routes, transit ports, interterritorial rail links, and internal rail facilities of both Southern and Northern Rhodesia,

B. Developing the Belgian Congo's waterways, river ports, and river fleet together with roads and railways to feed and extend the fluvial network.

C. Establishing new outlets to the sea for inland French Equatorial Africa and the French Cameroun along internal as well as transit routes.
This is the order of priority necessary to break transport bottlenecks now holding back the world's immediate supply of essential materials. The same order would not apply if the first consideration was long-range expansion of world trade through the development of African regional resources. From this viewpoint, all three groups are equally essential.

The specific transport projects in Central and Southern Africa which ought to be carried out at once on the grounds of their urgency, productivity, and soundness are:

**Southern and Northern Rhodesia:**

A. Equipping the Indian Ocean port of Beira in Portuguese Mozambique with additional facilities to handle general cargo, particularly Rhodesian imports.

B. Improving the Rhodesia Railway for better internal service, particularly in the haulage of coal from Wankie in Southern Rhodesia to the Copper Belt in Northern Rhodesia.

C. Forging a new rail link across a short gap between the Rhodesian and the South African lines, (i) to join the Rhodesias with the Indian Ocean port of Lourenco Marques in Portuguese Mozambique; (ii) to provide better, more direct contact between Southern Rhodesia and the Transvaal-Orange Free State areas of the Union.

D. Carrying out rail and port improvements on the Lobito route from Northern Rhodesia to the West Coast across the Belgian Congo and Portuguese Angola, if and when the present traffic, mainly Katanga export-import goods, is
increased by substantial Copper Belt traffic.

E. Enlarging the line capacity (if it can be done at a cost within reason) of the Nafeking line across Bechuanaland, at present the only rail link between Southern Rhodesia and the Union of South Africa.

Belgian Congo:

A. Improving the navigability of the Congo River and its tributaries; expanding and modernizing the river ports; and re-equipping the river fleet.

B. Expanding both the rail and road networks to improve their present meshing with the fluvial routes along the Congo River and its tributaries.

C. Building a new line to link the Katanga rail network with that of the Great Lakes.

D. Carrying out some railway and port improvements in British East Africa to provide better transport facilities to and from the Eastern Belgian Congo.

French Equatorial Africa and the French Cameroun:

A. Developing an outlet to the sea for the Lake Chad area over the Nigerian Railway by means of new line extensions and/or feeder roads designed to bring the railway within reasonable reach of Lake Chad.

B. Improving the present outlet to the sea of the North Central area of the French Cameroun over the Benue and Niger Rivers from the river port of Garoua, (French Cameroun) to the delta port of Burutu (Nigeria).
C. Developing an additional, larger outlet to the sea for the North Central area of the French Cameroun over an internal road now under construction from Garoua on the Benue River to the railhead of the Douala-M'Kangamba line.

D. Improving the present outlets to the sea via the Ubangi-Congo and other waterways, for a vast area in French Equatorial Africa which is within easy reach of the Congo and its navigable tributaries.
This report examines, in terms of their urgency, productivity, and soundness, major transport projects for which no external financing has yet been arranged. For convenience of analysis, the projects are classed in two broad regional groups:

A. Central and Southern Africa, as defined by the coverage of the recent Johannesburg Transport Conference - i.e. the Belgian Congo as a whole, the Portuguese dependent territories (Angola and Mozambique); some British dependent territories (British East Africa, Northern Rhodesia, Nyassaland, and the High Commission protectorates); some French dependent territories (Madagascar and the Brazzaville-Pointe Noire district of French Equatorial Africa); the Union of South Africa, and Southern Rhodesia.

B. Central Africa, as defined by the coverage of the recent Yaoundé Transport Conference - i.e. French Equatorial Africa, the French Cameroun, and French West Africa (Niger Province) together with their transit arteries through the Belgian Congo, Nigeria, and the British Cameroons.

Transport Problems of Southern and Northern Rhodesia

Southern and northern Rhodesia pose the most critical transport problems within the region covered by the Johannesburg Conference. A complete solution would require simultaneous action along each of the following lines:
A. Enlarging the capacity of the port of Beira (Mozambique) through which the great bulk of Rhodesian exports and imports move at present.

B. Joining the Rhodesias by rail with an additional port on the Indian Ocean, i.e. Lourenco Marques (Mozambique).

C. Using to the fullest, despite carrier agreements regarding zones of influence, the interconnecting railroads across Angola (Portuguese) and Katanga (Belgian Congo) from Lobito Bay on the Atlantic Ocean to the Copper Belt in Northern Rhodesia.

D. Establishing better facilities for internal rail haulage within both Rhodesias so that adequate amounts of Wankie coal can be delivered to the copper smelters in Northern Rhodesia and Katanga and to the booming industries of Southern Rhodesia.

E. Developing better rail linkage between the Rhodesias and the Union of South Africa in order to accommodate a heavy, steady expansion of northbound freight from the industrial areas of the Union to the expanding agricultural areas of Southern Rhodesia.

All the specific projects to help meet these needs rate top priority. Recurrent congestion at Beira, mainly because of an upswing of inbound transit goods far beyond the port's present capacity, has retarded both the export of various Rhodesian materials (e.g. copper, chrome, and asbestos) which are badly needed by Western Europe and the import of various materials (e.g. cement,
steel, and machinery) which are vital to Rhodesian economic growth. The copper smelters of Northern Rhodesia and Katanga cannot work at full capacity at present, partly because of serious deficiencies in the motive power, rolling stock, repair shops, and line facilities of the Rhodesia Railway as a carrier of Wankie coal. The only rail link between the Union of South Africa and the Rhodesias, i.e. the line from Vryburg to Bulawayo, is being worked close to full capacity and may soon become a bottleneck to the further growth of complementary trade between the industrial Transvaal and agricultural Southern Rhodesia. The continued expansion of the Rhodesian economy calls for additional means of access to the overseas world through Lourenco Marques on the Indian Ocean and Lobito on the Atlantic.

Beira Project.

Beira is primarily a transit port for the Rhodesias and also an outlet for some Katanga exports. Within the next 12 - 18 months the port will be equipped with large, new, ore-handling facilities now under construction with the help of ECA financing. These will provide ample capacity for the prompt, efficient, loading of Rhodesian and Katanga exports. Where only 800,000 tons a year of outbound ores and minerals can be handled at present, the new facilities will be able to handle 1.8 million tons a year.

Beira also needs additional piers for working inbound general merchandise, particularly Rhodesian imports, which are expected to increase from roughly 600,000 tons in 1950 to at least 800,000 tons in 1955. Construction of such facilities is contemplated by the
Beira Convention, an agreement among Portugal, Southern Rhodesia, and the United Kingdom. Although the Mozambique authorities assert their firm intention to carry out the project, neither its external nor internal financing seems to be definitely assured for the present.

Beit Bridge and Pafuri Projects

There is no disagreement about the need to build a rail link between Southern Rhodesia and Lourenco Marques in the near future. There is serious disagreement, however, about the route along which the link ought to run. The Johannesburg Conference recommended an ECA economic survey to decide between the two main alternatives, both technically feasible. These are (a) closing a short gap (about 110 miles) between the Beit Bridge railhead in North Transvaal and the West Nicholson railhead in Southern Rhodesia, thus connecting the Rhodesian network with the South African lines as well as with the port of Lourenco Marques; and (b) building a much longer line (roughly 700 miles) which would run inland across Southern Mozambique from Guija to Pafuri and then traverse Southern Rhodesia to existing railheads at Bannockburn-Shabani.

The Beit Bridge project would cost about £2 - 3 million, depending on certain supplemental expenditures to relay, strengthen, and realign track on the present spur down to West Nicholson. The line could be built in 18 - 24 months. The most difficult work - bridging the Limpopo River - has long been an accomplished fact.

The Beit Bridge project is strongly supported by the South African railway officials and just as strongly opposed by the Rhodesian railway
authorities. Their disagreement, openly voiced at Johannesburg, prevented the Conference from taking any definite action for or against the line, except for the suggested ECA survey of both Beit Bridge and Pafuri.

The Pafuri project would cost the equivalent of $20 - 25 million, of which half might have to be foreign exchange. Although construction of the line would take 3 - 4 years, no major works such as great tunnels or bridges are necessary. Sponsored by the Portuguese authorities, the Pafuri project is also supported by the Southern Rhodesia. The Portuguese favor it as a means of increasing traffic through Lourenco Marques, of stimulating agricultural development in Southern Mozambique, and of eventually establishing a rail connection between Beira and Lourenco Marques. The Southern Rhodesians see the Pafuri line as a plausible alternative, at least temporarily, to the Beit Bridge link.

The substance of the Southern Rhodesian opposition to closing the Beit Bridge gap is fear that the revenues of the Rhodesia Railway - a State-owned carrier - may be cut through diversion of goods traffic between the Union and the Rhodesias now moving over the Mafeking line. This line is owned by Rhodesia Railway (which collects all the receipts) but is operated by South African Railways (which is reimbursed for all the working expenses). Its traffic is mainly northbound manufacture and materials from various parts of the Union, some within and some beyond the economic reach of the proposed Beit Bridge link. According to official Rhodesian estimates, closing the Beit Bridge gap might divert enough goods traffic
from the Mafeking line to reduce the net revenue of the Rhodesia Railway by approximately £600,000 a year.

Carrier earnings apart, there is every reason to prefer the Beit Bridge to the Pafuri project. Both lines would give the Rhodesias an additional outlet on the Indian Ocean through the big, well-equipped port of Lourenco Marques, now mainly a transit port for the Transvaal. The link via Beit Bridge could be completed at a much lower cost than that via Pafuri, (£3 million at most as against $20 - 25 million) and in much less time (24 months at most, as against 3 - 4 years). Most important of all, closing the gap between the Transvaal and Rhodesian railheads would promote a greater volume of trade between neighboring economies whose trade is already swelling in response to the natural complementarity of the Union as an industrial producer and Southern Rhodesia as an agricultural producer.

It by no means follows that the Pafuri line has to be ruled out of consideration indefinitely. On the contrary, its construction may well be necessary to the eventual realization of Mozambique's full productive capacity and export potential. This, however, is a long-run objective.

**Mafeking Project**

The South African and Rhodesian railway experts agree that the Mafeking line across Bechuanaland is fast approaching saturation as an artery for northbound freight. The haulage of northbound goods along this line has multiplied from roughly 160,000 tons in 1942/43 to more than 500,000 tons a year in early 1950. About 74% of the traf-
fic is South African materials and manufactures from various inland stations; 7% is goods processed at various South African ports; and brought in 19% is overseas cargo through South African ports. About 42% comes from districts such as Capetown, Fort Elizabeth, and East London which are measurably closer to the Rhodesias via the Mafeking line than by any alternative route, and about 58% comes from districts such as Durban, Lourenco Marques, Johannesburg-Pretoria, the Witwatersrand, and the Free State goldfields for which the Beit Bridge link, if built, would be a significantly shorter route.

The South African and Rhodesian railway experts disagree, however, as to the feasibility of expanding the present line capacity of the Mafeking route. According to the South Africans, any substantial expansion at reasonable cost is precluded by the lack of additional sources of water to feed locomotive boilers along 496 miles of semi-arid scrub desert stretching from Mafeking to Bulawayo. According to the Southern Rhodesians, it may be possible both to increase the present supply of water and to use more powerful engines to haul more heavily loaded wagons.

Although expansion of the Mafeking's line capacity, if practicable, would warrant high priority, what can be done, how much it might cost, and who should bear the expense are open questions for the present. They will be decided, if the Johannesburg recommendation prevails, through a joint inquiry by the interest railway administrations.
Sinoia-Kafue Project

Much of the necessary work to increase the internal haulage capacity of the Rhodesia Railway is already under way or committed; e.g. procuring additional engines and wagons, improving certain stretches of track, and re-equipping the repair shops. Although these improvements are essential to the growth of Rhodesian production and trade as a whole, the major specific benefit will be larger deliveries of Bankie coal, particularly to the Copper Belt, where the smelters are working well below practical capacity because they lack coal. To maintain present output, they are being forced to the wasteful and costly expedient of felling 3 - 4 square miles of forest a month in order to obtain wood fuel equivalent to 15,000 tons of coal monthly. If the smelters were sure of enough coal, they could readily increase their copper production by at least 30% over the next three years.

Complete relief for the Copper Belt seems to hinge on a project, admittedly urgent and essential, which is under active consideration but has not yet been started or even budgeted. This is the so-called Sinoia-Kafue cutoff; a new line 250 miles long which would reduce the rail haul between the Copper Belt and Beira by 500 miles, thus greatly increasing the availability of wagons to haul coal as well as copper. As an incidental added benefit, a rich agricultural area, now largely unexploited because it lacks transport arteries, would be opened for development. Construction of the Sinoia-Kafue cutoff would be a 3-year job and is officially assessed to cost some £6 million. Considering the world's need for copper and that of the
Rhodesias for foreign exchange, the Sinoia-Kafue project ought to be started as soon as possible.

**Lobito Project**

Northern Rhodesia could get an additional rail outlet at once if an existing but unutilized route to the Atlantic Ocean were to be brought into service. In erconnecting rail lines - all the same gauge, all in good condition, all with spare capacity - run from the Copper Belt in Northern Rhodesia to Lobito Bay in Portuguese Angola. They are used mainly as an artery for Katanga export minerals such as copper, zinc, manganese, and cobalt, but could also be used as a Copper Belt artery to supplement the Beira route. In practice, almost no goods to and from Northern Rhodesia can ordinarily move over the Lobito route because of the unwillingness of the Rhodesia Railway, on revenue grounds, to channel export copper otherwise than via Beira and the unwillingness of all three carriers - the Rhodesia, Katanga and the Beneguela lines - to quote through-rates on other commodities.

Owing to governmental pressure, an inter-carrier agreement is now being worked out to quote, at least temporarily in regard to Rhodesian imports, through-rates between the Copper Belt and Lobito Bay. This may be a first step toward the highly desirable objective of using the Lobito route as a permanent major outlet for Rhodesian exports and imports. If the route does become such an outlet in the near future, some expansion of its rail and port capacity will be needed. No precise estimates are possible, except that new facilities would definitely be needed once traffic increased much beyond 5,000 tons a month above the present level.
Transport Problems of the Belgian Congo

Transportation in the Belgian Congo has long been based on the Congo River and its tributaries. They comprise a country-wide network of navigable waterways, measuring some 12,000 KM, which reaches into every productive region of the Congo either directly or through feeder railways and roads. Both the railways and the motor roads have been constructed to serve the single, limited function of supplementing the navigable waterways as feeders toward regions which the rivers cannot reach or as links between river ports which are separated by unnavigable stretches.

Maximum utilization of the waterways is the basic policy behind the Belgian Congo's transport development program. To this end, the Belgian Congo plans to invest the equivalent of $88 million in local currency and foreign exchange in the next 10 years to improve the navigability of the Congo River and some of its main tributaries; to extend the reach of some of the minor tributaries as well; to modernize and expand some of the major ports such as Leopoldville, (terminal point of Congo navigation) and Matadi (near the mouth); and to enlarge and renew the fleet of river craft operated by Otraco (a public corporation).

Improving and expanding the waterways will stimulate, through cheaper transport, the export of regional specialties such as palm oil, ground nuts, other oilseeds, coffee, cocoa, cotton and hardwood from the entire Congo Basin and also from a large area in French Equatorial Africa which is within easy reach of the fluvial network across the Belgian Congo. Better waterways will also facilitate
oversea shipment of an increased output of copper, cobalt, manganese, zinc, uranium, and other essential materials from the Katanga region. And finally, the improved fluvial network should promote, through increased internal trade, the development of certain regions in the Congo Basin which now lack good transport outlets.

Road development in the Belgian Congo interlocks with waterway development and deserves a high priority for much the same reasons. The total program, which may be overambitious, contemplates the construction or improvement within 10 years of 12,200 KM of trunk, branch, and feeder roads at a cost equivalent to $120 million. Only top priority projects costing about $17 million are due to be carried out in the next 3 years. They include a 670 KM road to join the Lake Yivu region with the inland waterway network at Stanleyville; a 150 KM road to run north from Boma into the delta region of the Congo River; improvement of the present low-grade road between Lake Tanganyika and Lake Kivu along its entire length; and construction of the initial stretch of a great trunk road from Leopoldville to Lake Tanganyika via Port Francqui and Costermansville.

Some railway projects to perfect the present meshing of the rail lines with the fluvial network are also planned. A particularly vital improvement - some increase of line and haulage capacity on the stretch between Leopoldville and Katadi - is already well under way and will require no further substantial investment until and unless the present traffic expands sufficiently to warrant electrification, double tracking, or both. Another essential improvement - a rail link between the Katanga lines and those of the Great Lakes estimated to
require the equivalent of $20 million—will soon be started. Paralleling a present fluvial route, the rail link will run from Kamina on the Katanga network, to Kabalo on that of the Great Lakes. The primary purpose of this line is to facilitate, through better transport, current efforts to develop the productive capacity of the Eastern Congo as a source of meats, hides and skins, tung oil, wattle, and other regional specialties. Secondarily, the new link will complete certain East-West transport arteries whose immediate economic usefulness is far from demonstrable. One of these routes will stretch across Africa from Dar-as-Salaam on the Indian Ocean to Matadi and Lobito on the Atlantic. Another will connect, by a North-South all-rail route, the Great Lakes region in Central Africa with the Rhodesias, the Union, and the Mozambique ports.

Certain projects in British East Africa tie in more or less directly with the improvement of the Belgian Congo transport. Among these are the enlargement of the port of Dar-as-Salaam, now in progress, as a measure to serve the export-import trade of the Eastern Belgian Congo as well as Tanganyika; improvement of the present rail linkage between Dar-as-Salaam and Lake Tanganyika, primarily as a measure to promote the economic growth of the Eastern Belgian Congo; and the possible construction of a railway across Western Uganda from Kampala to the Belgian Congo, which should help to activate the agricultural and mineral development of Western Uganda.

French Equatorial Africa and the French Cameroun

largely for lack of adequate transport outlets, most of French Equatorial Africa and the Cameroun form a far-flung conglomeration
of closed local economies. In French Equatorial Africa, only the coastal areas, the region traversed by the Brazzaville-Pointe Noire railroad, and certain strips along the Ubangi-Congo waterway, have ready access to the outside world. The entire Cameroun is largely shut off except for a small region along and near the coast, within immediate reach of the present railroads out of Douala northward to N’Kangsamba and eastward to Yaounde.

Some of the most convenient transport outlets for immense regions of French Equatorial Africa and the Cameroun go across non-French territories i.e. Nigeria and the Belgian Congo. French Equatorial Africa and the Cameroun, running deep inland from narrow coastal stretches along the Gulf of Guinea, are reached or are reachable over large areas by navigable tributaries of the Niger and Congo Rivers. Although the Lake Chad area is almost completely hemmed in at present, it will soon be within reasonable distance of the Nigerian Railway thanks to impending extensions of that line.

With proper means of access to overseas markets, both French Equatorial Africa and the Cameroun might be expected to increase their output and exports of various foods and raw materials. They have the productive capacity to deliver a much increased volume of tropical specialties such as coffee, cocoa, and bananas. They could also greatly enlarge their production for export of certain essentials such as cotton, hardwood, rice, hides, and rubber and their production for internal use of meat, grain, dryy produce, and other foods to supply coastal towns on the Gulf of Guinea.
Arteries for Lake Chad

Establishing a transport outlet for the Lake Chad area as recommended by the Dschang Conference involves two separate but related projects:

A. **Extending the effective reach of the Lagos-Kano-M’Guru main line** of the Nigerian Railway eastward across Bornu Province to the town of Maiguduri somewhat below the southern tip of Lake Chad. This is a firm project forming an essential element in the development program for Bornu Province, as officially formulated by the Nigerian Government. The necessary funds, about £2 million, have already been authorized. It remains only to decide whether a line extension or a feeder road should be built between M’Guru and Maiguduri.

B. **Building either a rail line or a motor road to join Maiguduri in Bornu Province with Fort Lamy, the main market town of the Lake Chad area in French Equatorial Africa.** Although the proposed route would be international, i.e. a 160 KM stretch in Nigeria and a 100 KM stretch in F.E.A., the construction, if carried out, would be entirely at the cost of the French authorities. Should a motor road be decided on for the entire distance, the construction of a simple, all-weather road (hard surface throughout, 7.6m wide) might well cost the equivalent of $1.7 million (i.e. £600,000) apart from imported road-building machinery. Maintenance costs thereafter would be on the order of $135,000 a year, i.e. about $840 per mile per annum.
In return for an initial investment of not above $3 million (including both the Nigerian and the French Equatorial Africa projects) the Lake Chad area would be able to deliver and receive goods at reasonable expense with reasonable promptness over an outlet some 2,000 KM long, capable of handling at least 50,000 tons a year each way. At present, the region's combined imports and exports passing through Fort Lamy by all routes are barely 25,000 tons a year and consist almost entirely of inbound goods. They get there by a prolonged, torturous haul which starts over the Nigerian Railway as far as it reaches, or along the Niger-Benue Rivers during the Benue's brief season of navigability. In either case, the next stage is truck haulage along low grade roads which are hardly more than pack trails and are motorable only in the dry season. To move goods the entire distance of 1,200 miles between Lake Chad and the Gulf of Guinea is a job which lasts from at least 45 to 90 days or more, depending on route, season, and direction of traffic. It is also an expensive job, giving rise to haulage costs (apart from port and other handling charges) which range in U.S.A. measure from 3.5¢ to 6.5¢ per ton-mile.
Approximate transport costs (except handling charges) to haul goods 2,000 KM between Lake Chad and the Gulf of Guinea (equivalent U.S. dollars per metric ton)

<table>
<thead>
<tr>
<th>Class of Merchandise</th>
<th>By road and the Nigerian Railway</th>
<th>By road and the Benue-Niger Rivers</th>
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<tbody>
<tr>
<td><strong>Import goods:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement</td>
<td>$41.10 - $43.30</td>
<td>$52.80</td>
</tr>
<tr>
<td>Petroleum</td>
<td>48.80 - 50.40</td>
<td>69.90</td>
</tr>
<tr>
<td>Textiles</td>
<td>66.00 - 68.10</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Export goods:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton</td>
<td>32.70 - 38.90</td>
<td>n.a.</td>
</tr>
<tr>
<td>Oil seeds</td>
<td>32.40 - 38.10</td>
<td>n.a.</td>
</tr>
<tr>
<td>Hides</td>
<td>50.40 - 53.10</td>
<td>69.10</td>
</tr>
</tbody>
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Conservatively estimated, transport costs between Lake Chad and the Gulf of Guinea might well be reduced roughly 35 - 40% by use of the proposed new link between Fort Lamy and the Nigerian Railway. The foreseeable reductions, computed from existing charges, should approximate $10 - $15 a ton on typical exports, and $15 - $25 a ton on typical imports. Unless such reductions are realized by actually building the projected link, it would be futile to aim at multiplying the area's production of export goods such as cotton, rice, peanuts, cottonseed oil, hides and skins, and frozen meats. Assuming that the link is constructed, the official goals of the Chad development program listed below become feasible if not certain.
### Export production goals of Chad development program - (thousand metric tons) -

<table>
<thead>
<tr>
<th>Goods</th>
<th>Actual Output</th>
<th>Envisaged Output</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1948/49</td>
<td>1949/50</td>
</tr>
<tr>
<td>Cotton</td>
<td>12.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Rice</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Peanuts</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td>Cotton-seed oil</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hides &amp; skins</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Frozen meat</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.8</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Arteries for North Central Cameroun

Considering the cheapness of river transport in tropical Africa as elsewhere, the Benue-Niger route is in principle an ideal means for moving produce from much of North Central Cameroun. Unfortunately, it cannot be used beyond narrow limits since the Benue is not navigable more than 6 weeks a year, owing to restricted flow of water. The stream is already being used to its full existing capacity of 13,200 tons a year upstream plus 14,000 tons a year downstream. If improvements in navigability, port equipment, and river fleet now under way are fully carried out, the Benue's capacity may well be doubled in the next few years to 22,000 tons per annum upstream, 30,000 tons per annum downstream. Any further increase would be unreasonably expensive, so that a few years from now the Benue-Niger route will have reached the ultimate limit of its downstream capacity. All of that capacity will be fully engaged if the production of export
goods in the North Central Cameroun increases, as planned, from 8,000 tons a year at present to 32,500 tons a year by 1953/54.

Developing export production in the North Central Cameroun much beyond 30,700 tons a year thus depends on the establishment of new outlets to the sea. The North-South Axis Road, a new outlet which should be able to handle an indefinite traffic expansion, has already been started by the Cameroun authorities. It will eventually stretch about 500 miles from the market town of Garoua on the Banue River to the N'Kangsamba railhead on the line out of Douala. The equivalent of $17.1 million has been budgeted or authorized for the entire job. Works already completed or in progress will cost about $5.7 million; those not yet begun, about $11.4 million.

The region to be traversed by the North-South road could produce sizable amounts of export goods such as coffee, cocoa, cotton, peanuts, palm kernels, rice, and hides and could also supply foodstuffs such as grain, vegetables, fruit, and meat to the Douala-Edea area on the coast. It is also possible that this region may have tin deposits of commercial size and workability. At N'Kangsamba, the North-South road joins a railway across one of the richest banana-growing areas in the French Union, and one that is also a major source of tropical hardwood. The Cameroun authorities estimate that once the completed road is linked to the existing railway line, increased trade and production might result in the movement of about 160,000 tons of goods a year down-country toward Douala plus 80,000 tons a year inland from Douala.
Arteries for other regions

A huge area in French Equatorial Africa is tapped by or within easy reach of the Congo River network. To service this area, the Dschang Conference recommended various waterway and feeder road improvements. These projects are all highly desirable, since the fluvial network already exists and could with some improvements, provide the cheapest means of moving produce in bulk from all the areas it reaches. Most of the necessary improvements are now under way or pending as part of the Belgian Congo's waterway program and of French Equatorial Africa road program.

The only Dschang project for which no persuasive case can be made as yet is a proposed new road, river, and rail route from Moundu to Douala, for moving the produce of Northwest Ubangi and East Central Cameroun. The route would run a total distance of roughly 500 miles, and would involve building a new railroad spur extending 50 miles beyond the present Yaounde railhead, to bring the existing line out of Douala to the Sanaga River at Nanga Eboko. The project would also require civil works to make the Upper Sanga navigable for an indefinite stretch above Nanga Eboko; equipment of river ports and procurement of river craft; and the construction of new or improved roads from undetermined ports on the Upper Sanaga to Moundu, the main market town of Northwest Ubangi-Shari.

A realistic appraisal of the entire plan is impossible in view of the many facts that have not been ascertained. Neither the cost nor the traffic potential of the envisaged rail line has been estimated, nor whether, how far, and at what expense the Upper Sanaga
could be made navigable. No definite program of feeder roads into
the river ports has yet been formulated and in any case, the entire
investment would admittedly be makeshift pending the eventual con-
struction of a new railroad—about 450 miles long between Nanga Eboko
and Mongu, which seems to be much too ambitious an undertaking con-
sidering that the area may never be able to produce large tonnages
of bulk freight.

**Conclusion:**

Of all the projects recently discussed by the Johannesburg and
Dschang Transport Conferences, those whose realization would do the
most good at present are railway, port, road and waterway improvements
affecting, in rough order of priority, (i) the Rhodesias, (ii) the
Belgian Congo, and (iii) French Equatorial Africa plus the Cameroun.
All of these are international projects in the broad sense of aiming
to promote more interchange of goods between Africa and the outside
world, and also, to some extent, between and among African territor-
ies. Most of them are international projects in a strict sense as
well because they involve transit routes, transit ports, and inter-
territorial links. Since these are objectives which transcend
political boundaries, they cannot be realized without broad inter-
governmental cooperation among the European colonial powers, the
self-governing African countries, and the dependent African
territories.
TRANSPORT MAP OF CENTRAL AND SOUTHERN AFRICA
SHOWING PRINCIPAL HARBOURS, RAIL AND WATER TRANSPORT ROUTES
SPECIALY PREPARED FOR THE JOHANNESBURG TRANSPORT CONFERENCE, OCTOBER 1950
BY THE INTERIM TRANSPORT ORGANIZATION
WEST CENTRAL AFRICA SOUTH OF WEST CENTRAL
SKETCH MAP OF PRINCIPAL TRAC

Source: Specially prepared for the Oechsling Transport Conference, November 950, by the Secretariat
AFRICA SOUTH OF THE SAHARA DESERT

MAP OF PRINCIPAL TRANSPORT ROUTES