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The World Bank in Asia



*See "The World Bank
Group in Asia", June 1967.*

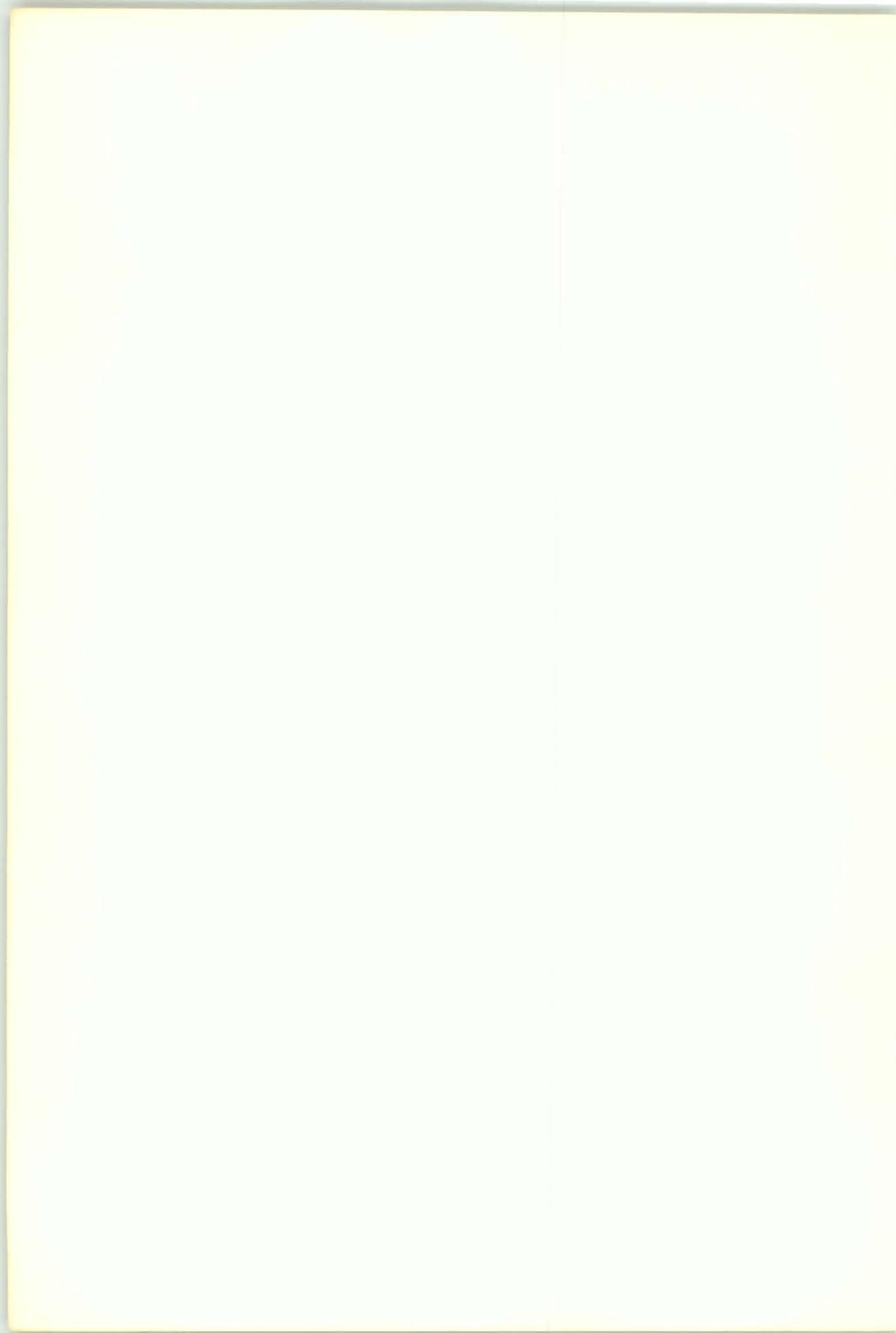
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
Washington, D. C. October, 1960

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THE WORLD BANK IN ASIA

A Summary of Activities

OCTOBER, 1960

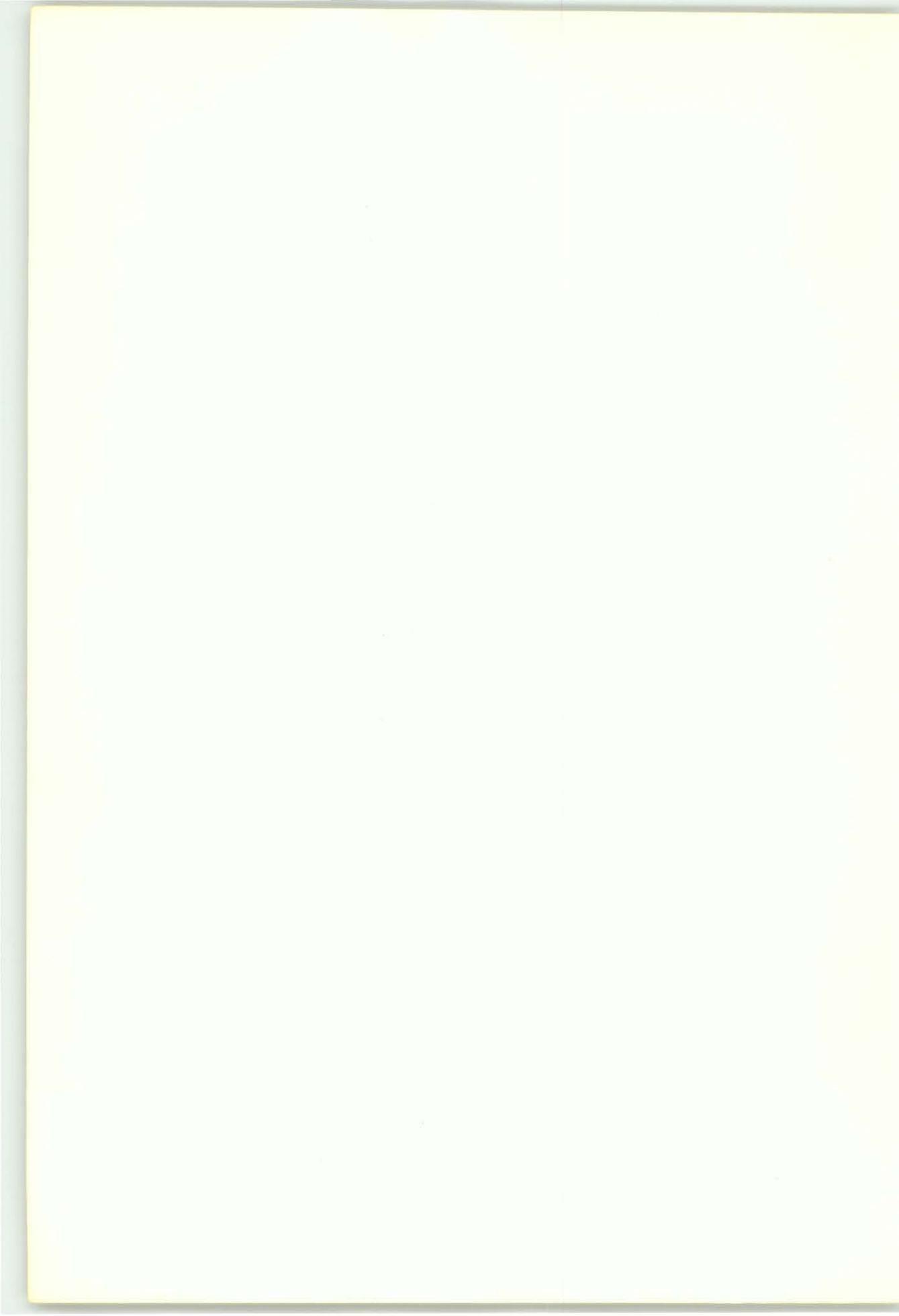


THE WORLD BANK IN ASIA

A Summary of Activities

Table of Contents

	<u>Pages</u>
Introduction	1 - 6
Burma	7 - 9
Ceylon	10 - 13
India	14 - 26
Japan	27 - 39
Malaya	40 - 42
Pakistan	43 - 50
Philippines	51 - 52
Thailand	53 - 58
The Indus Water Treaty, 1960	59 - 72



THE WORLD BANK IN ASIA

Introduction

In this booklet Asia has been arbitrarily defined as extending from Japan and the Philippines to the western border of Pakistan. The region includes thirteen member countries of the Bank, which has been active in all of them, and has made loans in eight. The total lent up to the end of September 1960, net of cancellations or refundings, was made up as follows:

<u>Country</u>	<u>Amounts net of Cancellations or refundings</u>
Burma	\$ 19,350,000
Ceylon	23,900,000
India	662,100,000
Japan	337,400,000
Malaya	35,600,000
Pakistan	241,300,000
Philippines	18,500,000
Thailand	<u>106,650,000</u>
	<u>\$1,444,800,000</u>

This lending, amounting to well over a quarter of total Bank loans in all member countries, has been concentrated on the development of basic services. For example, loans for transportation by road, rail, sea and air amount to nearly two-fifths of the total. Electric power and industrial development each account for about a quarter, with agriculture taking the

balance. Agriculture also benefited under many of the loans for transportation and for electric power generation, for example where irrigation and flood control works were associated with hydroelectric schemes. Through these high priority investments, the Bank has helped the expansion of basic services which have both permitted and stimulated industrial and commercial expansion.

<u>Purpose</u>	<u>Amount</u>
Transportation	\$ 562,800,000
Power	396,650,000
Agriculture	49,750,000
Industry	345,600,000
Indus Waters Development	<u>90,000,000</u>
	<u>\$1,444,800,000</u>

Transportation

Loans have been made for railways and ports in Burma, India, Pakistan and Thailand, for roads in Japan, and in India for the purchase of jet aircraft.

The Bank has lent \$328 million for the development of the Indian railways, more than for any other single project: by 1961 freight-carrying capacity in India will have risen by 60 per cent in five years. In Pakistan the Bank has financed the improvement of track and repair facilities and signalling and other equipment, and the acquisition of locomotives and rolling stock. In Burma, a Bank loan helped to pay for the purchase of

new freight cars, diesel railcars, bridge construction materials and other equipment for the war-damaged railway system. In Thailand, the Bank has financed the replacement of railway workshops destroyed during the war, and has assisted in a five-year railway development program.

The same four countries have all received loans for port improvement. Severe congestion existed in the principal ports of India, Pakistan and Burma. In India, with Bank help, berthing capacity, handling and storage facilities at the ports of Calcutta and Madras are being improved. In Pakistan, cargo berths and handling facilities at the Port of Karachi have been reconstructed and modernized, and goods are now moving faster through the port, reducing the turn-around time of vessels. In Burma, wharves and warehouses at the Port of Rangoon are being reconstructed, and new harbor vessels have been purchased. The Port of Bangkok in Thailand, previously accessible only to shallow-draft vessels, has now been opened to ocean-going ships by the dredging of its approach-channel with Bank-financed equipment.

The Bank assisted the introduction of jet transportation in India by financing part of the purchase by Air India International Corporation of three long-range jet aircraft and ancillary equipment. These now link India with London, New York and Sydney. In Japan, the Bank is helping to finance the country's first express highway, the Amagasaki-Ritto Expressway.

Power

The Bank has made power loans in seven countries, helping to finance the construction of thirteen major dams and hydroelectric stations, ten

thermoelectric stations, thousands of miles of transmission lines and extensive distribution facilities. The additions to generating capacity planned to result from projects in the various countries are as follows:

<u>Country</u>	<u>Added capacity</u> <u>('000s of kilowatts)</u>
Ceylon	50.0
India	902.5
Japan	1,221.4
Malaya	80.5
Pakistan	104.5
Philippines	100.0
Thailand	<u>140.0</u>
TOTAL	<u>2,598.9</u>

Power supplies in Pakistan have also been augmented substantially by means of a Bank loan for a pipeline which brings natural gas 350 miles from the Sui gas field to Karachi and intermediate towns.

Industry

The Bank has made loans totaling over \$300 million to expand the output of private steel companies in India and Japan. A total of \$159 million lent to two Indian companies has helped to raise production of finished steel by 1-1/4 million tons. In Japan, loans totaling \$144 million have helped six companies to complete their share of the vigorous expansion programs of the Japanese steel industry, assisting the construction and installation of

six blast furnaces, three strip mills, seven converters, two open-hearth furnaces and much other equipment.

Other loans in Japan have financed machines and machine tools needed by three engineering companies, while in Pakistan a Bank loan of \$4.2 million assisted in the construction of a paper mill which now meets all of Pakistan's domestic needs for the types of paper it produces.

Apart from these loans for particular projects, the Bank has made loans of \$34.2 million for industrial development to development banks in India and Pakistan. These banks help to stimulate private industry in their respective countries by financing the expansion of existing industries and the setting up of new ones.

Agriculture

Lending for agriculture has helped increase food production in India through the reclamation of lands from weed infestation and from the jungle. In West Pakistan, Bank lending has assisted in preparing land for settlement in the Thal irrigation area; in Japan, it has paid for machinery to clear and stock new farms established in remote areas and for imported cattle. A multipurpose project in Japan is helping to expand agricultural output through irrigation and flood control, and similar works carried out in conjunction with hydroelectric schemes in India and in Thailand have also benefited agriculture.

Technical Assistance and other Activities

In addition to its lending, the Bank has provided advice and assistance to its members in Asia on development problems. General survey missions have

made economic surveys in Ceylon, Malaya and Thailand. These surveys have been published in book form by the Johns Hopkins Press, Baltimore, Md., U.S.A. Bank missions have also been in close touch with Indian problems and have advised the Indian Government on various aspects of its Five-Year Plans. In the same way the Pakistani Government has been advised on its development plans. Studies organized by the Bank preceded the setting up of development banks in India and Pakistan; the Bank also has resident representatives in both countries.

Over the past five years, 43 officials from all 13 Asian member countries have attended the six-month courses of the Economic Development Institute in Washington, D.C. The Institute was established by the Bank in 1955 with the object of improving the quality of economic management in government in the less developed countries. It provides for selected groups of key officials an intensive course in economic policy and administration, designed to broaden their experience and enhance their usefulness to their governments. A further 58 officials have undergone training at the Bank itself. Twenty-five persons (mostly junior career officials) from 11 countries in the area have been through a six-month general training program designed to provide an opportunity for those in positions related to the Bank's work to become acquainted with the organization and functions of the Bank, and with certain aspects of economic development. In addition, 33 senior officials from 8 Asian member countries have received training at the Bank in general problems of public finance and economic development, through special courses lasting for three months.

BURMA

<u>Purpose and number of loans</u>		<u>Amount</u>
Ports	1	\$14,000,000
Railways	1	<u>5,350,000</u>
		\$19,350,000

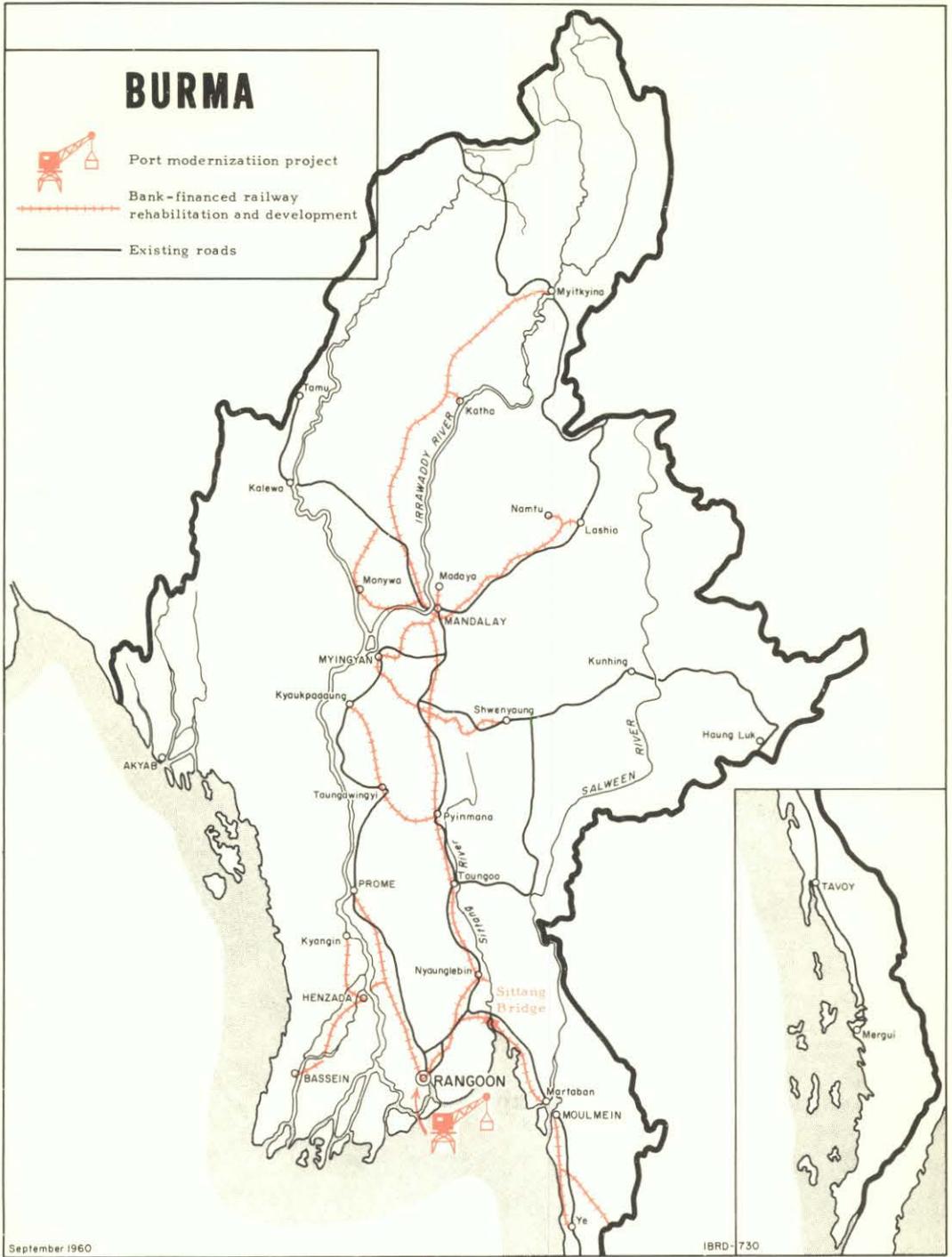
The Bank has made two transportation loans in Burma: one to modernize the Port of Rangoon, the principal seaport of the country, and the other to provide new rolling stock and bridge materials for the war-damaged railway system.

Port Loan

In May 1956, the Bank made a loan of \$14 million to the Commissioners of the Port of Rangoon to assist a modernization program. Rangoon is one of the major ports of Southeast Asia, handling four-fifths of Burma's imports and exports, but its operations were hampered by war damage which was only partly made good after 1945, and by insufficient wharf and cargo-handling capacity and obsolete harbor equipment.

The modernization program provided for the reconstruction of a wharf with three general cargo berths; for ancillary roads and railway tracks, 580,000 square feet of covered storage and also open storage for lead exports; for the purchase of cargo-handling equipment; and for the replacement of tugs, dredges and other harbor vessels.

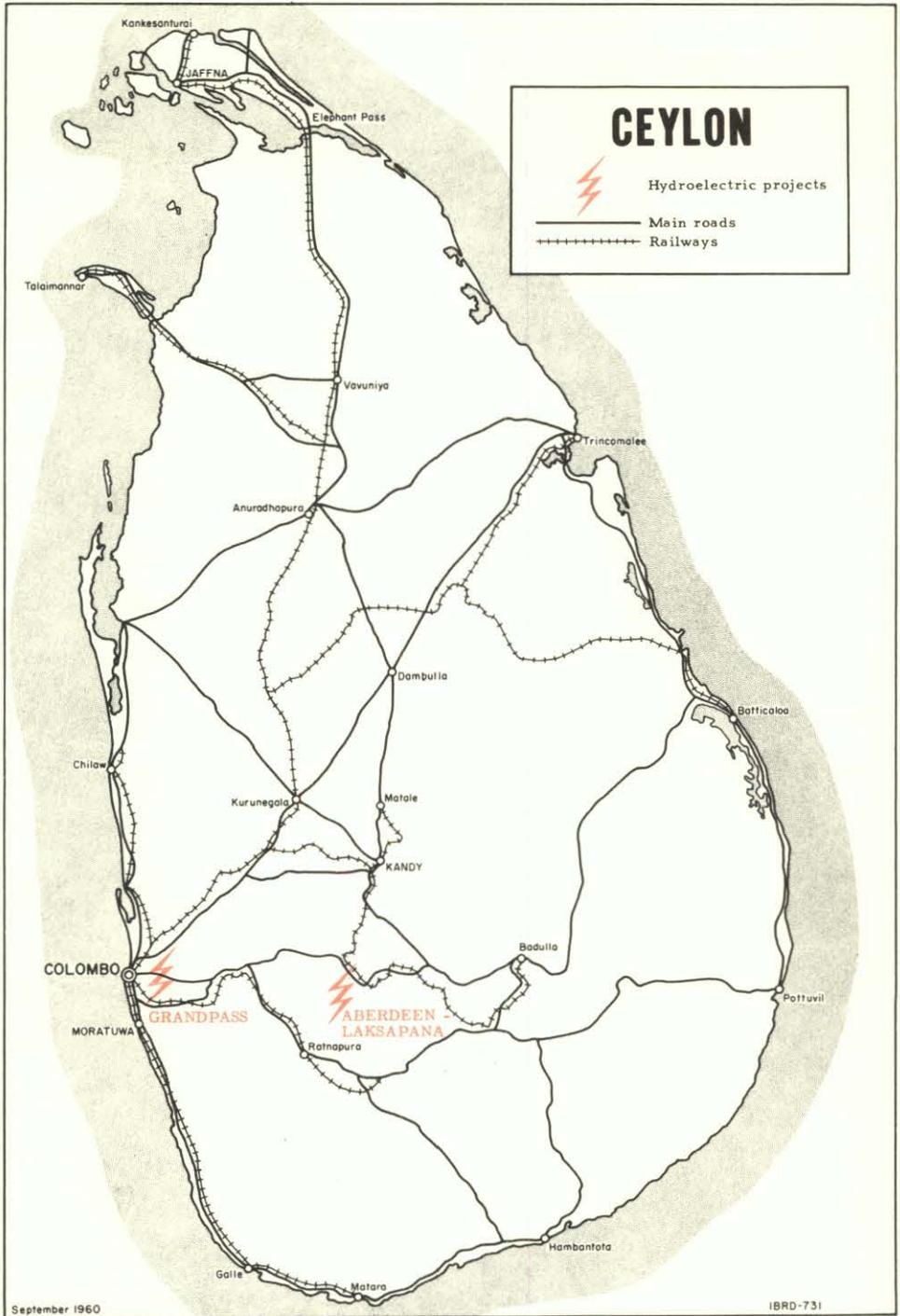
The new wharf is now complete and construction of storage facilities is ahead of schedule. Most of the cargo-handling equipment and harbor craft have been delivered and are in operation.



Railway Loan

Burma's state-owned railway system, which radiates from Rangoon, covers some 1,800 miles and carries the bulk of the country's freight and passenger traffic. Most of the war damage was made good in the immediate postwar years, but by 1955 it had become necessary for the Union of Burma Railway Board to embark on a program of rehabilitation and development. This called for the purchase of new freight cars, passenger coaches and diesel locomotives to cope with growing traffic and to replace obsolete and damaged equipment; the relaying of 200 miles of light or worn track with heavier rail; and further bridge repairs and reconstruction, including the building of a new bridge across the Sittang River to restore the rail link between Rangoon and Southeast Burma which had been broken during the war.

The Bank made a loan of \$5,350,000 to Burma in May 1956 to assist in financing the program. It has been used to pay for new freight cars, for diesel railcars for suburban passenger services and for bridge construction materials and equipment. The freight cars have been in service since 1957, and the passenger railcars were delivered in 1959. The remainder of the program is going forward despite delays caused by insurgent activities and technical difficulties.



CEYLON

<u>Purpose and number of loans</u>		<u>Amount</u>
Power	2	\$23,900,000

Ceylon needs more electric power -- for industrial development, for domestic consumption, and for processing tea, rubber and coconut, the traditional products which still account for about 90 per cent of exports. Much existing power equipment is obsolete, and many plantations have to rely on their own small generating sets. The government is now developing the country's hydroelectric power potential to meet these needs and also reduce Ceylon's previous dependence on thermoelectric power. The Aberdeen-Laksapana scheme is harnessing the power of the Kehelgamu and Maskeliya rivers at a point about 50 miles east of Colombo, the capital, to supply southwestern Ceylon, the most productive and populous part of the country. Eventually the total generating capacity of this scheme will be 150,000 kilowatts. The first stage, completed in 1951, consisted of the construction of a 25,000-kilowatt plant in the Laksapana Valley, a diversion dam and tunnel to conduct water from the Kehelgamu to the plant, and a transmission line to Colombo.

The next state of the development was financed with the aid of a \$16.5 million Bank loan of July 1954. This stage, the total cost of which is estimated at the equivalent of \$31.5 million, called for the construction of a second dam to store additional water from the Kehelgamu and to regulate its flow to the power station; the addition of 25,000 kilowatts to the

generating capacity of the existing power plant; and the construction of transmission lines and distribution facilities. The main works were completed by the end of 1959.

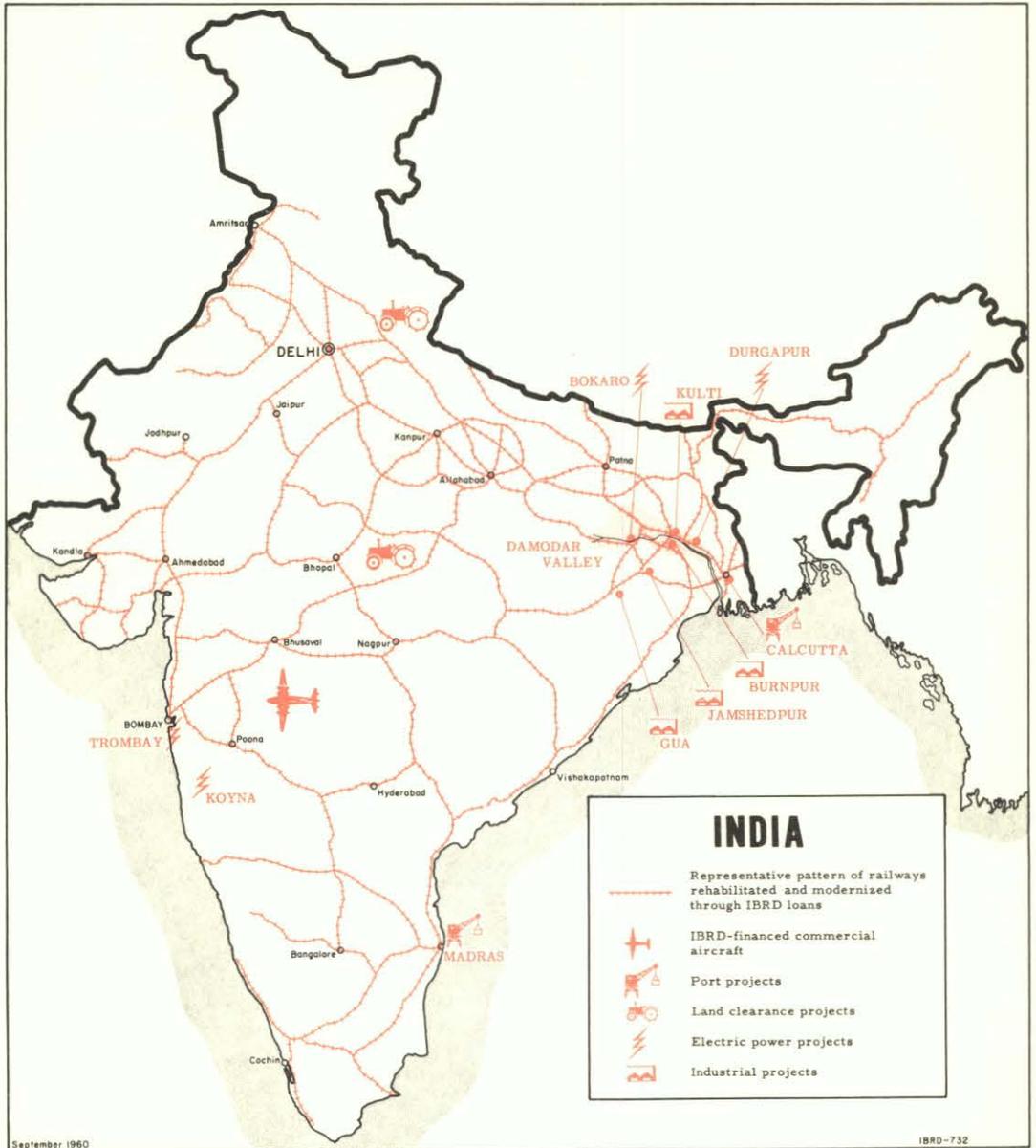
A second Bank loan of \$7.4 million was made in September 1958 for a 25,000-kilowatt thermoelectric plant at Grandpass, a district of the city of Colombo, and for the expansion of transmission and distribution facilities. The Grandpass plant will solve the immediate problem of bringing more power into this area of rapidly growing demand, pending completion of later stages of the Aberdeen-Laksapana scheme. The expanded generating capacity is already being drawn upon heavily. Of recent years power sales have increased at an average yearly rate of about 15 per cent.

Other Activities

In 1951, a general survey mission was organized to study Ceylon's economic potentialities and to make recommendations to assist the Government in drawing up a long-range development program. The mission gave priority in its report to an increase in agricultural production which would reduce Ceylon's dependence on imports of food. The report emphasized the need for improvement of agricultural techniques and for putting new lands under cultivation through irrigation, jungle clearance and settlement; it pointed out that the substantial investments proposed for electric power, industry and the improvement of transport would themselves lead to higher output from the land. The mission also stressed the need for resource surveys in many sectors -- in particular, water and irrigation, electric power, land use, soils and forests -- and urged that, until these studies were completed,

new large-scale schemes be deferred in favor of a greater number of smaller projects.

The Government took into account the recommendations of the mission in preparing a six-year development plan which started in 1953-54, and in setting up a Planning Commission of the Cabinet assisted by a Planning Secretariat. A further recommendation of the mission was put into effect in 1955 when the Government set up an Institute of Scientific and Industrial Research with the joint help of the Bank and the United Nations Technical Assistance Administration. The Institute undertakes research designed to develop new uses for Ceylon's natural resources and to improve the processes and equipment used in industrial plants. The Bank also assisted Ceylon in drawing up plans for the establishment of a Development Finance Corporation, which was founded by an Act of Parliament in October 1955.



INDIA

<u>Purpose and number of loans</u>		<u>Amount</u>
Transportation	11	\$376,410,000
Power	5	90,470,500
Industry	6	177,520,000
Agriculture	1	7,203,813
Multipurpose	<u>1</u>	<u>10,500,000</u>
	24	<u>\$662,104,313</u>

The Bank has made twenty-four loans to India, aggregating over \$662 million. Even before the Government drafted the First Five-Year Plan in 1950, the Bank had lent funds to assist the improvement of the national railways, the reclamation of large tracts of land in central India and for a thermal power project which was the first step in a larger scheme for developing the Damodar Valley of eastern India. Later loans financed high priority projects within the framework of the Plan.

Details of Bank lending to India follow.

Transportation

(1) Railways

The Indian railway system, the fourth largest in the world, comprises nearly 35,000 route miles and is the country's most important form of transport. Heavy demands made by military transport, together with a lack of materials and labor for adequate maintenance, caused the system to deteriorate considerably during World War II and it proved unable to cope with the rising volume of traffic in the post-war years.

To avoid delays in transport which would retard the general development of the economy, the Government embarked on a large-scale program of investment for the rehabilitation of the system. The Bank's first loan to aid the Indian Railways was made in August 1949, and provided \$32.8 million to finance part of the cost of importing 653 locomotives and spare parts, and 350 tank cars. This program enabled the railways to reduce or eliminate delays in the movement of essential freight, and permitted such important commodities as manganese and iron, coal and coke, copper and pigiron, to move more freely in India's internal and export trade.

During the First Five-Year Plan (1951-56) freight carried by the railroads grew by one-fifth, reaching 115 million tons in the final year. Increasing pressure on the railways was bound to arise from the Second Plan (1956-61), as production and trade continued to grow; in particular, more movement would be needed of coal and mineral ores, which account for 40% of freight, to feed new steel capacity and to move iron ore for export. A program was drawn up aiming at increasing freight capacity by about 40% to 162 million tons a year and passenger capacity by about 15%. Among its objectives, the program included the acquisition of about 2,400 locomotives, 9,240 passenger cars and 112,000 freight cars; the replacing of 8,000 miles of rails and sleepers; the doubling of about 1,300 miles of main-line tracks; the construction of about 800 miles of new lines to improve transportation from coal and ore fields and to relieve congested areas; improvements in yards and signalling facilities; and the electrification of certain main lines.

The program envisaged the expenditure of \$2.3 billion, including \$700 million of foreign exchange. Bank loans provided \$295 million: \$90 million was lent in July 1957, \$85 million in September 1958, \$50 million in July 1959, and \$70 million in August 1960. The Bank's loans are applied to expenditures on imported equipment, materials and services. The program moved forward approximately on schedule and during 1958, for the first time in many years, the railways were able to handle all the freight offered.

(2) Ports

Port improvement was also given high priority in India's Second Five-Year Plan. Calcutta and Madras are two of the main ports where measures are being taken to relieve ship congestion, expedite the handling of cargo and improve general operating efficiency.

Port of Calcutta

The Port of Calcutta, on the Hooghly River some 120 miles from the Bay of Bengal, serves not only India's largest city but also some of the most important industrial and agricultural regions in the country -- the Damodar Valley and much of the Ganges Valley. Traffic through the port is now about 10 million tons annually and accounts for perhaps half the value of India's imports and exports other than petroleum.

In June 1958, the Commissioners for the Port of Calcutta received a loan of \$29 million for a rehabilitation program to relieve congestion and enable the port to handle an additional two million tons of traffic annually. The program called for the improvement of berthing capacity,

extension of the railway marshalling yard, replacement of harbor craft, the building of additional transit and storage facilities, the provision of electric cranes and mechanical cargo-handling equipment. In addition dredges were to be purchased and dredging and river training works constructed, to deal with navigational difficulties created by shoaling in the Hooghly. In the past two years, however, shoaling conditions have worsened in the river and the Commissioners have decided to postpone part of the port improvements in order to devote more resources to an intensified dredging program. Additional dredges are to be bought and the Commissioners requested the Bank to allow disbursement of part of the loan for this purpose. The Bank reviewed these requests and decided that the proposals should be accepted.

Port of Madras

Madras, on the southeast coast, is the third largest port in India, now handling about 2-1/2 million tons of traffic annually; the number of ships using the port has increased by 30% since the war. Bulk exports of manganese ore have grown to about half a million tons a year and imports of general cargo have risen markedly, especially iron and steel, machinery, chemicals and fertilizers. This growth has caused serious congestion, necessitating new methods of handling.

In June 1958, simultaneously with the Port of Calcutta loan, the Bank lent \$14 million to the Trustees of the Port of Madras for the modernization of the port. The port is being expanded to accommodate the expected growth in traffic during the next ten years. The handling

capacity is expected to be about four million tons of traffic annually, or half as much again as current traffic. The main improvements include the construction of a new ship basin large enough to accommodate six new berths, of which only two are being fully equipped initially; construction of two other new berths, for coal and ore; reconstruction and re-equipping of two general cargo berths; improvement of a third berth to accommodate both passenger and cargo; the building of a new railroad marshalling yard, new transit sheds and other buildings; acquisition of modern cargo-handling equipment and of additional floating craft. The total cost of the project is expected to be equivalent to \$33.6 million; the Bank's loan of \$14 million will cover the foreign exchange requirements.

(3) Airways

In March 1957, the Bank made a loan of \$5.6 million to Air India International Corporation, as a part of a joint operation with five United States banks, which at the same time extended credits totaling \$11.2 million to the Corporation. The purpose of the combined transaction was to finance the foreign exchange cost of buying three long-range jet airplanes, nine spare engines and other spare parts, a flight simulator and ancillary equipment.

Air India International Corporation is a government enterprise operating international air services. The new aircraft were put into operation in the first half of 1960, and now link India with London, New York and Sydney.

Agriculture

The Bank's second loan to India, made in September 1949, helped to finance the import of agricultural machinery for the reclamation of farm lands infested with a weed known as kans grass, and for the experimental clearing of jungle lands.

The Central Tractor Organization, a unit of the Ministry of Agriculture, used the proceeds of the loan (about \$7.2 million) for the purchase of heavy tractors, ancillary equipment and spare parts. These were required for the deep plowing of a large area of central India infested with kans grass, and for clearing and plowing the jungle lands. The jungle clearance program, although primarily a pilot scheme, was also expected to make some contribution to India's food supply.

The loan was fully disbursed by 1951 and repaid by the end of 1956. Under the program, somewhat more than a million acres were cleared and there was an estimated increase of 350,000 tons annually in the amount of wheat going to market from the kans area.

Damodar Valley Development

The Damodar River drains a valley extending northwestward some 340 miles from its junction with the Hooghly River near Calcutta. The Valley has a population of five million and has long been one of the richest agricultural areas of India. Over recent decades it has also become the heart of India's industry and one of the greatest manufacturing centers of Asia. The Valley provides almost all of India's iron and copper and three-quarters of its coal, mica and chromite. Most of the steel,

chemical, fertilizer, engineering and other heavy industries, as well as a wide variety of light and small-scale industries including cable, glass, ceramic and bicycle manufacture have grown up in the Valley.

In the late 1940's the Indian Government drew up a unified scheme to develop and distribute electric power, control flooding and improve irrigation in the Valley. Execution of the scheme was entrusted to the Damodar Valley Corporation (DVC), created in 1943 on the pattern of the United States Tennessee Valley Authority.

The Bank has made three loans totaling over \$52 million to the DVC to increase electricity generating capacity, a key factor in the industrialization of the Valley. Upon it depend the electrification of coal mines with resultant benefits of increased production and lower unit costs. Also dependent is the development of iron, steel and other basic and secondary industries. The first loan, made in April 1950, provided about \$17 million of the finance for a project consisting chiefly of a large new thermo-electric power station at Bokaro. A second loan of January 1953 provided \$10.5 million for multipurpose projects intended to provide flood control, irrigation structures and electric power. The most recent loan of \$25 million made in July 1958, was made to finance (1) the installation of an additional 75,000 kilowatts of generating capacity at the Bokaro thermal plant, and (2) the construction of a new 150,000 kilowatt thermal power station at Durgapur, together with additional transmission and distribution facilities.

Apart from the loans made directly to the Damodar Valley Corporation, Bank lending for railways, for expanded steel production and for the improvement of the Port of Calcutta have greatly contributed to the industrialization of the Valley.

Electric Power

In addition to the loans made for electric power generation in the Damodar Valley, the Bank has made three loans for power in the Bombay-Poona region on the west coast. Electricity consumption in this region is about 390 kwh per head or about 16 times the national average. The region is best known for its textile industry but it is also important for a wide variety of other manufactures. The heavy demand for electric power for commercial and residential as well as industrial purposes in the area has made it necessary to ration consumption. The Bank's loans have been aimed at removing the resulting curb on industrial expansion.

Two loans were negotiated in November 1954 and May 1957 and made available sums of \$13.95 million and \$9.80 million. The borrowers were three private companies forming part of the Tata group of enterprises. The first loan assisted the construction of a 125,000-kilowatt thermo-electric station on Trombay Island near Bombay. The second loan financed the foreign exchange costs of adding a third generating unit to give the plant a capacity of 187,500 kilowatts.

The third Bank loan was of \$25 million and was made in April 1959 to the Government of India. The loan will cover most of the foreign exchange requirements of constructing the Koyna hydroelectric power

plant, 130 miles southeast of Bombay. The plant will be equipped initially with four 60,000-kilowatt generators and will be the main source of additional power supplies in the Bombay-Poona area during the 1960's. Its construction is the keystone of the further development of the area.

Iron and Steel

Rich deposits of iron ore, coal, manganese and limestone, allied to a plentiful supply of labor, enable India to produce steel at costs as low as any in the world. Bank loans to two private companies, the Indian Iron and Steel Company (IISCO) and the Tata Iron and Steel Company have assisted in a large-scale expansion of iron and steel production in India. An increase in iron and steel production was part of the foundation of the first two Five-Year Plans. Iron was required for plows and other farm equipment; steel for the construction of large irrigation and flood-control works, for housing, for hydroelectric works and for the extension of roads and railroads.

One important Plan objective was to equate domestic iron and steel production with demand by 1961 and thus eliminate the heavy drain on foreign exchange brought about by the need to import steel to meet steeply rising consumption. By early 1960 this objective had been substantially achieved, partly because of Bank assistance to India's two privately-owned steel plants and partly through the coming into operation of parts of three new Government-owned mills.

Two loans were made by the Bank to IISCO. The first was of \$30 million in December 1952, enabling the company to expand its integrated

steel mill at Burnpur in the Damodar Valley, to modernize its iron plant at Kulti, a few miles away, and to mechanize operations in its iron mines at Gua. The second loan was of \$20 million and was made in December 1956. This helped to increase rolling mill capacity at Burnpur and also to add new generating capacity of 20,000 kilowatts. Together, the two loans enabled the company to raise its capacity for producing finished steel from 350,000 tons to 800,000 tons a year.

The Tata Iron and Steel Company possesses, at Jamshedpur in the Damodar Valley, the largest integrated steel mill in Asia, and accounted for two-thirds of India's total steel production in 1957. In the past decade the company has been engaged in successive expansion programs, the most recent of which aimed at doubling capacity for the production of steel ingots and increasing finished steel capacity from 700,000 tons to 1,400,000 tons a year. The Bank made two loans toward this program, one of \$75 million in June 1956, and the second of \$32.5 million in November 1957, thus meeting rather less than half of the total cost of the program. Installations financed with the help of the Bank included a new battery of coke ovens, an ore crushing and sintering plant, a blast furnace, more converter and open hearth capacity, a blooming mill, a continuous sheet bar and billet mill, and a structural mill. All these have now been installed and are in operation.

Development of Private Industry

The Bank has made two loans, each of \$10 million, to the Industrial Credit and Investment Corporation of India (ICICI) to provide foreign

exchange for private industrial projects financed by the Corporation. ICICI was established in June 1955 by private investors of India, the United Kingdom and the United States. It makes long and medium-term loans to industrial enterprises, purchases shares, underwrites new issues of securities, and helps to obtain managerial and technical advice. Its total rupee resources at the end of 1959 amounted to about 230 million rupees (\$48 million approximately), and there was also \$20 million in foreign exchange provided by the Bank loans.

The Corporation's activities as underwriter and investor have helped to fill a gap in the structure of investment banking in India. The principal sectors of private industry assisted by the Corporation have been the electrical, mechanical and automotive industries, paper, chemicals and pharmaceuticals, wood products, sugar and shipping. At the end of August 1960, Bank loan funds were on loan from ICICI to 18 enterprises in the shipping, chemical, fertilizers, electrical, mechanical, food processing, sanitary ware and timber processing sectors of Indian industry. Further projects were pending and the demands for foreign exchange are expected to grow.

Other Assistance to India

In 1958, the success of the Five-Year Plan was threatened by an acute shortage of foreign exchange, and India was using up its foreign exchange reserves at a dangerously rapid rate in order to maintain imports essential to the Plan. Under the auspices of the Bank, representatives of five nations (Canada, Germany, Japan, the United Kingdom

and the United States) met in Washington, D.C. in August 1958 to discuss the situation. After these talks, the Bank and the Governments began bilateral negotiations with the Indian Government of arrangements for aid which covered the foreign exchange needed in the third year of the Second Five-Year Plan. The Bank itself undertook to continue its series of loans for the railways and other projects in India.

The participants met again in Washington in March 1959, and as a result similar bilateral arrangements were made for aid in the fourth year. Two other meetings have since taken place, both in 1960; at the second meeting, in September, a preliminary discussion took place of financial aid for the Third Five-Year Plan, beginning in April 1961.

Another initiative toward securing well informed consideration of the economic problems of the sub-continent took the form of a suggestion by Mr. Eugene R. Black, President of the Bank, to three internationally known bankers that they visit India and Pakistan to gain first-hand impressions of the current situation and prospects there. As a result Mr. Hermann Abs of the Deutschebank of Frankfurt, Sir Oliver Franks of Lloyds Bank of London and Mr. Allan Sproul, formerly Chairman of the New York Federal Reserve Bank, visited the two countries for six weeks early in 1960. In recording their general impressions in a joint letter to Mr. Black, the three bankers urged support for the efforts of both countries, but warned of the many difficulties which must be resolved cooperatively between India and Pakistan and the industrialized countries to which they were looking for support.

JAPAN

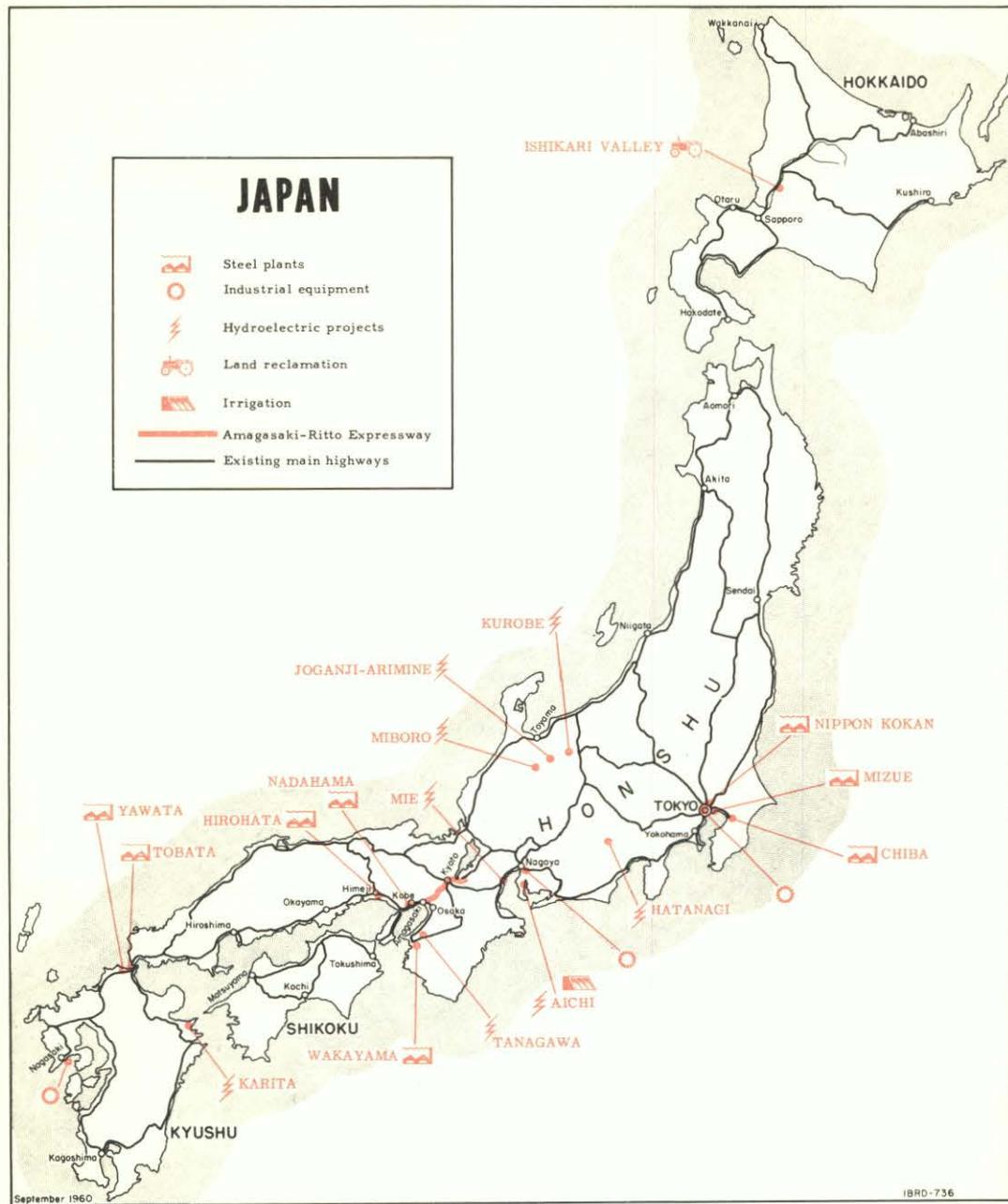
<u>Purpose and number of loans</u>		<u>Amount</u>
Agriculture	1	4,300,000
Industry	9	149,689,000
Multipurpose	1	4,900,000
Power	7	138,484,000
Transportation	<u>1</u>	<u>40,000,000</u>
	19	\$337,373,000

In Japan the Bank has made nineteen loans totaling \$337 million - more than in any other country except India. The loans have been of wide variety -- for power, iron and steel, land clearance, irrigation, and the construction of Japan's first express highway.

Industry

Nine loans to industry, totaling \$150 million, have been channeled through the Japan Development Bank, a public agency which supplies long-term credit for reconstruction and development projects. Most of this sum has been used to help in modernizing and enlarging Japan's steel capacity.

An important share of Japan's foreign exchange income is earned by the steel industry, while in the domestic market the maintenance of adequate supplies of iron and steel has been a major factor permitting the rapid post-war growth of the Japanese economy. In recent years the steel producers have undertaken capital investment programs designed to modernize and enlarge their plants, and, in particular, to reduce their dependence upon imported scrap by expanding their pig iron capacity. The current



five-year program of the industry, running to 1962, provides for an increase of 9.4 million tons, or nearly 85 per cent, in crude steel capacity.

The first Bank loan for the Japanese steel industry was made in October 1955 to help the Yawata Iron and Steel Company Limited, the largest steel firm in Japan, to modernize its plate-rolling plant. The loan of ¥5.3 million covered more than a third of the cost of installing a four-high 160-inch steel plate mill at Yawata on Kyushu Island to replace three machines built between 1905 and 1928. It was estimated that its installation would substantially reduce operating costs and improve the quality of the products. Modifications to be completed during 1960 are expected to raise the mill's initial capacity of 360,000 tons to 540,000 tons annually. Yawata also received ¥20 million through a Bank loan made to the Japan Development Bank in November 1959. This loan is covering part of the cost of additions to the company's Tobata works in northern Kyushu which will make Tobata a fully integrated steel plant. Two blast furnaces, each capable of producing 1,500 tons of pig iron a day, a sintering plant with an output of 3,500 tons a day, three 60-ton oxygen top-blowing converters, two coke-oven batteries and a 48-inch slabbing mill are being installed.

A steel loan of ¥2.6 million formed part of a larger loan of ¥8.1 million made in February 1956 through the Japan Development Bank for four separate industrial projects. It financed imported machinery for a seamless tube mill for the Japan Steel and Tube Corporation Limited (Nippon Kokan Kabushiki Kaisha), the third largest company in the Japanese steel industry,

and one of the country's biggest producers of pipes and tubes. The new mill, with a capacity of about 120,000 tons a year, came into operation at the end of 1957, replacing two obsolete mills. The company received a second loan, this time of \$22 million, in September 1958. A small part of this sum financed the extension of the new tube mill; the greater part, however, covered the foreign exchange costs of the first stage of building a completely integrated steel mill at Mizue near Tokyo. Here, with the Bank's assistance, the company has erected two 60-ton converters, both using the modern oxygen top-blowing process, a 46-inch slabbing mill, a 68-inch semi-continuous hot strip mill and a 66-inch reversing cold strip mill.

In December 1956 the Bank lent \$20 million to the Kawasaki Steel Corporation to cover the foreign exchange cost of imported equipment for a semi-continuous hot and cold strip mill at the company's new Chiba plant near Tokyo. The completion of the new mill, over six months ahead of schedule, meant that Kawasaki no longer had to ship steel some 300 miles from Chiba to its old works at Kobe where rolling was done in obsolete hand mills. Because the plant cost less than expected, the company was able to buy further auxiliary equipment. A second loan, of \$8 million, was made to Kawasaki in January 1958. It covered about two-fifths of the cost of a new blast furnace at Chiba capable of producing 1,000 tons of pig iron a day. This furnace was completed by May 1959.

In July 1958 the Bank made its biggest single loan for the Japanese steel industry - a credit of \$33 million toward a program of modernization

and expansion, costing \$83 million altogether, undertaken by Sumitomo Metal Industries Limited. The Bank's loan is financing work at Wakayama in central Honshu, where Sumitomo is constructing wharves and other harbor facilities to handle ships of up to 15,000 tons, a blast furnace with a daily capacity of 1,200 tons, two open-hearth furnaces, a coke oven and a 47-inch blooming mill. The program should be completed by March 1962.

A loan of \$10 million was made in August 1958 to assist the Kobe Steel Works Limited in increasing its production. This project, completed in 1959, included the construction at Nadahama on Osaka Bay of a blast furnace with a capacity of 800 tons a day, together with harbor and loading installations, a sintering plant, and a 16,400-kilowatt thermoelectric power plant. Nadahama is close enough to the company's main works in Kobe to allow pig iron made in the new furnace to be transported to Kobe and used while still molten. Previously the company had been put to much extra expense by the need to re-heat cold pig iron brought from a plant twelve miles away.

The Fuji Iron and Steel Company Limited, which in size ranks second as a producer only to Yawata, also borrowed from the Bank in November 1959. Fuji is using its loan of \$24 million at Hirohata on the inland sea, where it is constructing a blast furnace with a capacity of 1,500 tons a day, a sintering plant capable of handling 2,000 tons a day, two 60-ton oxygen top-blowing converters and a slabbing mill. This equipment should earn a particularly high economic return, as it will allow Fuji to use its existing rolling mills more intensively. Work on the project is now well advanced.

Three companies outside the steel industry shared with Japan Steel and Tube Company in the \$8.1 million loan made in February 1956 through the Japan Development Bank. The \$5.5 million they received paid for machines and machine tools imported from six countries. Mitsubishi Shipbuilding and Engineering Company Limited, the largest Japanese company in its field, received \$1.5 million to cover the foreign exchange cost of fifteen heavy machines and machine tools needed to manufacture turbo-superchargers and heavy diesel engines. These machines, most of which were installed at the company's Nagasaki shipyards, made it possible for Mitsubishi to meet a shift in demand from comparatively small diesel engines to higher-powered supercharged units.

Ishikawajima Heavy Industries Company Limited, which borrowed \$1,650,000, bought machine tools needed in manufacturing steam turbines and other heavy industrial machinery. The remainder of the loan was made to the Toyota Motor Company Limited, and covered the foreign exchange cost of 42 machines needed to modernize the company's production of trucks and bus chassis. Toyota's progress since the loan was made has been particularly impressive: monthly output is now more than three times as great as in 1956.

Electric Power

Although Japan has greatly enlarged its electrical generating capacity since 1945, it has found it difficult to keep pace with the growing demands of industry. Between 1952 and 1957, power consumption grew at an annual rate of 8 or 9 per cent. To assist the generating companies in meeting

this demand, the Bank has lent over \$138 million through the Japan Development Bank since 1953 for both hydroelectric and thermoelectric projects.

The Bank's first power loan, made in October 1953, was also its first loan in Japan. Three privately-owned companies received loans totaling \$40.2 million to build thermoelectric generating plants. Although these companies were responsible for over a third of all power generated in Japan, much of their capacity consisted of run-of-the-river hydroelectric plants whose output fell when the rivers were seasonally low. The thermoelectric plants were needed to make good this seasonal shortfall.

More than half the loan went to the Kansai Electric Power Company, Inc., one of the largest privately-owned power companies in the world, which received \$20,578,000 to cover the foreign exchange cost of a 150,000-kilowatt plant built at Tanagawa on Osaka Bay in central Japan. The plant, completed in 1956, serves the most important industrial area of Japan, including the cities of Osaka, Kobe, Sakai and Amagasaki. It provides power for the manufacture of metals, machinery, chemicals, ceramics, textiles and ships. The operating efficiency of its two high-temperature, high-pressure generating units is far higher than that of earlier Japanese installations. Kansai was lent a further \$37 million in June 1958 toward the cost of a dam and a 258,000-kilowatt underground power station on the Kurobe River in a remote part of the central range of the Japanese Alps. To provide access to the site, which otherwise is inaccessible for heavy equipment, it has been necessary to drive a 3-1/2 mile tunnel through a mountain range from a parallel valley. Another tunnel, six miles long,

will connect the dam to the power station. Because the dam will also regulate the flow of the Kurobe River, a substantial increase is expected in the output of existing plants further downstream.

The Kyushu Electric Power Company, Inc., received \$11,200,000 from the loan of October 1953 toward the foreign exchange cost of a 75,000-kilowatt thermoelectric station at Karita on the northeast coast of Kyushu. This plant, a single unit of the type installed by Kansai at Tanagawa, serves an area where more than half Japan's output of coal is mined, and which is also a center of basic metal and chemical manufacturing. The third borrower was the Chubu Electric Power Company, Inc., which received \$7,500,000 to meet the foreign exchange cost of a 66,000-kilowatt, single-unit plant at Mie on Ise Bay in central Japan. It serves the Nagoya area, providing power for companies making chinaware, textiles, and sewing and textile machinery. Both Kyushu and Chubu spent less on these stations than had been expected, and were able to cancel \$750,000 and \$1,044,000 respectively of their original loans.

Chubu returned to the Bank in September 1958 to borrow \$29 million for its 170,000-kilowatt Hatanagi hydroelectric project in central Honshu. This consists of a high dam and reservoir to direct the flow of the Ohi River successively through an upper power station, a second reservoir, a long tunnel and finally a lower station. A pump-back installation at the upper station will permit increased output during hours of peak demand, while silt control and regulation of the river's flow by the reservoirs

should improve the operations of power plants further downstream. The project should be completed during 1963.

In June 1958 a loan of \$25 million was made to the Hokuriku Electric Power Company, a privately-owned company serving an area centered on Toyama, on the west coast of Honshu. Four-fifths of this company's output is consumed by industry, which has been attracted into the area by the cheap electricity generated by the run-of-the-river hydroelectric plants forming the greater part of Hokuriku's capacity. Power restrictions made necessary by the reduced flow of water during the winter months have forced many of these consumers to work only part-time. The Joganji-Arimine project, for which the loan was made, will provide reliable supplies of power throughout the year. On the Joganji River, in the Japanese Alps, the company has nearly completed construction of the 450-foot high Arimine Dam. Further downstream, five new power stations are being built at successively lower levels to use the water stored behind the dam, and an existing power station is being enlarged to add a total of 261,000 kilowatts to Hokuriku's capacity. The three largest of the new stations came into full operation early in 1960.

The most recent power loan was made in February 1959. This was the first loan the Bank had made in Japan as part of a joint borrowing operation with the United States private investment market, the Bank lending \$10 million to the Japan Development Bank at the same time that the Japanese Government issued \$30 million worth of bonds on the New York market. The combined proceeds were re-lent to the Electric Power Development Company, an agency almost wholly owned by the government, to finance its Miboro

hydroelectric project on the Sho River, near the west coast of Honshu. At Miboro the company is constructing a large rockfill dam and an underground powerhouse with a capacity of 215,000 kilowatts. The output of this plant, estimated at 544 million kilowatt hours annually, will be sold to the Kansai Electric Power Company. Kansai will gain a further 220 million kilowatt hours each year through increased output from its own hydroelectric plants below Miboro, as regulation of the flow of the river by the new dam will allow them to operate more efficiently. The project should be completed in 1961.

Agriculture

Japan's population of over ninety million, growing at the rate of a million a year, lives in an area a twentieth the size of the United States. By intensive cultivation, the country produces four-fifths of the food it needs, but great efforts must be made to increase agricultural output to match population growth. One hope of higher output lies in developing some 2.5 million acres of remote or scrub-covered land where, for some years, the Japanese Government has been settling farmers and supporting them while they clear and prepare the land by their own hand labor to make it capable of growing satisfactory crops. Following a visit by a Bank agricultural mission in 1954, the Agricultural Land Development Machinery Public Corporation was established to experiment with modern heavy clearing and earthmoving machinery to find out whether this would be a practical way of reclaiming the land more quickly. In December 1956 the Bank made a loan of \$4.3 million to assist the Corporation in carrying out several pilot

reclamation projects, and also to finance imports of dairy cattle from Australia.

By the end of 1959, crawler tractors and other equipment financed by the Bank had reclaimed a total of over 22,000 acres, mostly on the islands of Hokkaido and Honshu. A further 24,000 acres is to be cleared under the present program, and the useful working life of the equipment should permit reclamation of at least another 25,000 acres beyond this. About 1,000 new farms have been established so far, and 2,000 existing farms have received additional land. On average, most of the new farms have covered their expenses in their fourth year of settlement, against the original expectation that they would operate profitably only in their seventh year. A separate project in the Ishikari Valley of western Hokkaido, where the climate is milder, is using Bank-financed machinery to drain, top dress, and irrigate nearly 30,000 acres to grow rice and other crops.

Demand for dairy products has grown too rapidly to be met by the natural rate of increase of Japan's herds of domestic cattle. Part of the Bank's loan made it possible for the Government to import 7,500 head of Jersey breeding cattle from Australia for use on existing farms and on the new settlements. These imports are continuing.

Multipurpose Project

Agriculture will also benefit from a loan of \$7 million made in August 1957. In the Aichi region of central Japan, the Bank is supporting a project which will irrigate more than thirty thousand farms, supply drinking

water for many towns and villages, increase the supply of water for industrial use to three cities (including Nagoya), and provide 10,000 kilowatts of electric power.

The project will irrigate 42,000 acres of land already under paddy and 40,000 acres of upland areas, thus, it is hoped, increasing crops by about 200,000 tons annually. This is Japan's first attempt to irrigate ridge lands, where drought causes severe damage in the summer and only a narrow range of crops can be grown. In the lower-lying areas, perennial irrigation will allow farmers to grow crops throughout the year on fields which must now be flooded in winter to store water. The borrower, the Aichi Irrigation Public Corporation, is building a dam at Makio Bridge on the Otaki River whose outflow will drive the turbines of a 10,000-kilowatt power station for the Kansai Electric Power Company, and feed a 68-mile main irrigation canal and some 780 miles of secondary canals on the Chita Peninsula. Because foreign exchange costs were lower than expected, \$2.1 million of the original loan has since been cancelled.

Transportation

In March 1960 the Bank made a loan of \$40 million to the Japan Highway Public Corporation toward the cost of the Amagasaki-Ritto Expressway. This new 45-mile road, to link the Osaka and Kyoto metropolitan areas, forms part of a highway development program calling for government expenditure of \$2.8 billion over the period 1958-1963. With the railways already overloaded, Japan's inadequate road system (only 10 per cent of the 93,000-mile network is paved) must bear the burden of a 15 to 20 per cent annual

increase in truck and bus traffic, and an even greater increase in the use of automobiles. To overcome congestion and delays, particularly serious in the industrial areas, the government plans to build limited-access high-speed roads between a number of the most important manufacturing cities.

The Amagasaki-Ritto Expressway is the first part of a 118-mile toll highway which will eventually link Kobe and Nagoya. It traverses an area which contains nearly a tenth of the population of Japan, about 57,000 factories and workshops whose products cover the whole range of Japanese output, and many farms. The new road will be a four-lane, divided highway, bypassing all towns. To avoid densely-populated or rice-growing areas, it will be necessary to drive several long tunnels, while bridges and viaducts will be needed to carry the road across areas subject to flooding, several major rivers, and existing roads and railways. When it is completed, probably early in 1963, the Expressway should halve the traveling time between Amagasaki and Ritto. Tolls should repay its cost within 25 years.



MALAYA

<u>Purpose and number of loans</u>		<u>Amount</u>
Power	1	\$35,600,000

In 1954, a Bank survey mission was invited to visit Malaya to assess the country's resources, and to suggest measures for economic and social development. The fourteen members of the mission included four specialists in agriculture and related fields nominated by the Food and Agriculture Organization of the United Nations. Their report, published in 1955, recommended that \$258 million be spent on development over the five years 1955-1959. It emphasized that public expenditure on social and economic development must remain high in order to keep pace with the growth in population: although Malaya's average standard of living is the highest in the Far East, it is threatened by one of the highest birth rates in the world.

The mission thought it particularly important that assistance should be given to rubber growers to help them to replant with high-yielding stock which could compete successfully with synthetic rubber. Comprehensive geological and land-use surveys were suggested to try to find ways of reducing Malaya's excessive dependence upon rubber and tin, and proposals were also put forward in the fields of agriculture, transportation, power and the social services. The mission recommended the establishment of a central bank and an industrial credit organization to serve both Malaya and Singapore.

One loan has been made in Malaya. In 1958, the Bank lent \$35.6 million to the Central Electricity Board to meet the foreign exchange cost of its Cameron Highlands hydroelectric project -- the biggest single development project in the Federation. This scheme will increase the capacity of the central power network operated by the Board by 50 per cent, making it possible to meet rising demand in its present service area of Kuala Lumpur and the states of Selangor, Negri Sembilan and Malacca, while also enlarging the network to serve other areas.

Total consumption of electric power in Malaya has been rising by about 7-1/2 per cent annually, although the tin industry, the largest consumer, has been depressed by output restrictions. The Cameron Highlands scheme is the first stage of a program designed to develop the hydroelectric potential of Malaya's combination of high rainfall and mountainous terrain. The waters of four small rivers -- the Telom, Kial, Habu and Bertam -- on the Cameron Highlands plateau, some 100 miles north of Kuala Lumpur, will be combined and used to drive the turbines of two power stations -- a 5,500-kilowatt intermediate station at Habu and a much bigger underground station (with three 25,000-kilowatt generators, and provision for a fourth) at Jor. Besides building the two power stations, the contractors will have to drive about thirteen miles of tunnels, construct a dam 400 feet long and 120 feet high at Ringlet Falls on the Bertam River, and erect 217 miles of transmission lines. The whole project should be completed in 1964.

PAKISTAN

<u>Purpose and number of loans</u>		<u>Amount</u>
Transportation	5	\$ 99,500,000
Power	3	30,176,585
Industry	3	18,400,000
Agriculture	1	3,250,000
Indus Basin	<u>1</u>	<u>90,000,000</u>
	13	\$241,326,585

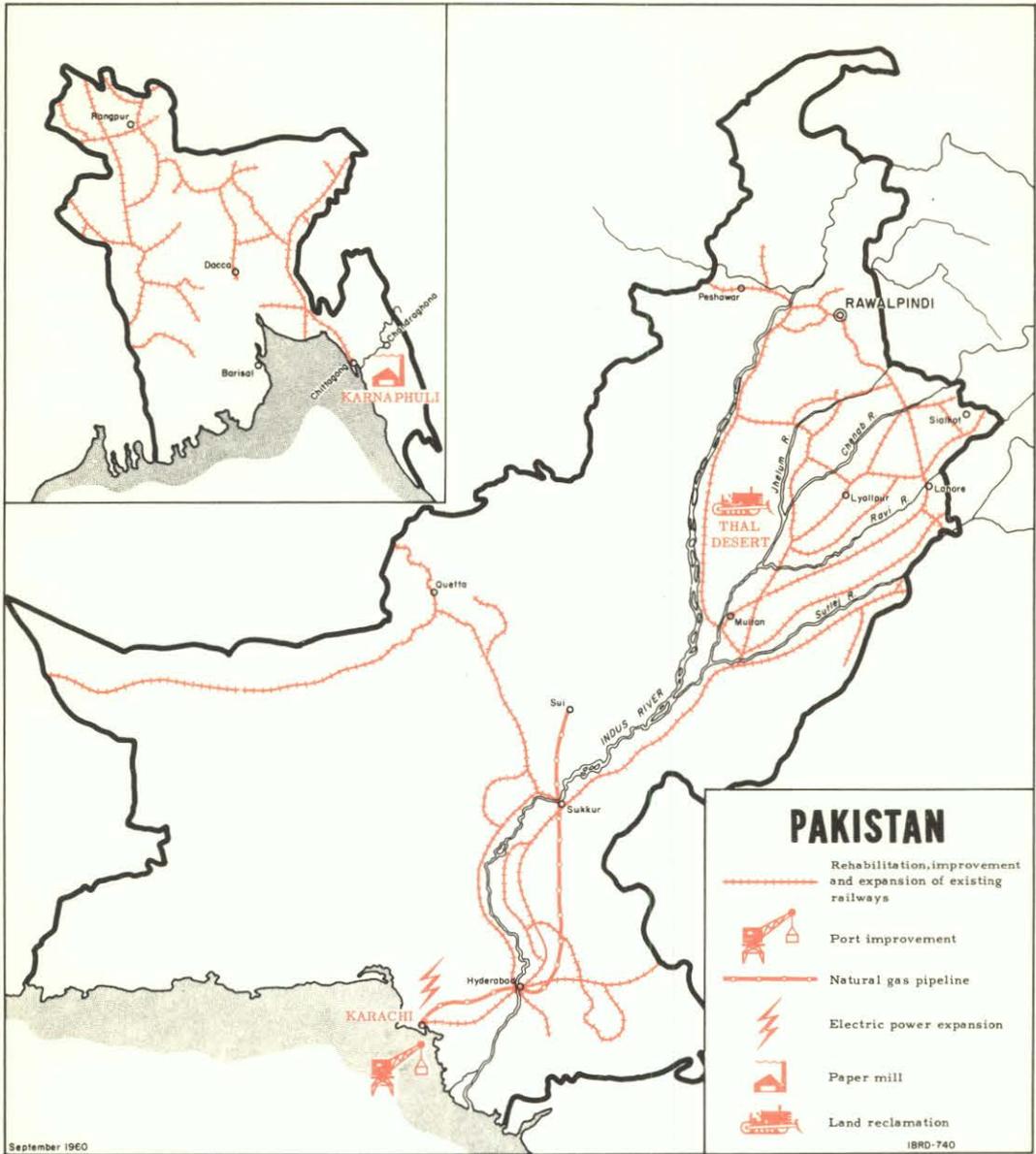
The Bank has assisted Pakistan in its development efforts both with loans and by providing technical assistance and advice. In November 1953, the Bank stationed a special representative in Pakistan to advise on the execution of Bank financed projects; in 1958 the functions of the special representative were extended; he was to be available for advice to the Government on economic and financial policy. The three bankers who visited India early in 1960 at the Bank's suggestion also visited Pakistan and reported their impressions of both countries.

The Bank has lent \$241 million in Pakistan for basic utilities, industry, agriculture, and the Indus Basin Settlement Plan.

Transportation

(1) Railways

The Bank has made three loans, totaling \$70.7 million, for the rehabilitation, improvement and expansion of the railways of Pakistan. The country has two systems, the North Western Railway, which is the main form of transport in West Pakistan, and the Eastern Bengal Railway, which



September 1960

IBRD-740

serves East Pakistan. Like the Indian railways, they were left by the war years with a legacy of obsolete and worn out locomotives and rolling stock, track in need of maintenance and inadequate workshop facilities. The first Bank loan of \$27.2 million, made in March 1952, was used in a program to rehabilitate both systems and convert them to diesel power. It helped buy abroad 42 diesel electric locomotives and 39 shunting locomotives, 12 locomotive boilers, 206 passenger cars, 1194 freight cars, sleepers, spare parts and workshop equipment.

The second loan of \$31 million was made in October 1957. About half the amount was for freight cars and most of the balance for sleepers and rails. A sum was set aside to replace the Landsdowne Bridge, which spans the Indus River about 250 miles upstream from Karachi. The third loan of \$12.5 million was made in November 1959 for a program to meet the minimum requirements of the railways pending the formulation of a program of railway development to be carried out during the Second Five-Year Plan beginning in 1960. The loan is being used to obtain rolling stock, signaling equipment and track materials.

(2) Port of Karachi

Karachi is the only port in West Pakistan, and the East Wharves handle about 60% of its traffic. The Wharves, built around the turn of the century, had deteriorated so much that reconstruction was needed to avoid serious interruption in the flow of goods to and from West Pakistan. In August 1955, the Bank made a loan of \$14.8 million to the Trustees of the Port, to help finance the reconstruction and modernization of cargo berths

and handling facilities at the East Wharves. By 1960, 13 existing berths had been replaced by new ones. The work also included the construction of a concrete quay wall, new storage facilities, access roads and railway tracks, the provision of portal cranes and the construction of workshops and an additional office building.

The project is speeding up the movement of freight, shortening the turn-around time of vessels, and increasing the capacity of the port.

Natural Gas

Pakistan has meager supplies of coal and oil, and a large part of its annual requirements of fuel have to be imported. The discovery in 1952 of a huge reservoir of natural gas at Sui about 350 miles north of Karachi was therefore of vital importance to the economy. It promised an abundant and economical fuel for Pakistan's developing industries, and would effect large savings of foreign exchange by displacing coal and oil as industrial fuels.

The Bank, through a loan of \$14 million made in June 1954 to the Sui Gas Transmission Company, helped bring the gas from the remote Sui field to consuming centers in Karachi and elsewhere. The project which the loan helped to finance consisted of laying a 16-inch pipeline from Sui to Karachi via Sukkur and Hyderabad through the lower Indus River Valley, together with connecting lines to several large consumers. The 350-mile pipeline was laid in five and a half months and was completed in April 1955: gas sales started in September. By the end of 1959 Sui gas was supplying over two-thirds of West Pakistan's industrial fuel needs.

Consumers include electrical and cement plants and textile mills as well as other enterprises and domestic users. The largest user is the Karachi Electric Supply Corporation.

Electricity

In the last decade or so Karachi has become one of the chief manufacturing centers of Pakistan and its population has quadrupled. With this growth has come a much greater demand for power for industrial and residential purposes. To relieve the consequent shortage the Karachi Electric Supply Corporation Ltd. (KESC), has greatly expanded generating capacity with the assistance of three Bank loans totaling \$30.2 million.

The first loan, of \$13.8 million, was made in June 1955, and helped to finance an expansion of power to meet the most urgent needs. A 30,000-kilowatt thermal power station was built in Karachi and went into commercial operation early in 1957; existing power plants were rehabilitated; transmission and distribution facilities were extended and improved and equipment for offices and stores was acquired. The second loan was for the amount of \$14 million and was made in April 1958. This loan is being used in a KESC project for the construction of a new thermal station with two turbo-generating units of 30,000-kilowatt capacity each, adjacent to the existing station. The second loan is also helping to extend transmission and distribution facilities.

Commercial operation of the two units in the second station is expected to start in the first half of 1962. In the meantime KESC is taking emergency measures to expand output and relieve the scarcity of power in

Karachi. A 14,500-kilowatt diesel generating station is being installed and is expected to start operating in 1960. This plant will enable the Corporation to meet industrial demand until the new 60,000-kilowatt plant goes into operation in 1962; thereafter the diesel plant will be used to meet peak loads and for stand-by capacity. A third Bank loan of \$2.4 million was made in August 1959 to finance the foreign exchange cost of the diesel plant.

Industry

(a) Industrial Development Corporation

Two Bank loans totaling \$14.2 million made to the Pakistan Industrial Credit and Investment Corporation Limited (PICIC) have aided the growth of private industry in Pakistan. PICIC is a corporation formed in 1957 by Pakistani, British, American and Japanese private investors after Bank and other experts had explored the possibilities of industrial development in Pakistan and had studied ways in which an industrial finance institution could be established. The principal objectives of PICIC are to assist in the expansion or modernization of small and medium-sized industries and to help create new ones. It makes loans and equity investments, and underwrites and distributes securities. In late 1959 its total resources were Rupees 185 million (\$38.9 million) made up of paid-up share capital, a 30-year interest free rupee advance from the Government and foreign exchange from World Bank and U.S. Development Loan Fund loans.

By the end of 1959 PICIC had committed itself to 73 loans for a total amount of Rupees 76.9 million (almost \$16.1 million) and, in conjunction with some of its larger credit operations, had acquired small amounts of equity participations and option rights. Apart from one new sugar mill and a number of small and medium-sized new plants, PICIC's financing has been mainly for the improvement of existing enterprises. Sugar and textile industries have been the largest borrowers; others include food processing, chemicals and pharmaceuticals, mechanical, glass and ceramic industries.

The first Bank loan to PICIC was of \$4.2 million and was made in December 1957; the second of \$10 million was made in September 1959. Both loans were made to meet the foreign exchange requirements of projects financed by PICIC.

(b) Pulp and Paper

In August 1955 the Bank made a loan of \$4.2 million to Karnaphuli Paper Mill Ltd. to help finance a paper mill at Chandraghona, on the Karnaphuli River downstream from the bamboo forests of the Chittagong Hill Tracts in East Pakistan. The mill manufactures pulp and paper from bamboo and is designed to produce 30,000 tons of writing and wrapping paper annually. The plant cost the equivalent of \$20 million; the Bank's loan provided about one third of the foreign exchange component.

In the past Pakistan has had to import all of its paper requirements, but now the Karnaphuli plant is meeting present domestic needs for the types of paper it produces. The plant has also provided a new market for

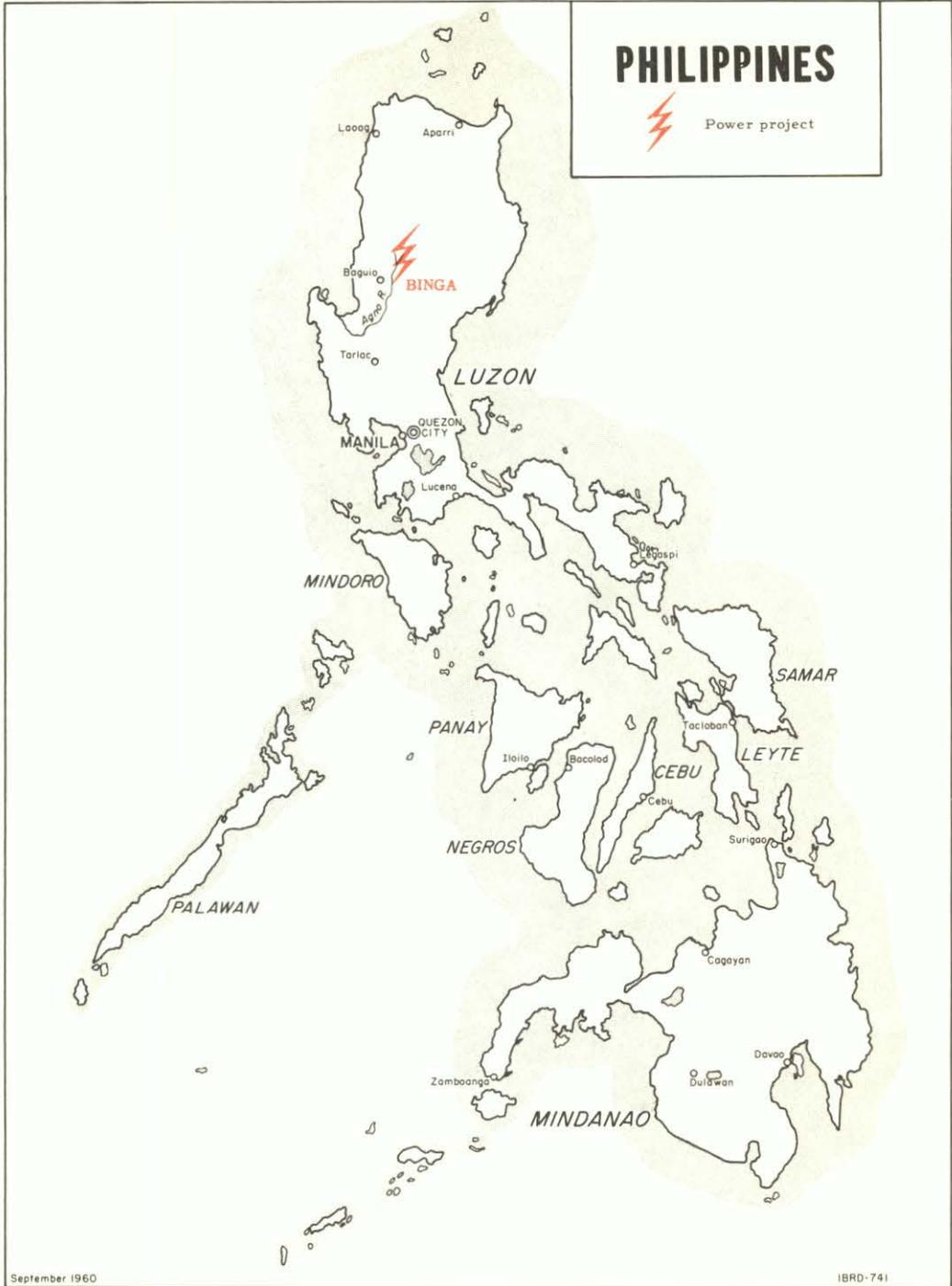
bamboo and given employment to about 3,000 people, most of whom were previously engaged in traditional agriculture. The Karnaphuli Paper Mill Ltd. was established in 1952 by the Pakistan Industrial Development Corporation as a government-owned institution. The Corporation subsequently sold a majority of the shares to private investors.

Agriculture

A Bank loan of \$3.25 million, made in June 1952, was used in paying for imports of tractors and ancillary equipment to level and plow land for settlement in the Thal irrigation area in the north-eastern part of West Pakistan. By the end of May 1959, nearly 430,000 acres had been prepared. Large areas have been brought under cultivation, families are being settled and new communities are being established.

The Indus Basin

On September 19, 1960, the Indus Water Treaty was signed in Karachi by the Prime Minister of India, the President of Pakistan and a Vice President of the Bank. An account of the negotiation which culminated in this Treaty is given on pages 59-72, which also contain a description of the gigantic system of replacement and development works embodied in the settlement. As part of the financing of these works, the Bank made a loan of \$90 million to Pakistan; \$80 million of the loan is being paid into the Indus Basin Development Fund, and the balance of \$10 million will be available to meet interest and other charges on the loan during the first eight years of the period of construction of the works.



PHILIPPINES

<u>Purpose and number of loans</u>		<u>Amount</u>
Electric power	1	\$18,500,000

Demand for electric power in the Philippines has been growing rapidly. In the Manila area, which has a population of over a million, it has increased by 12 per cent annually, with industrial demand rising twice as fast. In surrounding areas demand is also rising quickly. The Bank made its first loan, of \$21 million, in the Philippines in November 1957 to help to finance hydroelectric plants to meet these demands.

The Philippines has large unused resources of water power, whose development is the responsibility of the National Power Corporation, a government agency. The Corporation is engaged on a program of six projects to exploit the hydroelectric potential of the Agno and Toboy Rivers, on the northern island of Luzon. The Bank's loan assisted the second of these projects -- the construction at Binga on the Agno River of a dam and reservoir, an underground powerhouse with an installed capacity of 100,000 kilowatts, and transmission lines to Manila and other towns. Because imported equipment cost less than had been expected, \$2,500,000 of the loan was later cancelled. The four 25,000-kilowatt generators came into operation in the first half of 1960.

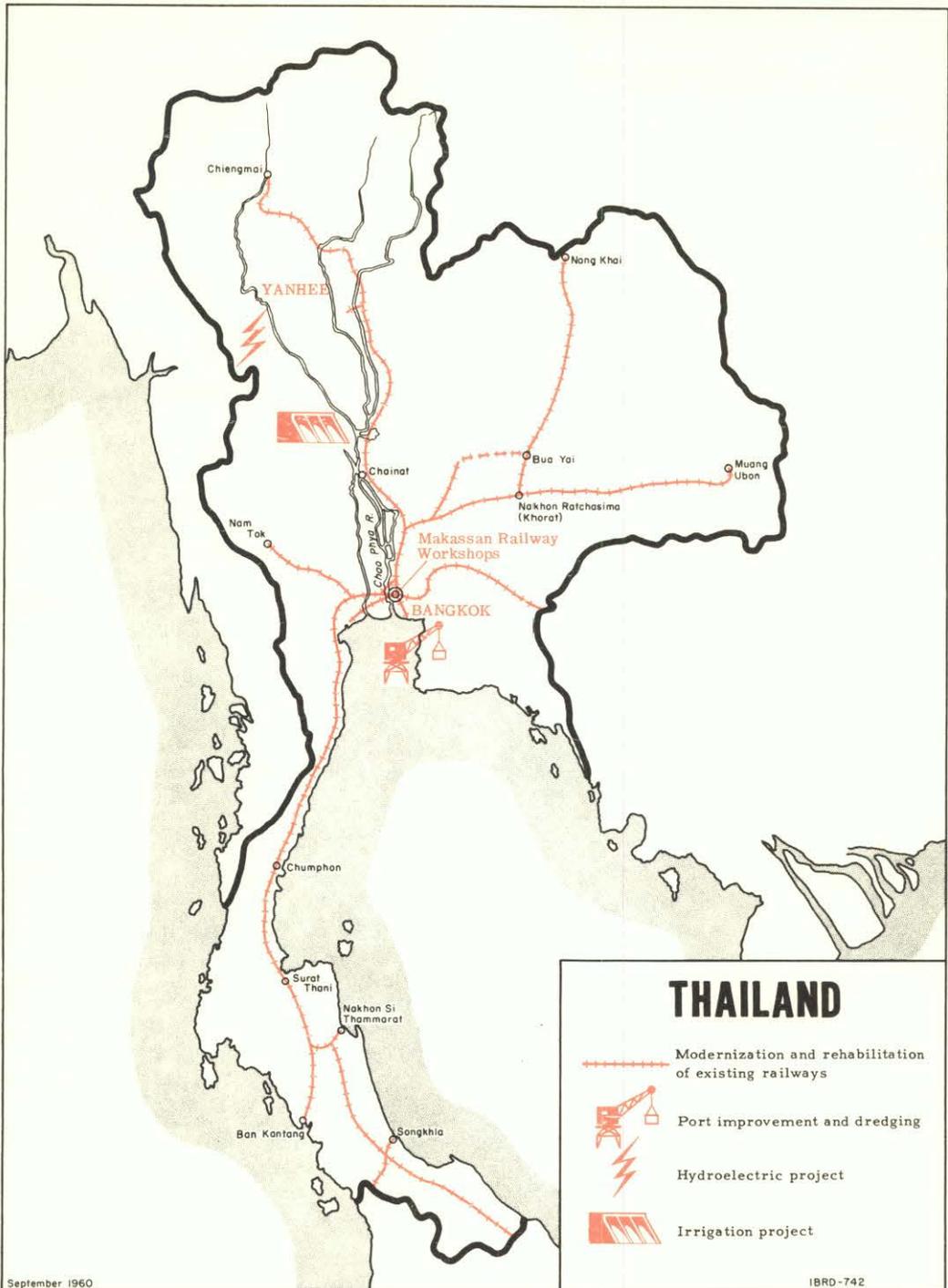
THAILAND

<u>Purpose and number of loans</u>		<u>Amount</u>
Agriculture	1	\$ 18,000,000
Multipurpose	1	66,000,000
Ports	2	7,659,000
Railways	<u>2</u>	<u>15,000,000</u>
	6	\$106,659,000

Loans totaling nearly \$107 million have been made in Thailand, which was the first country in southeast Asia to receive a loan from the Bank. Two loans were made to rehabilitate and modernize the railway system; two more have helped to open the port of Bangkok to larger ships; one has assisted in financing a scheme for irrigation of the rice-growing Central Plain; and one -- the largest and most recent -- is paying for imported equipment, material and services for a multipurpose project which will generate power for half of Thailand and control the river's flow to help irrigation and to reduce flooding on the Central Plain.

Railways

The railways are vital to Thailand, serving many areas which are remote from navigable waterways and which have few roads. Heavy war damage to the railway system included the destruction of its workshops, so that for some years the permanent way and rolling stock could not be properly maintained. Meanwhile traffic increased as exports and the population grew, so that by 1950 the system was in need both of rehabilitation and expansion.



In October 1950 the Bank lent \$3 million to the Kingdom of Thailand, to help rebuild and re-equip the Makassan workshops of the State Railway, to install mechanical signalling equipment and to acquire spare parts to repair rolling stock. The workshops had been completed and the signalling equipment installed by the end of 1956.

By 1955 further expansion of the Thai economy made further modernization and rehabilitation necessary. The Bank made a loan of \$12 million to the State Railway in August 1955 to assist a five-year investment program including renewal of rails on 875 miles of track, the purchase of 30 diesel locomotives, 170 passenger coaches, and about 850 freight cars, and replacement of obsolete couplers with a modern automatic type -- assembly of the latter being carried out in the workshops built with the help of the earlier Bank loan.

Ports

Two Bank loans, totaling \$7,659,000, have helped to develop Klong Toi, the port of Bangkok. Four-fifths of Thailand's exports, including all rice shipments, pass through Bangkok, and almost all imports enter the country there. The port lies some distance up the Chao Phya River, the major waterway of Thailand. Although the river itself is deep, silt deposited at its mouth has built up a bar extending more than nine miles into the gulf of Thailand. Until recently this bar could not be crossed by ships of more than about 4,000 tons deadweight. All larger ships had to load and unload with the help of lighters -- an expensive and dangerous

operation -- near a coastal island some distance from the mouth of the Chao Phya, the lighters carrying the goods the 55 miles to or from Bangkok.

In October 1950 the Bank made a loan to the Kingdom of Thailand of \$4.4 million, the greater part of which (nearly \$3 million) was used to finance the dredging of a deep channel through the sandbar in order to permit ships of up to 10,000 tons deadweight to use the port. The remainder of the loan assisted in the purchase of port equipment, including a tugboat, cargo-handling equipment, buoys and a 1,500-kilowatt diesel power plant. In spite of great difficulties experienced because of much heavier silting than expected, and a typhoon in October 1952, which set work back by several months, the channel was opened early in 1954. By 1956 the proportion of total imports handled by lighter had fallen from two-fifths to less than two percent, and the time taken to load and unload ships had been nearly halved.

Silting in the channel has continued to be more serious than had originally been expected, and in October 1956, the Bank lent \$3.4 million to the Port Authority of Thailand for three dredges and auxiliary equipment needed to keep the port open to large vessels. These have been delivered and are now operating satisfactorily. As their cost proved to be less than had been forecast, \$141,000 of this second loan was subsequently canceled.

Agriculture

The Bank made a loan of \$18 million in October 1950, to the Kingdom of Thailand toward the cost of a project to develop rice production. Thailand's output of rice is not used solely to feed its people; a large

quantity is exported, helping to meet the needs of other southeast Asian countries and providing almost half of Thailand's export earnings. As the most important of several projects, the Government embarked on a scheme to provide an assured water supply to an area of 2,260,000 acres in the Central Plain of Thailand. This called for the construction of a reinforced concrete barrage across the Chao Phya River near Chainat, about 100 miles north of Bangkok, together with a complete irrigation system of canal and water distribution channels. Besides yielding a surplus for export, it should eventually allow consumption of an extra 350,000 tons of rice and 75,000 tons of soya beans at home.

The Bank's loan has helped to meet the foreign exchange cost of construction plant, permanent and workshop equipment and materials for the barrage, of equipment for the Central Workshops of the Royal Irrigation Department of Bangkok, and of the contractor's and consulting engineer's fees. The barrage was built by August 1956, and most of the major structures were completed by the end of that year.

Multipurpose Project

For some years Thailand has suffered from an acute power shortage. With a total public generating capacity of a little over 100,000 kilowatts, most large consumers have been obliged to install their own generators. The Yanhee hydroelectric project is designed to relieve the power shortage, by the installation in its initial stages of 140,000 kilowatts of generating capacity to serve Bangkok and eleven other communities. By the installation of a further 420,000 kilowatts of capacity, Yanhee will eventually meet most

of Thailand's expected needs of electricity up to about 1975. It should also make it possible to control floods in the Central Plain, and will provide water to maintain a flow to the Chao Phya irrigation system, thus making possible a further increase in agricultural production. Another incidental benefit should be the improvement of the Chao Phya River as a navigable waterway.

The Bank is meeting about two-thirds of the total cost of the first stage of the project with a loan of \$66 million, made in September 1957, to the Yanhee Electricity Authority. This will assist construction of the Bhumphol dam on the Ping River 260 miles northwest of Bangkok. The 500-foot high arch dam will create a reservoir capable of storing twelve billion cubic meters of water. The Bank loan will also finance the first two generating units, each of 70,000 kilowatts, in a powerhouse designed for an ultimate capacity of eight units, and will help to finance transmission lines and distribution equipment between Yanhee and Bangkok.

Other Activities

A Bank survey mission went to Thailand in 1957, spending a year there working in close cooperation with a group of Thai experts who later formed the nucleus of an economic development council established on the mission's recommendation. The mission's report, presented to the Thai Government early in 1959, stressed the need for increased revenues, improved economic administration, and a more careful use of natural resources. An important consequence of the report was the establishment of a new policy for attracting foreign private capital to investment in industry.

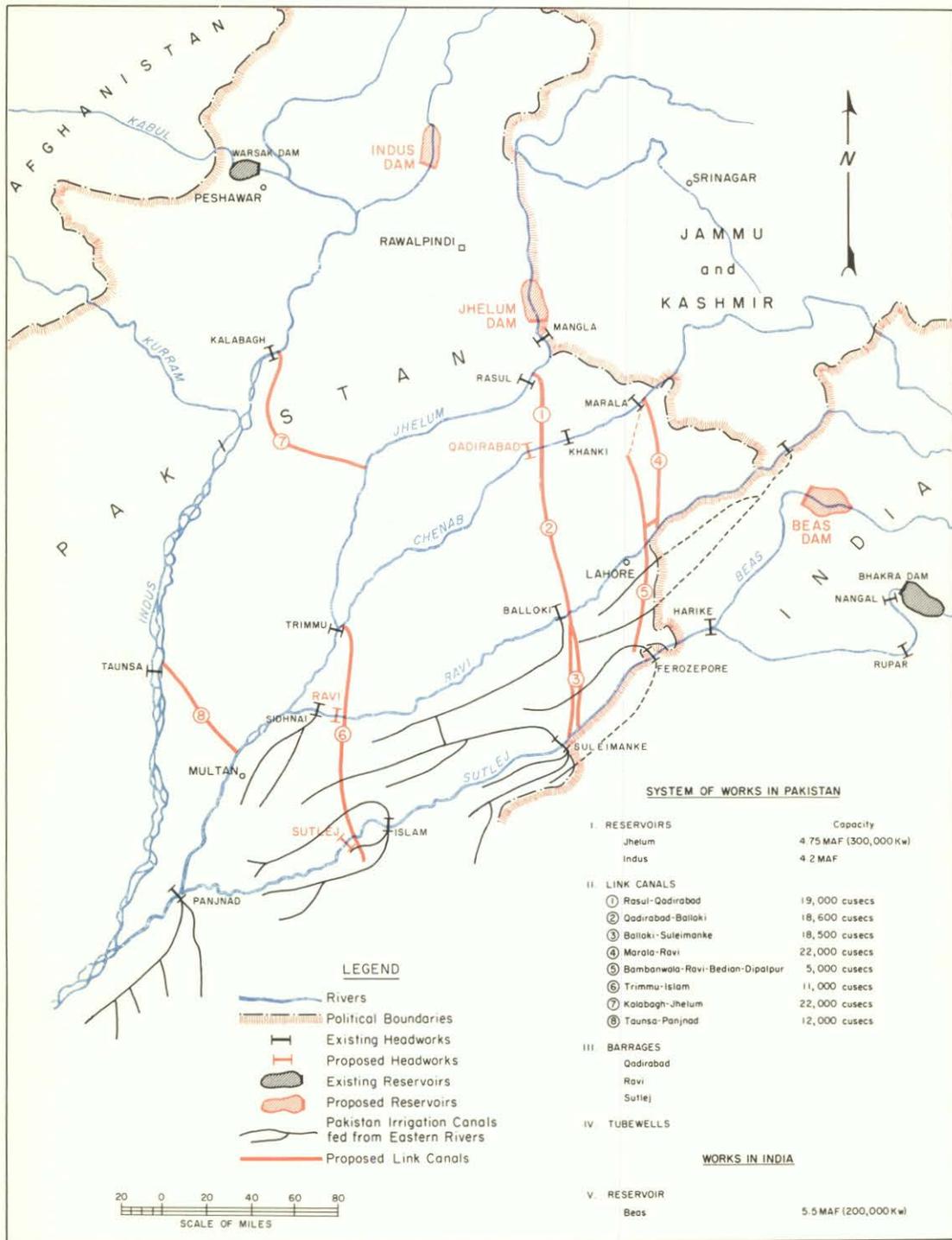
THE INDUS WATER TREATY

A Treaty governing the use of the waters of the Indus system of rivers, entitled "The Indus Water Treaty 1960", was signed on 19th September in Karachi, by Shri Jawaharlal Nehru (Prime Minister of India) on behalf of India and by Field Marshal Mohammad Ayub Khan (President of Pakistan) on behalf of Pakistan. The Treaty was signed on behalf of the World Bank by Mr. W. A. B. Iliff, Vice President of the Bank.

Signature of the Treaty marked the end of a critical and long-standing dispute between India and Pakistan, and opened the way to the peaceful use and development of water resources on which depends the livelihood of some 50 million people in the two countries.

Simultaneously with the signing of the Indus Water Treaty, an international financial Agreement was also executed in Karachi by representatives of the Governments of Australia, Canada, Germany, New Zealand, Pakistan, the United Kingdom and the United States, and of the World Bank. This Agreement created an Indus Basin Development Fund of almost \$900 million to finance the construction of irrigation and other works in Pakistan consequential on the Treaty settlement. The Fund is being financed with the equivalent of about \$640 million to be provided by the participating governments, with a contribution of approximately \$174 million payable by India under the Water Treaty, and with \$80 million out of the proceeds of a World Bank loan to Pakistan.

INDUS BASIN SETTLEMENT PLAN



SYSTEM OF WORKS IN PAKISTAN

I. RESERVOIRS		Capacity
Jhelum	4.75 MAF	(300,000 Kw)
Indus	4.2 MAF	

II. LINK CANALS		
① Rasul-Qadirabad	19,000	cusecs
② Qadirabad-Balloki	18,600	cusecs
③ Balloki-Suleimanke	18,500	cusecs
④ Marala-Ravi	22,000	cusecs
⑤ Bambanwala-Ravi-Bedian-Dipalpur	5,000	cusecs
⑥ Trimmu-Islam	11,000	cusecs
⑦ Kalabagh-Jhelum	22,000	cusecs
⑧ Taunsa-Panjinad	12,000	cusecs

III. BARRAGES		
Qadirabad		
Ravi		
Sutlej		

IV. TUBEWELLS		

V. RESERVOIR		
Beas	5.5 MAF	(200,000 Kw)

LEGEND

- Rivers
- Political Boundaries
- Existing Headworks
- Proposed Headworks
- Existing Reservoirs
- Proposed Reservoirs
- Pakistan Irrigation Canals fed from Eastern Rivers
- Proposed Link Canals

WORKS IN INDIA

V. RESERVOIR		
Beas	5.5 MAF	(200,000 Kw)

The Indus System

The Indus, with its five main tributary rivers, comprises one of the great river systems of the world. Its annual flow is twice that of the Nile and three times that of the Tigris and Euphrates combined; it amounts to almost 170 million acre-feet, or enough water to submerge, to a depth of one foot, the whole area of the State of Texas, or the whole area of France.

All of the six main rivers of the system rise in the high Himalayas. Fed chiefly by melting snow and ice, and by the monsoon rains, they descend through the mountains and the hills on to the gently sloping plains of West Pakistan and northwestern India.

Rainfall is scanty in the plains area, and without the rivers, and the irrigation system, the plains of the Indus basin would be desert. But, with the system of irrigation developed over the last hundred years, the rivers support a population of about 40 million people in Pakistan and about 10 million in India -- approximately one-tenth of the combined population of the two countries. The area of irrigated land is about 30 million acres. This is the largest irrigation system in the world; it feeds a larger area than is irrigated in Egypt and the Sudan by the Nile.

Up to now, the system has been developed entirely from river flow, and without reservoir storage; in consequence, water supplies are precarious to the extent that they are subject not only to the seasonal variations, but also to the year-by-year variations, in the flow of the rivers.

The sharing of the waters of the Indus system has been a matter of dispute for many years. Until the subcontinent was partitioned in 1947 between India and Pakistan, there were conflicting water claims continuously in dispute between the Sind and Punjab provinces of undivided India. Partition drew the border between India and Pakistan right across the Indus system. Pakistan became the downstream riparian, and the head-works of two of the main irrigation canals in Pakistan were left on the Indian side of the border. The sharing of the use of the waters thereupon became an international issue, and has since been a principal cause of strained relations between India and Pakistan.

The Indus Negotiations

In 1951, an article written by Mr. David Lilienthal (former Chairman of the Tennessee Valley Authority) appeared in a popular American magazine. This article suggested that a solution of the dispute might possibly be found if Indian and Pakistan technicians would together work out a comprehensive engineering plan for the development of the waters of the system, on a joint basis, and if the World Bank would undertake to assist in financing the necessary works.

Inspired by this idea, Mr. Eugene R. Black, the President of the World Bank, proposed to the Governments of the two countries that, with the good offices of the Bank, they might be able to resolve their differences on the use of the Indus waters. His suggestion was accepted in March 1952.

There followed two years of study by a technical group consisting of Indian, Pakistan and World Bank engineers, under the direction of General Raymond A. Wheeler. The purpose of this study was an endeavor to prepare a comprehensive plan for the development, on a joint basis, of the water resources of the system. But it became apparent that no progress could be made toward a settlement until there was agreement on the basic issue, namely, how was the use of the waters to be divided between the two countries. Accordingly, in February 1954, General Wheeler was authorized by the Bank Management to make a Bank Proposal for consideration by the two Governments.

The elements of the Bank Proposal were:-

- (a) the waters of the three Eastern Rivers (Ravi, Beas and Sutlej) should be for the use of India;
- (b) the waters of the three Western Rivers (Indus, Jhelum and Chenab) should be for the use of Pakistan;
- (c) there should be a Transition Period, during which Pakistan would construct a system of link canals to transfer water from the Western Rivers to replace the irrigation uses in Pakistan hitherto met from the Eastern Rivers; and
- (d) India should pay the cost of constructing these replacement link canals.

The Bank Proposal was accepted by India, with some reservations, as the basis of a settlement. Pakistan, however, felt unable to accept the Proposal unless it underwent substantial amendment, mainly related to the inclusion of some reservoir storage in the replacement plan to meet

irrigation uses in Pakistan during the critical periods of short flow supplies.

There then followed more than four years of discussion and negotiation in Washington between an Indian Delegation, led by Mr. N. D. Gulhati (Additional Secretary to the Government of India, Ministry of Irrigation and Power) and a Pakistan Delegation, led by Mr. G. Mueenuddin (Secretary to the Government of Pakistan, Ministry of Fuel, Power and National Resources). The Bank was represented by Mr. Iliff, assisted by a small group of technical experts led by General Wheeler.

By May 1959 the main issues standing in the way of a settlement had crystallized, and Mr. Black and Mr. Iliff visited New Delhi and Karachi to hold conversations with the Prime Minister of India and with the President of Pakistan. In the course of this visit, agreement was reached on the general principles on which a water treaty should be based, including the system of works to be constructed as part of the settlement arrangements, and the financial contribution to be made by India.

The drafting of the Treaty began in August 1959, and entailed further negotiations, under the auspices of the World Bank, directed towards securing agreement on the many complicated technical and financial details which had to be specifically incorporated in any final document.

Meanwhile, it had become apparent that the cost of financing the system of works in India and in Pakistan to which the two Governments had agreed as one of the features of an acceptable settlement, was far beyond the capacity of India and Pakistan to meet. The Bank therefore undertook the formulation of a plan envisaging financial participation by a number of other friendly governments interested in promoting the orderly economic development of the Indian subcontinent, and in bringing about a settlement of this troublesome and contentious water dispute. The basis of this participation entailed an independent series of negotiations, and the preparation of the Indus Basin Development Fund Agreement.

The texts of the Indus Water Treaty and of the Indus Basin Development Fund Agreement were finally agreed late in August 1960.

The Treaty In Outline

The Preamble to the Treaty recognizes the need for "fixing and delimiting in the spirit of good will and friendship the rights and obligations" of the Government of India and the Government of Pakistan concerning the use of the waters of the Indus River System.

The Treaty allocates the waters of the three Eastern Rivers -- Ravi, Beas and Sutlej -- to India, with certain exceptions specified in the Treaty. The main exception is that during a Transition Period, while the works are being constructed in Pakistan for the replacement of Eastern River water, India will continue to deliver water to Pakistan from the Eastern Rivers in accordance with a schedule set out in an Annexure to

the Treaty. The Transition Period will be ten years, but may, in certain circumstances be extended by a further one, two or three years.

The waters of the three Western Rivers - Indus, Jhelum and Chenab - are for the use of Pakistan, and India undertakes to let flow for unrestricted use by Pakistan all the waters of these three rivers, subject to Treaty provisions that some of these waters may be used by India in areas upstream of the Pakistan border for the development of irrigation, electric power and certain other uses spelled out in detail in Annexures to the Treaty.

Pakistan undertakes to construct, during the Transition Period, a system of works, part of which will replace, from the Western Rivers, those irrigation uses in Pakistan which have hitherto been met from the Eastern Rivers.

India is to contribute to the Indus Basin Development Fund about £62,000,000 (about \$174 million) in ten equal annual installments.

Both countries recognize their common interest in the optimum development of the rivers, and declare their intention to cooperate by mutual agreement to the fullest possible extent. Meteorological and hydrological observation stations are to be established and the Treaty provides for a complete exchange of information from these stations. It also provides for an exchange of information about proposed river works to enable each party to estimate the effects these works may have on its own situation.

The Treaty sets up a Permanent Indus Commission composed of two persons, one appointed by each of the Governments. The Commission will have general responsibility for implementing the provisions of the Treaty and will seek to reconcile any points of disagreement that may arise. Once every five years the Commission will make a general tour of inspection of all the works on the rivers; and the Commission may, on the request of either Commissioner, at any time visit any particular work in either country. The Commission will report at least once a year to each of the Governments. Each Government undertakes to give to the Commissioner of the other Government the immunities and privileges extended under the Convention on Privileges and Immunities of the United Nations.

Where differences or disputes cannot be resolved by agreement between the Commissioners, the Treaty establishes machinery for resort to a "Neutral Expert" (who is to be a highly-qualified engineer) for a final decision on technical questions, and for resort, in certain circumstances, to a Court of Arbitration.

The Treaty has nine Annexures. The principal matters covered in these Annexures are: Agricultural Use by Pakistan of water from the tributaries of the Ravi River; Agricultural Use by India of water from the Western Rivers; Generation of hydroelectric power by India on the Western Rivers; Storage of water by India on the Western Rivers; Questions that may be referred to a Neutral Expert; Appointment and Procedure of a Court of Arbitration; and Transitional Arrangements relating

to the deliveries of water to Pakistan from the Eastern Rivers during the Transition Period.

The Indus Works Program

The division of waters provided for in the Treaty necessitates the construction of works to transfer water from the three Western Rivers to meet the irrigation uses in Pakistan hitherto met by water from the three Eastern Rivers. The effect of the transfer will be eventually to release the whole flow of the three Eastern Rivers for irrigation development in India.

The system of canals and reservoirs that will actually be constructed will, however, provide further substantial irrigation development, and will develop important hydroelectric potential, in both India and Pakistan. It will also make a much-needed contribution to soil reclamation and drainage in Pakistan, and provide a measure of flood protection in both countries.

The program will be the largest of its kind ever to be undertaken anywhere. The total cost of the program will be approximately the equivalent of \$1,070,000,000 (or £380,000,000 sterling) of which approximately \$870,000,000 (or £310,000,000 sterling) will be spent on works in Pakistan, and approximately \$200,000,000 (or £70,000,000 sterling) on works in India. It calls for the excavation of about 700,000,000 cubic yards of earth, for instance, and will require the use of 2,000,000 tons of cement, 250,000 tons of steel and 1,000,000,000 bricks and tiles.

Works in Pakistan

The following works are to be built in West Pakistan:

1. A system of eight link canals nearly 400 miles in total length, transferring water from the Western Rivers to areas formerly irrigated by the Eastern Rivers. The total area to be thus irrigated is about 5,000,000 acres. The total annual volume of water to be transferred is 14 million acre feet, about equal to the entire yearly flow of the Colorado River in the United States. Three of the canals will each be big enough to carry twice as much water as the average flow of the Potomac River at Washington or ten times as much as the average flow of the Thames at Teddington.

2. Two earth-fill storage dams, one on the Jhelum River (with a live reservoir capacity of 4.75 million acre-feet) and the other on the upper Indus (with a live reservoir capacity of 4.2 million acre-feet). These two reservoirs will provide the water-storage potential to meet on a firm basis the irrigation supplies of the Pakistan canals during critical periods of fluctuating short flow supplies, and, as well, will make possible substantial new irrigation development.

3. Power stations will be installed at the Jhelum Dam with a capacity of more than 300,000 kilowatts.

4. Works to integrate the present canal and river system into the new inter-river link canals. These works include three barrages to carry new canals across rivers, and the remodelling of five existing barrages and of eight existing canals.

5. Tubewells and drainage to overcome waterlogging and salinity in irrigated areas totaling 2,500,000 acres. The number of tubewells to be installed is 2,500.

The general scheme of works was drawn up by an Indus Basin Advisory Board set up by the Government of Pakistan, which in addition to Pakistan irrigation engineers, included representatives of American and British engineering firms, and in consultation with the World Bank. The responsibility for carrying out the works rests with the Water and Power Development Authority of West Pakistan (WAPDA).

The cost of the works in Pakistan will be financed out of the Indus Basin Development Fund.

Works in India

The Indus settlement also envisages the construction of a large earth-fill dam on the Beas River in India. This dam will create a reservoir with a live capacity of 5.5 million acre-feet, and a hydro-electric potential for generating 200,000 kilowatts of power. Together with the Bhakra Reservoir on the Sutlej River (now nearing completion) and with the newly constructed Rajasthan canal system, it will serve as the basis for irrigating large areas in the Punjab and in the Rajasthan desert. The Beas project will not be financed from the Indus Basin Development Fund. The foreign exchange cost will be met by a loan of \$33 million from the United States Government and by a loan of \$23 million from the World Bank. The rupee expenditure will be borne by the Government of India.

The Indus Basin Development Fund

The Indus Basin Development Fund is established by the Indus Basin Development Fund Agreement, which will become effective on the ratification of the Indus Water Treaty by India and Pakistan.

The Agreement provides the Fund with the following resources of foreign exchange:

A. Treaty Contribution by India	£ Stg.	62,060,000
B. Contributions in Grants from each of the following Governments in the amounts shown:		
Australia	£ A	6,965,000
Canada	Can.\$	22,100,000
Germany	DM	126,000,000
New Zealand	£ NZ	1,000,000
United Kingdom	£ Stg.	20,860,000
United States	\$	177,000,000
C. Proceeds of a United States Government Loan to Pakistan	\$	70,000,000
D. Proceeds of a World Bank Loan to Pakistan	\$	80,000,000
E. Contribution by Pakistan	£ Stg.	440,000

All of the above contributions will be freely usable or convertible for purchases in member countries of the Bank and in New Zealand and Switzerland.

In addition, the Fund will be provided with the following resources of Pakistan rupees to finance expenditure in Pakistan currency:

F. A contribution by the United States in Pakistan rupees equivalent to	\$	235,000,000
This contribution will be in the form of grants, or loans, or both, to Pakistan as may be agreed between the United States and Pakistan.		
G. A contribution by Pakistan in Pakistan rupees equivalent to	£ Stg.	9,850,000

The aggregate resources of the Fund in foreign exchange and in Pakistan rupees will be of the order of the equivalent of \$894,000,000 (about £320,000,000 sterling).

The Fund will be administered by the World Bank. As Administrator, the Bank will be responsible under the Fund Agreement for calling up half-yearly contributions to the Fund and for regulating disbursements from the Fund to meet approved expenditures.

The United States Loan

The United States Development Loan Fund loan of \$70 million to Pakistan, of which the proceeds accrue to the Indus Basin Development Fund, will be repaid in Pakistan rupees over a period of 30 years from the date of the first disbursement; interest will be at the rate of 3-1/2% per annum.

The World Bank Loan

The agreement covering the World Bank loan was signed in Karachi on September 19, 1960. The amount of the loan is \$90 million, of which \$80 million will be paid into the Indus Basin Development Fund and the balance of \$10 million will be available to meet interest and other charges on the loan during the first eight years of the period of construction of the works. The loan is to be repaid over a period of 20 years beginning in 1970. Each portion of the loan, as it is made available for disbursement, will carry interest at the rate then in effect for long-term loans being made by the Bank.

Statement of Loans

September 30, 1960

Statement of Loans—September 30, 1960

EXPRESSED IN UNITED STATES CURRENCY

Borrower and guarantor ¹	Loan number	Program or project	Date of loan agreement	Maturities	Interest rate (including commission)	Original principal amount	Loans not yet effective ²	Cancellations, terminations and refundings	Principal repayments to Bank	Effective loans sold or agreed to be sold ³		Effective loans held by Bank	Principal amount disbursed	Undisbursed balance of effective loans ⁴	
										Total sales	Portion matured ⁵				
BURMA	139 BA	Railway development	May 4, 1956	1959-1971	4 3/4%	\$ 5,350,000	\$ —	\$ —	\$ 340,000	\$ —	\$ —	\$ 5,010,000	\$ 4,755,453	\$ 594,547	
BURMA (Guarantor)															
Rangoon Port Commissioners	140 BA	Port development	May 4, 1956	1960-1976	4 3/4%	14,000,000	—	—	284,000	—	—	13,716,000	10,814,660	3,185,340	
TOTAL						19,350,000	—	—	624,000	—	—	18,726,000	15,570,113	3,779,887	
CEYLON															
	101 CE	Electric power development	July 9, 1954	1959-1979	4 3/4%	19,110,000	—	2,610,000	990,000	—	—	15,510,000	14,363,149	2,136,851	
	209 CE	Electric power development	Sept. 17, 1958	1961-1978	5 3/4%	7,400,000	—	—	—	717,000	—	6,683,000	732,012	6,667,988	
TOTAL						26,510,000	—	2,610,000	990,000	717,000	—	22,193,000	15,095,161	8,804,839	
INDIA															
	17 IN	Railway rehabilitation	Aug. 18, 1949	1950-1964	4%	34,000,000	—	1,200,000	8,276,840	17,743,630	13,523,582	6,779,530	32,800,000	—	
	19 IN	Agricultural development	Sept. 29, 1949	1952-1956	3 1/2%	10,000,000	—	2,796,187	2,263,000	4,940,813	4,940,813	—	7,203,813	—	
	23 IN	Electric power development	Apr. 18, 1950	1955-1970	4%	18,500,000	—	1,779,500	1,339,000	5,869,000	3,514,000	9,512,500	16,720,500	—	
	72 IN	Damodar multi-purpose project	Jan. 23, 1953	1956-1977	4 3/4%	19,500,000	—	9,000,000	1,061,000	845,000	338,000	8,594,000	10,500,000	—	
	167 IN	Railway improvements	July 12, 1957	1961-1972	5 3/4%	24,000,000	—	—	—	—	—	24,000,000	24,000,000	—	
	168 IN	Railway improvements	July 12, 1957	1961-1972	5 3/4%	19,110,000	—	—	—	—	—	19,110,000	19,110,000	—	
	169 IN	Railway improvements	July 12, 1957	1961-1972	5 3/4%	11,200,000	—	—	—	—	—	11,200,000	11,200,000	—	
	170 IN	Railway improvements	July 12, 1957	1961-1972	5 3/4%	35,700,000	—	—	—	—	—	35,700,000	35,700,000	—	
	203 IN	Electric power development	July 23, 1958	1961-1978	5 3/4%	25,000,000	—	—	—	262,810	—	24,737,190	16,879,971	8,120,029	
	207 IN	Railway improvements	Sept. 16, 1958	1963-1979	5 3/4%	85,000,000	—	—	—	2,003,000	—	82,997,000	85,000,000	—	
	223 IN	Electric power development	Apr. 8, 1959	1965-1984	5 3/4%	25,000,000	—	—	—	—	—	25,000,000	5,831,538	19,168,462	
	233 IN	Railway improvements	July 15, 1959	1963-1979	6%	50,000,000	—	—	—	—	3,762,000	46,238,000	50,000,000	—	
	262 IN	Railway improvements	July 29, 1960	1964-1980	5 3/4%	70,000,000	70,000,000	—	—	—	Note 3	—	—	—	
INDIA (Guarantor)															
Indian Iron & Steel Company	71 IN	Iron and steel expansion	Dec. 18, 1952	1959-1967	4 3/4%	31,500,000	—	1,480,000	—	3,137,000	700,000	700,000	26,183,000	28,660,138	1,359,862
Indian Iron & Steel Company	159 IN	Steel expansion	Dec. 19, 1956	1960-1967	5%	20,000,000	—	—	—	1,032,000	1,032,000	18,968,000	16,750,196	3,249,804	
Tata Group of Hydro Companies	106 IN	Electric power development	Nov. 19, 1954	1958-1974	4 3/4%	16,200,000	—	2,250,000	—	1,364,000	1,364,000	12,586,000	12,985,283	964,717	
Tata Group of Hydro Companies	164 IN	Electric power development	May 29, 1957	1960-1975	5 3/4%	9,800,000	—	—	202,000	—	—	9,598,000	8,874,505	925,495	
I. C. I. C. I.	109 IN	Development of private industry	Mar. 14, 1955	1961-1969	4 3/4%	10,000,000	—	—	—	—	—	10,000,000	6,776,582	3,223,418	
I. C. I. C. I.	232 IN	Development of private industry	July 15, 1959	1962-1969	Note ⁶	10,000,000	—	—	—	200,000	—	9,800,000	71,719	9,928,281	
The Tata Iron and Steel Co., Ltd.	146 IN	Expansion of steel production facilities	June 26, 1956	1959-1971	4 3/4%	75,000,000	—	—	2,410,000	2,355,000	2,355,000	70,235,000	75,000,000	—	
The Tata Iron and Steel Co., Ltd.	182 IN	Expansion of steel production facilities	Nov. 20, 1957	1960-1971	6%	32,500,000	—	—	—	15,000,000	—	17,500,000	32,500,000	—	
Air-India International Corp.	161 IN	Purchase of aircraft	Mar. 5, 1957	1963-1965	5 1/2%	5,600,000	—	—	—	—	—	5,600,000	5,600,000	—	
Calcutta Port Commissioners	198 IN	Port improvements	June 25, 1958	1963-1978	5 3/4%	29,000,000	—	—	—	—	1,113,000	27,887,000	7,379,309	21,620,691	
Trustees of the Port of Madras	199 IN	Port improvements	June 25, 1958	1963-1978	5 3/4%	14,000,000	—	—	—	592,000	—	13,408,000	2,782,392	11,217,608	
TOTAL						680,610,000	70,000,000	18,505,687	18,688,840	57,782,253	27,767,395	515,633,220	512,325,946	79,778,367	
JAPAN (Guarantor)															
Japan Development Bank	89 JA	Electric power (Kansai)	Oct. 15, 1953	1957-1973	5%	21,500,000	—	922,429	798	5,065,773	3,551,773	15,511,000	20,577,571	—	
Japan Development Bank	196 JA	Electric power (Kansai)	June 13, 1958	1962-1983	5 3/4%	37,000,000	—	—	—	1,070,000	—	35,930,000	34,833,389	2,166,611	
Japan Development Bank	90 JA	Electric power (Kyushu)	Oct. 15, 1953	1957-1973	5%	11,200,000	—	749,680	63,627	2,553,694	1,774,694	7,832,999	10,450,320	—	
Japan Development Bank	91 JA	Electric power (Chubu)	Oct. 15, 1953	1957-1973	5%	7,500,000	—	1,043,611	147,389	1,529,000	1,071,000	4,780,000	6,456,389	—	
Japan Development Bank	205 JA	Electric power (Chubu)	Sept. 10, 1958	1962-1983	5 3/4%	29,000,000	—	—	—	682,000	—	28,318,000	17,423,144	11,576,856	
Japan Development Bank	133 JA	Steel plate mill (Yawata)	Oct. 25, 1955	1958-1970	4 3/4%	5,300,000	—	171,142	—	1,528,000	960,000	3,600,858	5,128,858	—	
Japan Development Bank	239 JA	Steel production facilities (Yawata)	Nov. 12, 1959	1962-1975	6%	20,000,000	—	—	—	2,055,000	—	17,945,000	13,231,160	6,768,840	
Japan Development Bank	136 JA	Industrial projects	Feb. 21, 1956	1958-1971	4 3/4%	8,100,000	—	539,555	463,445	2,118,000	1,190,000	4,979,000	7,560,445	—	
Japan Development Bank	157 JA	Steel strip mill (Kawasaki)	Dec. 19, 1956	1960-1971	5%	20,000,000	—	—	—	3,300,991	618,000	16,699,009	20,000,000	—	
Japan Development Bank	188 JA	Steel production facilities (Kawasaki)	Jan. 29, 1958	1960-1971	5 3/4%	8,000,000	—	—	—	1,531,000	238,000	6,469,000	8,000,000	—	
Japan Development Bank	200 JA	Electric power (Hokuriku)	June 27, 1958	1961-1983	5 3/4%	25,000,000	—	—	—	936,000	—	24,064,000	25,000,000	—	
Japan Development Bank	201 JA	Steel production facilities (Sumitomo)	July 11, 1958	1961-1973	5 3/4%	33,000,000	—	—	—	3,003,000	—	29,997,000	27,696,970	5,303,030	
Japan Development Bank	204 JA	Steel production facilities (Kobe)	Aug. 18, 1958	1960-1973	5 3/4%	10,000,000	—	—	7,000	1,348,810	250,000	8,644,190	10,000,000	—	
Japan Development Bank	206 JA	Steel production facilities (Nippon Kokan)	Sept. 10, 1958	1960-1973	5 3/4%	22,000,000	—	—	—	2,913,000	—	19,087,000	19,826,915	2,173,085	
Japan Development Bank	220 JA	Electric power (Mihoro)	Feb. 17, 1959	1974-1983	5 3/4%	10,000,000	—	—	—	—	—	10,000,000	8,368,010	1,631,990	
Japan Development Bank	238 JA	Steel production facilities (Fuji)	Nov. 12, 1959	1962-1975	6%	24,000,000	—	—	—	2,566,000	—	21,434,000	17,621,060	6,378,940	
Land Development Corporation	158 JA	Land reclamation	Dec. 19, 1956	1959-1971	5%	4,300,000	—	—	255,000	427,000	—	3,618,000	3,823,075	476,925	
Aichi Irrigation Public Corp.	173 JA	Multi-purpose project	Aug. 9, 1957	1961-1977	5 3/4%	7,000,000	—	2,100,000	—	721,000	—	4,179,000	4,258,926	641,074	
Nihon Doro Kodan	248 JA	Highway construction	Mar. 17, 1960	1963-1983	6 1/4%	40,000,000	—	—	—	1,630,952	—	38,369,048	7,464,858	32,535,142	
TOTAL						342,900,000	—	5,526,417	937,259	34,979,220	9,653,467	301,457,104	267,721,090	69,652,493	

STATEMENT OF LOANS—SEPTEMBER 30, 1960 (continued)

EXPRESSED IN UNITED STATES CURRENCY														
Borrower and guarantor ¹	Loan number	Program or project	Date of loan agreement	Maturities	Interest rate (including commission)	Original principal amount	Loans not yet effective ²	Cancellations, terminations and refundings	Principal repayments to Bank	Effective loans sold or agreed to be sold ³		Effective loans held by Bank	Principal amount disbursed	Undisbursed balance of effective loans ⁴
										Total sales	Portion matured ⁵			
MALAYA (Guarantor)														
Central Electricity Board	210 MA	Electric power development	Sept. 22, 1958	1964-1983	5¾%	\$ 35,600,000	\$ —	\$ —	\$ —	\$ 1,280,000	\$ —	\$ 34,320,000	\$ 3,606,944	\$ 31,991,056
PAKISTAN														
	60 PAK	Railway rehabilitation	Mar. 27, 1952	1954-1967	4¾%	27,200,000	—	—	10,660,400	935,600	935,600	15,604,000	26,708,788	491,212
	62 PAK	Agricultural development	June 13, 1952	1954-1959	4¾%	3,250,000	—	—	2,253,000	997,000	997,000	—	3,250,000	—
	180 PAK	Railway improvements	Oct. 18, 1957	1961-1973	6%	31,000,000	—	—	—	850,000	—	30,150,000	23,494,329	7,505,671
	241 PAK	Railway improvements	Nov. 30, 1959	1963-1975	6%	12,500,000	—	—	—	949,000	—	11,551,000	—	12,500,000
	266 PAK	Indus Basin development project	Sept. 19, 1960	1970-1990	Note ⁶	90,000,000	90,000,000	—	—	—	—	—	—	—
PAKISTAN (Guarantor)														
Sui Gas Transmission Co.	99 PAK	Natural gas pipeline	June 2, 1954	1956-1974	4¾%	14,000,000	—	—	574,000	1,806,000	1,806,000	11,620,000	14,000,000	—
Karachi Electric Supply Corp.	120 PAK	Electric power development	June 20, 1955	1957-1970	4¾%	13,800,000	—	23,415	448,400	2,049,600	2,049,600	11,278,585	13,776,585	—
Karachi Electric Supply Corp.	191 PAK	Electric power development	Apr. 23, 1958	1963-1978	5½%	14,000,000	—	—	—	198,000	—	13,802,000	2,458,994	11,541,006
Karachi Electric Supply Corp.	234 PAK	Electric power development	Aug. 13, 1959	1962-1974	6%	2,400,000	—	—	—	330,000	—	2,070,000	940,237	1,459,763
Karnaphuli Paper Mills, Ltd.	125 PAK	Construction of paper and pulp mill	Aug. 4, 1955	1956-1970	4¾%	4,200,000	—	—	245,000	775,000	775,000	3,180,000	4,200,000	—
Trustees of the Port of Karachi	126 PAK	Port construction and development	Aug. 4, 1955	1960-1980	4¾%	14,800,000	—	—	158	216,842	216,842	14,583,000	10,318,773	4,481,227
P. I. C. I. C.	185 PAK	Development of private industry	Dec. 17, 1957	1962-1972	5¾%	4,200,000	—	—	—	—	—	4,200,000	2,873,293	1,326,707
P. I. C. I. C.	236 PAK	Development of private industry	Sept. 25, 1959	1962-1969	Note ⁶	10,000,000	—	—	—	—	—	10,000,000	126,909	9,873,091
		TOTAL				241,350,000	90,000,000	23,415	14,180,958	9,107,042	6,780,042	128,035,585	102,147,908	49,178,677
PHILIPPINES (Guarantor)														
National Power Corporation	183 PH	Electric power development	Nov. 22, 1957	1960-1982	6%	21,000,000	—	2,500,000	—	987,000	—	17,513,000	16,617,620	1,882,380
THAILAND														
	35 TH	Railway rehabilitation	Oct. 27, 1950	1954-1966	3¾%	3,000,000	—	—	1,197,000	189,000	189,000	1,614,000	3,000,000	—
	36 TH	Irrigation project	Oct. 27, 1950	1956-1971	4%	18,000,000	—	—	4,144,000	796,000	—	13,060,000	18,000,000	—
	37 TH	Port construction and development	Oct. 27, 1950	1954-1966	3¾%	4,400,000	—	—	1,758,000	275,000	275,000	2,367,000	4,400,000	—
THAILAND (Guarantor)														
State Railway of Thailand	128 TH	Railway rehabilitation	Aug. 9, 1955	1958-1970	4¾%	12,000,000	—	—	779,000	1,105,000	1,105,000	10,116,000	11,907,671	92,329
Port Authority of Thailand	151 TH	Port construction and development	Oct. 12, 1956	1958-1971	4¾%	3,400,000	—	140,922	282,078	184,000	184,000	2,793,000	3,259,078	—
Yanhee Electricity Authority	175 TH	Multi-purpose project	Sept. 12, 1957	1963-1982	5¾%	66,000,000	—	—	—	—	—	66,000,000	21,428,666	44,571,334
		TOTAL				106,800,000	—	140,922	8,160,078	2,549,000	1,753,000	95,950,000	61,995,415	44,663,663
GRAND TOTAL						\$1,474,120,000	\$160,000,000	\$29,306,441	\$43,581,135	\$107,401,515	\$45,953,904	\$1,133,830,909	\$995,080,197	\$289,733,362

