

THE COMMERCIAL TIMBER INDUSTRY IN COLONIAL PAPUA NEW GUINEA

by W. J. Jonas

As in most other colonies, the structure and location of many economic activities in colonial Papua New Guinea¹ were determined by decisions taken in the metropolitan country, in this case, Australia. These decisions were not made in political or economic isolation and their translation into practice was influenced by extrametropolitan events and local colonial conditions. The changing, though continuing, interplay of metropolitan decision making, external events and forces, and colonial conditions (including the natural resource base) is well illustrated by the commercial timber industry in colonial Papua New Guinea. This was particularly so from the end of World War II until the colony achieved independence in 1975.

The war itself forced a change in colonial attitudes. So too did Australia's relations with reindustrializing Japan, an influential visiting mission from the World Bank, and growing international sentiments of anticolonialism. As these attitudes, reflected in official colonial policy, changed, there was an alteration in the structure and location of the commercial timber industry. This paper examines the commercial timber industry in colonial Papua New Guinea as it was affected by colonial policy and practice.

Beginnings of the Timber Industry

In the prewar period both assessment and utilization of the timber resources of Papua New Guinea were haphazard and relatively isolated

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occurrences. Papua's forests were explored in 1908 (Burnett 1908) while New Guinea's timbers were included in a more general report by W. Haynes in 1921 (Angus 1972). Both reports were little used. Major investigations were carried out by C. E. Lane-Poole, and his report, *The Forest Resources of the Territories of Papua and New Guinea* (Lane-Poole 1925) was comprehensive and detailed. While not overly optimistic about the value of the forests for timber, he did suggest that they be tapped for their minor products.

Utilization of timber was on a small scale. At least twenty-four permits allowed harvesting over 80,542 hectares. Fifteen sawmills operated, supplying missions, gold mines, and the general needs of the colony. Local demand was quite limited, the 4,720 cubic meters (m³) of sawn timber produced in 1941 being the highest annual prewar figure. New Guinea walnut, sandalwood, and mangrove bark were exported.

Colonial ties were not strong during this period. After 1920 New Guinea was administered by Australia under a League of Nations mandate. Principal products were plantation crops and gold, and the territory was expected to pay its own way. Papua, accurately described by Amarshi (1979) as a "lethargic" colony, received a small, annual grant-in-aid from the commonwealth government. The colony as a whole was also seen as a defense buffer for Australia, and it was regarded necessary only to possess the land for this function to be fulfilled.

During the 1930s copra, the main source of revenue from the supposedly self-supporting New Guinea, began to suffer declining prices, and with the annual grant to Papua being small, other sources of revenue were considered. Interest was again renewed in the forests, especially as the United States began to increase its purchases of the highly decorative and durable walnut timber. A commercial forestry industry was given serious consideration by the Australian government, and in 1938 the first forest officer, J. B. McAdam, was appointed to establish a forestry service. His initial work was soon interrupted by events of World War II.

The assumptions underlying the policy of defense through possession were severely shattered when Japan invaded in 1942. The loose colonial ties that this policy had engendered also changed. The war years were, of course, a special time for colonial relationships. Out of necessity Australia and Papua New Guinea were brought closer, and the results for the timber industry were dramatic.

For a year (1942-1943) after the initial Japanese invasion all sawmilling ceased. In 1942 the New Guinea Administrative Unit and the Papua Administrative Unit were combined to form the Australia New Guinea

Administrative Unit (Angau), which became the administering body of the colony until 1945. To meet wartime timber needs, Angau reorganized and opened sawmills and during the rest of the war produced an estimated 188,814 m³ of sawn timber along with various timbers needed for the vast military operations (Essai 1961). Knowledge of the resource also grew. Under the direction of McAdam, over 30 percent of the colony's vegetation was mapped at a scale of 1:63,360, and by the end of hostilities more than one-quarter of the mapped area had been checked on the ground. After the war, McAdam was able to generalize from these surveys that there existed approximately ninety million m³ of timber resources in the colony.

Changed Policy, Changed Industry

. . . the sleepy days of a colonial backwater could never return. For better and for worse, World War II, more compulsive and pervasive than any earthquake, shook Papua New Guinea into the fast-flowing stream of the modern world. (Ryan 1972:1224)

Australia was forced to reconsider its relationship with its colony, and stronger colonial policy and links were initiated. One of the first changes was temporary administrative union of Papua and New Guinea² under the Papua and New Guinea Provisional Administration Act of 1945. The unification was made permanent by the Papua and New Guinea Act of 1949. Port Moresby became the administrative capital, New Guinea no longer had to pay its own way, and annual grants-in-aid became a significant aspect of the new colonial relationship.³

The annual monetary grants were to strengthen colonial ties as were the policies of "development" of the postwar Australian governments. E. J. Ward, as minister for external territories in the Labor government, pledged that "In future, the basis for the economy of the Territory will be native and European industry with the limit of non-native expansion determined by the welfare of the natives generally" (C.P. Debates, Vol. 183, 1945, p. 4054). His successor in the federal government, P. C. Spender, set the following objectives:

- (1) the welfare and advancement of the native peoples, and their increasing participation in the natural wealth of the territories;
- (2) the development of the resources of the territories to the point at which ultimately they will be economically self-supporting and thus advance their development and the wel-

fare of their inhabitants, and enable them to supply the needs of Australia and the world generally with the valuable commodities that they are capable of producing. (C.P. Debates, Vol. 208, 1950, pp. 3636-3637)

With the restoration of civilian administration, the work of the army's New Guinea Forests Command was handed over to the previously recommended forestry service, the Department of Forests, which was constituted in 1946 under McAdam. Faced with staff shortages, with all the major towns except Port Moresby requiring construction, and with revised colonial economic policy emanating from Canberra, McAdam believed that a forest products industry must become a reality and that it needed to be organized and encouraged through his department. He officially pressed for the controlled working of forest areas, advance planning of forestry products, the establishment of forest reservations, research into utilization and silviculture, inspection of harvesting and marketing, and the training of technical staff (McAdam 1946; Ligertwood 1949).

In 1950 a start was made to put these recommendations into practice. In line with the general policy of unification of the two Territories, forestry laws as they related to New Guinea were also adopted for Papua. This was made effective under the Forestry (Papua) Ordinance 1950 as amended by the Forestry (Papua) Ordinance 1951. A major policy statement was issued by Spender in conjunction with this ordinance: "Recognizing the importance of timber supplies for practically all activities in the Territory, it has been determined that there should be a vigorous forest policy" (C.P. Debates, Vol. 208, 1950, pp. 3640-3641).

The "vigorous forest policy" made provision for the development of a timber industry based on sound forestry principles, public tender for the rights to harvest forest areas with allowance made for the granting of emergency permits (ETPs)⁴ and licenses (ELs) upon private application, and the payment of royalties on all timber cut. In particular the granting of the ETPs had a significant influence on both the scale and location of the industry, for they enabled it to grow in accordance with the colonial policy of uniform development as formulated by Paul (later Sir Paul) Hasluck.

Uniform Development

The policy of uniform development aimed at spreading economic growth and development sectorally and spatially. Areas that, through

lack of contact or lack of immediately accessible resources, were not as "developed" as other areas were to be promoted even if this meant delaying growth in those areas that had already displayed and benefited from some economic advantage.

Although the practical effect of the uniform development policy was largely the opposite of what was intended, three aspects of it were significant for the timber industry. These were the growth of towns, the spread of plantation agriculture in the lowlands, and the introduction of coffee and tea into the valleys of the central cordillera.

Nineteen sawmills and associated logging ventures existed in 1950. Morobe, New Britain, and Central Districts were the scenes of greatest activity. The system of ETPs induced a fairly rapid influx of operations, and by 1955 there were fifty-five units working with a total log harvest for that year of 116,906 m³. In New Britain, eleven operations provided timber for the reconstruction of Rabaul and plantation infrastructure on the Gazelle Peninsula. Seven mills in Morobe provided timber for the rebuilding of Lae and for the resumption of gold mining around Wau and Bulolo. Another seven mills in Central District focused on Port Moresby, where timber was required for building and general construction works in the colony's capital.

The expansion of plantation farming in lowland areas also affected timber production. Before farming could commence it usually was necessary for the mixed tropical hardwood forest to be removed. Planters were granted permits to harvest, mill, and sell timber from their properties under the system of ETPs. In addition to satisfying the growing timber demand, this also enabled plantation owners to earn monies while waiting for crops to come into production. The main areas involved were Central District, where 5,549.5 ha of plantation land were logged between 1950 and 1960, and Northern District, where an Australian sponsored Ex-Servicemen's Credit Scheme necessitated the clearing of 8,058 ha of land, most of which were given over to cocoa plantings.

Coffee and tea production were introduced into the highlands in the 1950s. As part of the new colonial economic policy described above, this crop production was not confined to new settlers. With the increased metropolitan subsidy making agricultural extension work possible, the indigenous highlands people were also encouraged to produce for the export market. The areal spread of coffee production in particular was very rapid and by 1950 more than 5,000 ha, divided roughly evenly between plantations and smallholders, were under cultivation. The expansion of this agriculture and the spread of associated administrative functions created a need for basic and growing infrastructure which

was in part met by timber production. By 1960 there were seven sawmills in the Eastern Highlands and ten in the Western Highlands,

In general, then, the spread of the timber industry in the 1950s--related as it was to the spread of other activities, especially administration functions and commercial agriculture--was a direct result of colonial policy. The metropolitan government's policy also was responsible for the single most concentrated timber activity of the 1950s, the establishment of a large plywood mill at Bulolo.

Within Australia, where postwar shortages of plywood were being experienced, plywood interests suggested that a joint government-private interest venture be undertaken to utilize the *Araucaria* forests of the Bulolo and Watut Valleys. The New Guinea Timber Agreement Act (No. 40 of 1952) gave legal status to the harvesting and processing of these timbers by Commonwealth New Guinea Timbers Limited (CNGT). Just over 50 percent of the shares in CNGT were owned by the Commonwealth government, the remainder being held by Bulolo Gold Dredging which, as the name implies, was a firm that had previously been involved in gold extraction. At its construction, CNGT's plywood mill at Bulolo was the largest single industrial operation in the colony.

External Influences and Policy Change

Apart from the plywood mill, the scale of timber operations remained small. While the ETPs encouraged growth in the number of timber producing firms, these firms largely provided a service to other activities, they were increasingly scattered throughout the colony, and the industry, in general, was fragmented and introverted. Events of the 1960s changed this: the industry adopted an external orientation, and individual operations grew enormously in size. As in the previous decade, these were specific responses to broader colonial policy, a policy that changed under the influence of circumstances external to both Australia and Papua New Guinea. Highly significant were the postwar recovery of industrial Japan, a visiting mission by the International Bank of Reconstruction and Development, changing relations between Australia and its traditional trading partners, and the influence of world opinion in metropole-colony relations.

Japanese demand for timber rose rapidly after the war. During the 1950s the total consumption of wood in Japan rose from 57 million m³ to 75 million m³ and by 1960 showed no signs of leveling off. The Japanese population rose from 83 million to 93 million between 1950 and 1960; GDP increased at an annual average of 8 percent during the same

period; and per capita income rose from U.S. \$103 to U.S. \$420. In consequence, consumption of wood increased rapidly. From 1951 onward Japanese interests were allowed to invest directly in timber projects abroad so that by the end of the decade Japanese capital had been invested in the forests of Indonesia and the Philippines, and an increasing awareness was displayed in the timber resources of Papua New Guinea.

Loggers in Papua New Guinea also became interested in the Japanese timber market, especially as the domestic market for timber in the colony began to be satisfied by the local sawmills and as restrictions on log exports began to be relaxed. In 1963 an attempt to sell timber to Japan was successful, 354,000 m³ of logs being exported. These were almost exclusively tropical hardwoods used in the construction, furniture, and veneer industries. In the same year it was reported that "the most outstanding influence in the region during the year has been interest in log exports by Japanese timber merchants" (Department of Forests, File 47-4-9, 1963).

Japan soon moved from the role of customer to that of investor as well. In 1964 the New Guinea Lumber Development Company was formed and made available \$1 million for borrowing by log producers. This firm was half-owned by the Japanese company, Southern Trade and Industry, which in 1965 went on to purchase 50 percent of Stettin Bay Timber Company and to undertake the largest log export operations in the colony with all of the export logs from the Hoskins area of New Britain destined for Japan.

Japanese investment abroad had two main aims: the facilitation of market opportunities for Japan's growing export trade and the guarantee of raw material supplies for Japanese industry. Australia's role in this was largely influenced by changing relations with its traditional trading partners. Trade between Australia and Japan grew rapidly during the 1950s. For example in 1949-1950, 38.7 percent of Australia's exports went to the U.K., with only 4 percent going to Japan. By 1959-1960, the share of exports going to Japan had risen to 14.4 percent while the U.K. proportion had fallen to 23.9 percent. This trend continued into the following decade, and by 1963-1964 the percentage figures for the two countries were almost equal.

There were a number of reasons for this. As European countries began to move toward economic integration, Australia began looking more toward trade with Southeast Asia and Japan. Southeast Asian countries and Japan had the advantage of geographical proximity, there were increases in aggregate, if not per capita, incomes in a number of

these countries, and Japan, in particular, exhibited growth in trade and income. In 1957 Japan and Australia signed a trade agreement that guaranteed that Japan would receive most favored nation treatment from Australia. This agreement was automatically renewed in 1960, and its renewal again in 1963 further extended trade concessions to Japan. Obviously, the Australian government was eager to see the continued growth of trade between the two countries. This attitude extended to trade between Australia's colony and Japan at the time when Japan was penetrating further into the world's hardwood forests.

But external political as well as economic changes were also influencing colonial policy. In Indonesia, anti-Dutch action accelerated from 1957 onward with the nationalization of Dutch enterprises and the expulsion of Dutch nationals. By 1960 the Netherlands government, in an attempt to avoid Indonesian confrontation in West New Guinea, created an elected New Guinea Raad (Parliament) and lobbied for independence for the colony, newly named Papua Barat. Indonesia, realizing that this could result in its failing to gain Papua Barat, began to land armed troops by sea and air into the western and southern coastal districts. By 1962 West New Guinea was squarely situated in the cold war because Indonesia had been successful in gaining support from Russia and China.

Australia, meanwhile, had come in for severe criticism at the Commonwealth Prime Ministers' Conference in London in 1960 for its reactionary colonial policy. Upon his return to Australia, Prime Minister Menzies showed that he at least was reconsidering previous colonial policy with his statement, "when people have to wait too long to independence they achieve it with ill-will" (*Sydney Morning Herald*, 21 June 1960).

In the same year many issues of colonial and racial origin were flaring up in Africa--probably the most significant being the violence in the Congo--and the United Nations General Assembly also accepted the abolitionist Declaration on Colonialism.

Against this background the 1962 United Nations Mission to New Guinea was highly significant. Led by the extremely influential Sir Hugh MacKintosh Foot (later Lord Caradon), this mission concluded that the entire process of development should be hastened. Among its specific recommendations were that a complete survey of the colony's resources and economic achievements be undertaken by World Bank experts. This resulted in the mission of the International Bank for Reconstruction and Development in the following year.

The IBRD mission enthusiastically encouraged Japanese and other

foreign investment in Papua New Guinea. This followed its survey of the colony's resources and its recommendation that the policy of uniform development be replaced by one of concentration of effort in those areas where potential returns were considered greatest. Rapid self-sufficiency was the goal, with timber production to play a major role, for

Given the limitations of the Territory market, economic progress means in the first instance expanding production for export and the best prospects for economic growth lie in the fields of agriculture and forestry. These are the only major resources about which enough is known to permit a rapid development in the next several years. (IBRD 1965, p. 32)

Specific recommendations for the timber industry urged a rapid and large increase in the volume and value of exports, the initial production increases to be unprocessed timber (logs) with processed produce to follow, and that the increased production and exports be undertaken by a small number of large firms with expertise in both timber production and export marketing.

Initially reluctant, the Commonwealth government accepted the recommendations, which, for their incorporation into policy and implementation in practice, necessitated the acquisition of vast areas of forested land from traditional owners. As with the entry of the Japanese producers, forest acquisition had begun on a large scale before the IBRD report, but official recommendations were to further endorse as well as speed up the operation.

Acting as broker between the traditional owners and potential loggers, the colonial Department of Forests purchased harvesting rights known as Timber Rights Purchases (TRPs) and reallocated forests to loggers under the system of timber permits. To meet the demands of the Japanese market and the IBRD recommendations, the Department of Forests had to purchase large volumes of timber, and this meant that large areas of land would be involved. The timber had to be physically and economically accessible, and since the logs were to be exported, the forests had to be close to suitable shipping sites. It was also intended that, as far as possible, land harvested for trees should be suitable for the recommended large-scale commercial agriculture.

The coastal lowlands of New Britain provided these conditions, and over 200,000 hectares of forests were acquired for harvesting during the 1960s. Elsewhere, too, vast purchases of harvesting rights were made between 1960 and 1970 and during the early years of the following dec-

ade. These are set out in Table 4, which also shows the uses to which the timber was to be put in line with the IBRD recommendations.

To Independence

Papua New Guinea's transition from colony to independent state was, in many ways, a contradictory process. While the Australian government accepted the IBRD recommendations and implemented practices that, it was hoped, would lead toward economic self-reliance for the colony, it also appeared to be in no great haste to sever the colonial umbilical cord. And, while several large-scale timber projects were commenced, and attempts were made to develop a viable timber export industry, ownership of this industry was not in the hands of Papua New Guineans.

Having acquired legal access to the forests through the system of TRPs, the colonial administration then set about attracting foreign interests to harvest and, later, process the logs. This was done with great enthusiasm. Detailed feasibility studies were conducted and harvesting concessions were advertised in internationally distributed glossy brochures.

Foreign interests, especially Japanese, responded to the invitation. In 1966, the Hoskins operations, by then Japanese owned, were granted a permit to remove at least 28,321 m³ of logs per year for the Japanese market. This permit was followed by others, as shown in Table 1. All of these large-scale logging operations were foreign owned.

Two significant aspects of the logging operations--greatly increased scale of production and concentration of ownership into foreign hands,

TABLE 1 Large-Scale Logging Concessions, 1966-1974

Area	Year Granted	Annual Harvest (m ³)
Hoskins	1966	28,322
Wilelo	1968	4,720
Wilelo	1968	42,483
Navo	1968	20,061
Bakada	1969	25,962
Hargy	1970	106,208
Kaut	1972	28,321
Open Bay	1973	480,000
Vanimu	1974	66,000

Source: Office of Forests, Timber Permits

both a direct result of colonial policy-were also pronounced features of timber processing. As indicated in Table 2, total processing capacity for the industry increased from 231,742 m³ in 1955 to 538,253 m³ by 1970. At independence (1975) almost 95 percent of this processing capacity was foreign owned (Table 3).

The permits and increases in foreign-owned production units were accompanied by a number of grand schemes aimed at further increasing exports and moving Papua New Guinea farther along the road to economic self-sufficiency. These schemes, which included provision for further processing as well as logging for export, are outlined in Table 4. At

TABLE 2 **Processing Capacity in all Timber Mills**

Year	Total Capacity (m ³ per year)	Increase from 1955 (%)
1955	231,742	—
1960	284,084	22.5
1965	288,598	24.5
1970	538,253	132.3
1975	554,423	139.6

Source: Timber Permits and Department of Forests Annual Reports

TABLE 3 **Proportion of Total Capacity by Mill Ownership**

Year	Indigenous	Mission	Foreign	Administration
1955	0	2.5	80.5	17.0
1960	0	2.6	83.4	14.0
1965	2.2	5.6	91.8	0.4
1970	1.8	4.6	93.3	0.3
1975	1.4	3.9	94.7	0

Source: Timber Permits and Department of Forests Annual Reports

TABLE 4 **Proposed Major Forestry Projects at Independence**

Location	Area (ha)	Planned Use
Gogol-Mandang	98,415	Wood chips, sawn logs, veneers
Open Bay	183,000	Wood chips, sawn logs, veneers
Vanimo	297,600	Wood chips, sawn logs
Sagarai-Gadaisu	162,000	Sawn logs
Kumusi	64,000	Sawn logs
Kapuluk	181,000	Wood chips, sawn logs

Source: Office of Forests, *Compendium of Statistics 1975*

independence, the woodchip project at Madang was the only one to have become operational. The project, which involved the clear cutting of timber from over 95,000 hectares of land, in association with saw-milling of the valuable Kwila (*Intsia* spp.), produced the first shipment of woodchips for Japan in 1974.

Planning for these projects, which evolved from IBRD recommendations and were an integral part of colonial economic policy, took place also during a time of growing economic confidence. During the late 1960s and the early 1970s, measurable economic growth rates were high and increasing, exports in general were expanding, and the Bougainville copper mine promised significant revenue from royalties, taxes, and wages. Yet, in part, the projects were to jar with aims that, as independence drew near, were being professed from within the colony itself.

In December 1972, the leader of the government party, Mr. Somare, announced a program of eight aims of redirection and socioeconomic policy and planning. Basic to this new plan was a greater spread of opportunity and income among people and among areas. Translated into forestry policy (see Jephcott 1974) the eight aims were:

1. Increased opportunities for local equity participation in forest industry and forest resources development.
2. Direct earnings toward the forest owners through a share in the royalty, business equity, and other business and employment opportunities.
3. Develop extension services to assist minor forest products industries and village participation in reforestation and forest industry activities. Involve forest owners in all phases of forest development.
4. Create opportunities for contract workers and entrepreneurs in transport, logging, carpentry shops and other small industries.
5. Improve the competitive position of local timber products against imported substitutes.
6. Improve marketing and prices for export timber products to result in higher profit opportunities and thus greater revenue from royalty and taxes,
7. In general context explore ways of increasing opportunities for women to participate in the forest activities.
8. The Department will take overall management responsibility for the forest resources to assure that the national objectives are achieved and forest owners get a fair deal and at the

same time will encourage forest owners and the industry to accept maximum responsibility for forestry activities particularly in the fields of utilization and forestation.

These eight aims involving greater equity and participation for Papua New Guinea were, at least in spirit, in conflict with the planned large-scale foreign-owned schemes. The problem was further exacerbated by the Private Dealings Act (1971), which allowed traditional owners to bypass the government and deal directly with private buyers. Although it was intended that under this act small parcels of timber would be sold, the potential existed for foreign buyers to purchase large areas of the forests. As independence approached, the administrators of forestry policy and practice were in fact operating under two sets of legislation each of which not only conflicted with the other but also contained internal contradictions.

The major departure from previous policy that was incorporated in the eight aims--both in general and specifically for the forestry industry--was the notion of "Papua New Guinea for Papua New Guineans." Given many of the features of the colonial heritage, such as large areas of forests alienated for large-scale exploitation by foreign firms, this was obviously going to be difficult to achieve.

Conclusion

On 16 September 1975 the people of Papua New Guinea joined the independent nations of the world. The new nation inherited a commercial timber industry the dynamic of which was determined by the interplay of colonialism and world economic forces.

In many ways the former colonists had reason to feel satisfied with the task they had performed and confident that they had left a heritage which would enable the timber industry to contribute successfully to Papua New Guinea's economic base. Despite a general, and perhaps inevitable, background of political and legislative confusion, the economic future of the industry seemed well assured and policy had been formulated for its continued operation. The export market for logs had been successfully penetrated and processing was expanding. The world needed timber, and Papua New Guinea was in a position to meet some of that need.

Japanese and Australian investors were interested in timber projects that would provide Papua New Guineans with income, employment, and infrastructure. The problem of poor and multispecies forests

appeared to have been overcome by clear cutting for wood chip operations; more than one million hectares was available for wood chipping and major multiple-use schemes. The external orientation of the industry was well established, and it seemed the industry could only continue to prosper.

But prosperity for whom? It seems most unlikely that prosperity for the majority of Papua New Guineans could have ensued, because the two processes that determined the structure and dictated the operations of the forestry industry both worked to serve metropolitan interests. Colonialism is based on inequality; without this inequality it could not exist. World market forces are based on inequality; trade is not equal; somebody must profit from trade and without this profit trade, and the production that feeds it, would not exist as the world market economy knows it. By 1975 Papua New Guinea had experienced almost one hundred years of colonialism and especially since World War II had been increasingly drawn into the world market economy.

Colonialism and expansion of the world market economy have worked together, the former facilitating the latter, and both operating to intensify and maintain the inequality on which each is based. In Papua New Guinea the legislative power of the colonial government enabled it to acquire more than two million hectares of forests from traditional owners at low prices for trade and processing within the colony and increasingly abroad. This trade favored metropolitan interests, especially Japan, which required timber for industrial and domestic use, and Australia, which wished to benefit from trade with Japan. Colonial policy, encouraged by metropolitan-backed international agencies, allowed penetration into Papua New Guinea of large-scale, capital-intensive operations, the aims of which were increasingly to extract value from the forests and transfer it abroad. Employment of Papua New Guineans in this process was minimal and then in non-decision-making, laboring roles. Papua New Guineans were mostly sellers of timber in forms of trade and production that were encouraged by colonial policy and activity in the name of economic growth and by promises of "development." As practiced during the period of formal colonialism, ownership and control of the Papua New Guinea timber industry was concentrated in the hands of metropolitan powers and colonial agents.

Japan wanted timber for its development and had the technology to utilize the difficult forests of Papua New Guinea. Australia wanted timber and had access to the softwood forests. It also wanted infrastructure and economic growth in the colony and, most importantly, it wanted

trade with Japan. The IBBD saw foreign investment in forestry projects as contributing to the development of the poor countries containing forest resources. Expansion of foreign investment into the forests of Papua New Guinea and expansion of the world market economy of which this investment is a fundamental part were made possible by Australian colonial policy.

All statements of good intention to the contrary, provision of infrastructure, apart from that required for extraction of the forest resource, was minimal. Timber was acquired from the traditional owners in great haste and under clumsy and cumbersome legislation. Disputes over land became increasingly common. Measured in terms of investment and output, the industry experienced considerable growth. But this was economic growth that, by extracting value from Papua New Guinea, favored metropolitan development, a process that in this case was facilitated by Australian colonial rule.

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NOTES

1. Papua was formally colonized by Britain in 1884, the same year New Guinea was annexed by Germany. Australia gained Papua as a colony in 1905, and New Guinea was awarded to Australia as a mandated territory by the League of Nations in 1920. The independent nation is known as Papua New Guinea, and for this paper this name is used unless a distinction is being made between Papua and New Guinea.

2. After this union, the colony was known officially as the Territory of Papua and New Guinea.

3. The combined Territory received, for example, more than \$4 million in 1946-1947 and over \$6 million in 1948-1949, compared with the 1939 grant to Papua of \$90,000.

4. ETPs were valid only for stated time periods, specified minimum and maximum volumes to be cut, and demanded the construction of a sawmill of specified milling capacity.

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