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REPORT AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED LOAN
TO
THE REPUBLIC OF INDONESIA
FOR A
NINTH POWER PROJECT

May 23, 1980

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CURRENCY EQUIVALENTS

Currency Unit - Rupiah (Rp)	
US\$1.00	= Rp 625
Rp 100	= US\$0.160
Rp 1 million	= US\$1,600

UNITS AND EQUIVALENTS

1 metric ton	= 1,000 kilograms (kg)
1 liter (l)	= 0.0063 barrels
1 kilometer (km)	= 0.6215 miles (mi)
1 kilovolt (kV)	= 1,000 volts (V)
1 megavolt-ampere	= 1,000 kilovolt-amperes (kVA)
1 kilovolt-ampere	= 1,000 volt-ampere (VA)
1 megawatt (MW)	= 1,000 kilowatts (kW)
1 gigawatt hour (GWh)	= 1 million kilowatt hours (kWh)

ABBREVIATIONS AND ACRONYMS

BAPPENAS	- National Planning Agency
EHV	- Extra High Voltage
MM	- Merz and McLellan of U.K.
MONENCO	- Montreal Engineering Company of Canada
PCR	- Preece, Cardew and Rider of U.K.
PLN	- Perusahaan Umum Listrik Negara - National Power Authority
PERTAMINA	- National Oil Company
REPELITA	- Five Year Development Plan
SOFRELEC	- French Engineering and Management Consultants
USAID	- US Agency for International Development
Wilayah	- PLN's Operational Region

PLN'S FISCAL YEAR (FY)

April 1 - March 31

GOVERNMENT OF INDONESIA'S FISCAL YEAR

April 1 - March 31

INDONESIA

NINTH POWER PROJECT

LOAN AND PROJECT SUMMARY

Borrower: Republic of Indonesia

Beneficiary: Perusahaan Umum Listrik Negara (PLN), the National Electricity Authority

Amount: \$253 million equivalent.

Terms: 20 years, including 5 years of grace, with interest at 8.25% p.a.

Onlending Terms: The proceeds of the loan will be made available to PLN on the same terms as the Bank loan. The Government would bear the foreign exchange risk.

Project

Description: The project would expand PLN's urgently needed base load generating capacity in Java. It would provide for:

- (a) the installation of the second 400 MW generating set (Unit No. 2) at Suralaya with coal handling and ash disposal facilities for Unit No. 1 and Unit No. 2;
- (b) the construction of the 500 kV transmission lines from Suralaya to Semarang with 500 kV substations at Suralaya, Jakarta, Bandung and Semarang;
- (c) the provision of a simulator at Suralaya for the training of the operating staff;
- (d) the establishment of a Java system control center at Jakarta; and
- (e) the consulting services including training.

No engineering risk is foreseen in the type of work involved in the project. Delays in land acquisition may occur. However, appropriate measures have been included in the project to prevent them. There is a possibility that coal may not be available from the Bukit Asam by the expected commission date of the Suralaya station, in which case it will be necessary to use fuel oil in the plant and the project has been designed to permit it.

<u>Estimated Costs:/1</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
	----- \$ million -----		
(a) <u>Suralaya Unit No. 2</u>			
Site preparation, piling and civil works	26.5	-	26.5
Steel work and cladding	2.6	3.0	5.6
Steam generator and ancillary plant	5.4	78.9	84.3
Turbine generator and ancillary plant	3.8	35.6	39.4
Ash and dust plant	0.8	11.1	11.9
Station electrical and substations equipment and miscellaneous	5.7	10.8	16.5
Station coal handling	2.3	12.7	15.0
Operator training	0.8	4.0	4.8
Engineering, construction and administration	4.3	7.7	12.0
<u>Base Cost</u>	<u>52.2</u>	<u>163.7</u>	<u>215.9</u>
Physical contingencies	3.3	7.3	10.6
Price contingencies	20.5	34.8	55.3
<u>Total Cost</u>	<u>76.0</u>	<u>205.8</u>	<u>281.8</u>
(b) <u>Extra High Voltage (EHV) Lines</u>			
Overhead lines	97.2	110.3	207.5
Substations	24.6	45.1	69.7
Java Control Center	1.2	11.6	12.8
Engineering, Construction Supervision and Training	1.0	8.5	9.5
<u>Base Cost</u>	<u>124.0</u>	<u>175.5</u>	<u>299.5</u>
Physical contingencies	5.0	12.5	17.5
Price contingencies	51.0	51.0	102.0
<u>Total Cost</u>	<u>180.0</u>	<u>239.0</u>	<u>419.0</u>
<u>GRAND TOTAL</u>	<u>256.0</u>	<u>444.8</u>	<u>700.8</u>

/1 Cost estimates include taxes on civil works and locally purchased equipment.

Financing Plan:

Source	<u>Foreign cost</u>	<u>Local cost</u>	<u>Total</u>
	----- US\$	million -----	
IBRD	253.0	-	253.0
ADB	139.0 /a	-	139.0 /a
Export credits or Government funds	46.0	-	46.0
Government	-	256.0	<u>256.0</u>
			<u>694.0 /b</u>

Estimated Disbursements:

<u>Bank FY</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Annual	40.0	62.0	74.0	48.0	26.0	3.0
Cumulative	40.0	102.0	176.0	224.0	250.0	253.0

Rate of Return: About 12%.

Staff Appraisal Report: No. 2694-IND, dated March 20, 1980.

/a ADB approved a loan of \$83.6 million in November 1979; the balance is expected to be committed in CY80.

/b This total excludes \$6.8 million provided under Ln 1365-IND for the consultant services for the EHV component of the project.

REPORT AND RECOMMENDATION OF THE PRESIDENT
OF THE INTERNATIONAL BANK FOR RECONSTRUCTION
AND DEVELOPMENT TO THE EXECUTIVE DIRECTORS
ON A PROPOSED LOAN TO THE REPUBLIC OF INDONESIA
FOR A NINTH POWER PROJECT

1. I submit the following report and recommendation on a proposed loan to the Republic of Indonesia for the equivalent of \$253 million to help finance a Ninth Power Project. The loan would have a term of 20 years, including five years of grace, with interest at 8.25% per annum. The proceeds of the loan would be onlent to Perusahaan Umum Listrik Negara (PLN), the National Electricity Authority, on the same terms as those of the proposed loan. The foreign exchange risk will be borne by the Government.

PART I - THE ECONOMY /1

2. A basic economic report, "Indonesia: Growth Patterns, Social Progress and Development Prospects" (No. 2093-IND, dated February 20, 1979) was distributed to the Executive Directors on February 26, 1979. An updating country economic memorandum, "Indonesia: Long-Run Development and Short-Run Adjustment" (No. 2788-IND, dated February 20, 1980) was recently distributed to the Executive Directors.

Background

3. The Republic of Indonesia is an archipelago nation of more than 13,000 islands covering a land area in excess of two million sq km. With an estimated population of 140 million (end of 1979), it is the world's fifth most populous nation. The population density exceeds 600 persons per sq km in Java, where 63% of the population live, but averages less than 30 persons per sq km in the rest of the country. Over 82% of the population lives in rural areas; and agriculture accounts for about 62% of total employment, though only slightly over 30% of GDP. GNP per capita is estimated at \$360./2

4. Over the last thirteen years, Indonesia's economic, social and institutional development has surpassed that of most other heavily-populated, poor countries. Although the new government in 1966 inherited a severely dislocated and bankrupt economy, it rapidly brought hyperinflation under control, established full convertibility of the currency and regained the confidence of Western creditors. During the First Development Plan period, Repelita I (1969/70 to 1973/74), a major rehabilitation of the neglected infrastructure was initiated, the investment rate was doubled to 18% of GDP and an average real GDP growth rate of over 9% p.a. was achieved. During Repelita II (1974/75 to 1978/79), economic activity was fueled by a dramatic

/1 Substantially unchanged from the President's Report on the National Agricultural Research Project (No. P-2776-IND), circulated under cover of R80-85 (IDA/R80-60) dated April 17, 1980, and approved by the Executive Directors on May 6, 1980.

/2 1978 figures. World Bank Atlas, 1979.

increase in foreign exchange resources resulting from the world commodity boom, the quadrupling of oil prices and expanded public and private foreign capital inflows. Net oil exports increased from \$640 million in 1973 to \$4.0 billion /1 in 1978, which enabled real Government expenditure to increase by 20% annually and encouraged a 7% average annual GDP growth rate. Not all sectors have shared in this growth. In particular, the performance of nonextractive exports, with some exceptions, such as coffee and palm oil, has been disappointing; rubber exports, for example, have stagnated since 1971, and manufactured exports are only now giving any indication of sustained growth. In addition, there has been little evidence, despite increased foreign exchange resources, that the post-oil future of the economy has been assured through a broad-based expansion of the industrial sector.

Social Developments

5. While there is general agreement that overall growth in the economy - an annual rate of almost 8% over ten years /2 - has been impressive, views diverge on the degree to which the poor have shared in this increased income. The National Household Surveys for 1970 and 1976 indicate that while overall income disparities almost certainly widened between those two dates, there was nevertheless a considerable improvement in the consumption of all income groups, with real consumption expenditure of the bottom 40% of the population probably increasing at between 3.5% and 5.5% annually. Growth in per capita income was generally higher in Java than in the Other Islands and higher in urban than in rural areas.

6. Employment growth has been rapid in the 1970s (an average of 4.7% p.a. between 1971 and 1976, compared with a total population growth of 2%). However, it is likely that there has been a slight increase in the level of open unemployment due to a greater rate of growth of working age population than of total population and to increased participation rates (50% in September 1971, 55% in October 1976). Most (54%) of the increased employment during this period was absorbed in nonagricultural activities, resulting in a decline in the share of agricultural employment from 66% to 62%. Within the nonagricultural sector, employment increases largely resulted from proliferating small-scale enterprises in the manufacturing and service sectors, where productivity is generally extremely low.

7. Government-sponsored programs deserve at least part of the credit for many of the major advances of the last decade. In particular, the BIMAS and INMAS rice intensification schemes and the Government public works (INPRES) programs have demonstrated the Government's capacity to marshal resources in pursuit of its social goals. Between 1971/72 and 1976/77 real expenditures increased at an annual average rate of 37% on Health and Family Planning, 45% on Education, and 31% on Housing and Water Supply, resulting in

/1 Includes Liquified Natural Gas (\$225 million).

/2 Gross Domestic Income grew even faster; at about 9.5% p.a., due to improvements in the terms of trade.

the rapid development of social infrastructure. For example, Indonesia's health centers, which totalled 1,058 in 1969, were increased to 4,029 by 1977; between 1973 and 1978, 31,000 primary schools were constructed and primary school enrollment was expected to reach 85% in 1979, up from 60% in 1974. Perhaps the most significant achievement of the First and Second Development Plans has been the success of the National Family Planning Program, established in 1970, in reducing the overall population growth rate to below 2%. Fertility rates have fallen by almost 20% on Java and Bali, where almost 30% of married women in the reproductive age group are practicing modern methods of contraception.

8. Despite these advances, however, the magnitude of the poverty problem, the lack of food security, and the inadequacy of basic public services remain overwhelming. In 1976, an estimated 50 million people, over one third of Indonesia's total population, spent less than \$90 a year (at 1976 prices and exchange rate) and a large proportion of the labor force was seriously underemployed in both rural and urban areas. Moreover, the continued prevalence of numerous debilitating diseases, which often stem directly from nutritional deficiencies and unsanitary living conditions, results in extremely low life expectancy at birth and a very high mortality rate. Life expectancy at birth in Indonesia is only 48 years (most recent estimate) compared with 60 years in the Philippines and 67 years in Malaysia. For the same countries, infant mortality rates are respectively 126, 65 and 35 per thousand. Every year in Indonesia approximately 600,000 infants less than one year old die. These statistics reflect both low incomes and the underlying inadequacy of basic public services. Over 100 million Indonesians remain without access to safe water or sanitary excreta disposal; there are only 6 physicians and 6 nurses per 100,000 of the population; and almost 40% of the adult population are illiterate.

Development Strategy in the Nonoil Economy

9. The rehabilitation of infrastructure which has made possible the impressive growth rate over the last decade and which has underpinned past development policy must now give way to a new strategy as the tasks of rehabilitation is now essentially completed. The Government has recognized this in preparing the Third Development Plan, Repelita III (1979/80 to 1983/84). Three primary goals have been specified: a more equitable distribution of the benefits of growth, a high growth rate, and national stability. A high priority must now be given to the industrial sector since neither agriculture nor services can be expected to absorb the large projected increases in the labor force (1.4 million p.a. up to the year 2000) and simultaneously ensure rising real wage rates.

10. The prospects for an outward-looking labor-intensive industrial development have been improved by some of the policy actions taken in recent months. The most dramatic of these was the devaluation of the rupiah from Rp 415 to Rp 625 per US dollar on November 15, 1978. Its purpose was to reverse some of the adverse relative price changes in the economy that had occurred earlier in the decade and thus to encourage a shift of resources away from the nontraded goods sector towards labor-intensive import substi-

tution and export industries. In support of the aims of Repelita III and the devaluation, the Government has also simplified the investment licensing process and exporting procedures and introduced a system of export certificates - tax rebates - to encourage exporters. A new corporation tax law was promulgated in March 1979 providing greater incentives to entrepreneurs, particularly those in smaller-scale ventures and those using the services of a public accountant. On the monetary side a start has been made in making the commercial banking system more responsive to the needs of small-scale enterprises.

11. A detailed industrial development strategy has not yet been articulated, although the Repelita III document acknowledges that private investment will be relied upon as the primary means of industrial job creation. Despite the improvements outlined above, it is not yet clear that private entrepreneurs will be able or willing to invest sufficiently in those sectors most conducive to job creation and income growth. In particular there are two issues that require urgent attention. First, although some improvements have been made, many entrepreneurs still complain about cumbersome administrative procedures and controls associated with the highly centralized government bureaucracy. Second, the high level of effective protection, which has increased over the last year, may encourage the misallocation of scarce capital and managerial resources. Indonesia's potential for manufactured exports is considerable but it is unlikely that these exports will ever provide the stimulus to growth that has been enjoyed by other smaller East Asian countries. In the medium term it is more likely that Indonesia's "engine of growth" will be its own large domestic market. However, it is important that barriers to trade be reduced in order to provide appropriate market signals and to encourage those sectors in which a genuine comparative advantage exists. The formal tariff structure is probably less significant than the high administrative costs and delays associated with importing. The important improvements made in exporting procedures over the last year have demonstrated that rapid changes can be made in this area. Similar advances on the import side would improve resource allocation by reducing the proliferation of domestic industries that have little prospect of ever attaining international competitiveness. In many countries devaluation has been accompanied by a rationalization of the tariff structure. Although this has not yet occurred in Indonesia, the recent increases in oil revenues have, by substantially increasing foreign exchange reserves, provided an additional opportunity.

Short-Run Stability and Long-Run Development

12. Medium-term prospects for the balance of payments and the Government budget have improved fundamentally in recent months. Three factors - the devaluation, an improvement in the nonoil terms of trade, and the oil price rise - have been responsible. The effect of the devaluation on the external accounts is still not clear although there is some evidence of significant supply-side response in some sectors. The improvement in the balance of payments that followed immediately after November 1978 was due less to the devaluation than to favorable developments in the world prices of

primary commodities./¹ As a result, Indonesia achieved an external surplus of over \$700 million in 1978/79. Most important, however, has been the increase in the export price of crude oil to \$32 a barrel in January 1980. This is expected to generate additional oil and LNG export earnings of \$3.1 billion in 1979/80. Budget revenues have also benefitted from these developments. Since over half of the Government's revenues were denominated in foreign exchange, an immediate effect of the devaluation was to dramatically increase budgetary revenues in terms of rupiah. As a result of the oil price increases, budget revenues from oil and LNG are predicted to rise from \$3.7 billion in 1978/79 to \$8.9 billion in 1979/80.

13. These favorable developments, while clearly presenting a valuable opportunity to undertake development programs and stimulate private industrial enterprise, may also present serious problems of short-run price and monetary stability. This potential conflict could be seen, for example, in the measures taken by the Government to ameliorate the inflationary effects of the devaluation, which, while successful in keeping prices under control, sometimes tended to counteract the desired effects of the devaluation. Notable here was the tight control exerted over private sector credit creation which may have limited investment in those export sectors that the devaluation was designed to encourage. In addition, the increased foreign exchange revenue presents potentially difficult problems of monetary management. The manner in which Indonesia increases its capacity to absorb imports effectively will be a primary determinant of Indonesia's future growth prospects.

Domestic Resource Mobilization and External Capital Flows

14. In the immediate future, the availability of foreign exchange will not be a constraint on development due to both the increase in export revenues and the consequent improvement in creditworthiness. (In 1979 Indonesia's debt-service ratio has fallen from 18% to 16%)./² In the medium and long run, however, the situation is less clear, due to uncertainty about how quickly Indonesia will be able to absorb its sudden increase in wealth, and because projections of future export revenues remain highly speculative. It is therefore important that increased efforts be made to mobilize domestic financial resources. The Government's concern with this issue is demonstrated by its stated intention of eliminating budget subsidies on consumer goods. To this end, domestic prices of all oil products were increased by an average of about 40% in April and May 1979 but the budget savings have since been nullified by increases in international prices. On May 1, 1980, the Government therefore raised domestic oil prices by a further 50% and thus partially compensated for increases in international prices of oil. There is considerable scope for improving the nonoil tax base, which accounts for less than 45% of

¹ The nonoil terms of trade improved by 42% between October 1978 and July 1979.

² Ratio of debt service payments to commodity export earnings, with oil and gas on a net basis.

total revenues. For example, taxes on personal and business incomes amount to only 3% of GNP, and taxes on consumption, 2.5% of GNP. Expanding the tax base, eliminating loopholes, and improving administration, are the obvious means of securing a larger and more equitable tax burden. The mobilization of private sector financial resource is hindered at present by the absence of attractive long-term financial instruments, but the Government's encouragement of the fledgling Jakarta Stock Exchange will hopefully result in an important source of domestic funds in the medium term.

15. The Inter-Governmental Group on Indonesia (IGGI) remains the principal source of external capital, including Official Development Assistance (ODA), to the country. The Bank's 1979 basic economic report on Indonesia recommended that total ODA reach at least \$1.93 billion in 1979, of which at least 70% should be on concessional and semi-concessional terms. This was achieved. The Bank's recent economic memorandum on Indonesia (dated February 20, 1980) recommended a level of assistance of \$2.1 billion for 1980, which would represent no increase in real terms over the recommended and actual amount of ODA for 1979. At the meeting of the IGGI in May 1980, the indication of probable commitments in 1980 made by bilateral and multilateral IGGI members amounted to almost this level.

PART II - BANK GROUP OPERATIONS IN INDONESIA /1

16. As of March 31, 1980, Indonesia had received 47 IDA credits totalling \$901.8 million, and 46 Bank loans amounting to \$2,691.0 million. IFC investments totalled \$62.2 million. The share of the Bank Group in Indonesia's total (disbursed) external debt outstanding at the end of 1977 was about 8%, and the share of debt service about 1.8%. By the end of 1978, these ratios are estimated to have increased to around 8.3% and 3%, respectively. Annex II contains a summary of IDA credits, Bank loans and IFC investments as of March 31, 1980, as well as notes on the execution of ongoing projects.

17. During Repelita I, and in line with the objectives of this First Plan, a high proportion of Bank Group lending was directed toward the rehabilitation of deteriorated infrastructure and production facilities, meeting the critical shortage of skilled manpower, and technical assistance needed for pre-investment studies and project execution. As the focus of the Government's policy shifted during Repelita II towards expansion of productive capacity in the agriculture, transportation and power sectors, as well as improvement in the quality and delivery of basic public services, the thrust of our lending changed to focus on these objectives. Given the critical importance of agriculture (including transmigration) for employment, food security and exports, over one third of Bank Group-supported projects have been in this

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sector. In addition, loans and credits have been extended to virtually all other sectors of the economy, including fertilizer production and distribution, transportation, education, urban development, water supply, rural development, nutrition, industrial development financing (including small industry development), power, telecommunications, population and technical assistance.

18. Indonesia is currently in the process of implementing its Third Five-Year Plan, Repelita III. As noted in Part I above, this document, while stressing the need for continued high growth and stability, departs from previous Plans by placing special emphasis on income distribution and poverty alleviation. This focus, which is fully in line with the conclusions of the Basic Economic Report, in turn requires greater attention to employment generation and improvements in basic public services. While the Government's agricultural programs are expected to generate significant employment opportunities, the long-term solution to Indonesia's employment problem is primarily dependent on the articulation and implementation of a coherent labor-intensive industrialization strategy. To support this effort the Bank plans to significantly expand its hitherto modest involvement in this sector. As part of this initiative, an operation designed to support several industrial DEFCs through an umbrella institution (most probably Bank Indonesia) is at an advanced stage of preparation, and projects to support export processing zones and wood processing, and to further expand Bank assistance to small-scale enterprise are at various stages of identification and preparation. A comprehensive program of economic work in the industrial sector is being initiated to provide the necessary understandings and backup for this expanded operation.

19. Outside industry, no major shifts in the balance of Bank Group lending are expected. Given the importance of rice production, irrigation will continue to absorb a substantial portion of Bank Group agricultural lending; however, the Bank also plans to take further initiatives to promote secondary food crops. For example, the recently approved Second Agriculture Extension and the Second Agriculture Research, and the proposed Second Seeds projects, will give greater emphasis to these crops. Continued support for the provision of basic services (population, education, health, nutrition, urban development and water supply) as well as the traditional sectors (power and transport) is also anticipated. Since it is clear that the achievement of the Government's employment and equity objectives will become increasingly dependent on the development of appropriate sectoral policy packages and strategies, institutions, and staff development, it is expected that the focus of the above operations will gradually broaden to a subsector and sector approach. The proposed sectoral approach is designed to enable Bank Group assistance to be responsive to these demands, and to continue its institution-building efforts in a broader context than has been done hitherto.

20. Although Indonesia's project implementation performance is generally in line with the overall average for the Bank, both the Bank and the Government have become increasingly concerned about the level of disbursements, which has shown a declining trend in the past three years.

While some of this decline is accounted for by a shift in several sectors towards "newer" type poverty-oriented projects, many of the problems appear to be related to the Government's cumbersome budgetary, procurement and payment procedures, including issuance of tender documents and opening of letters of credit. These problems are further compounded by the severe shortages of both managerial and technical manpower. A number of steps have been taken by the Government and the Bank to address these issues. Several special Bank missions have visited Indonesia to analyze the problems and make recommendations for simplifying budgetary and financial procedures. The Government and the Bank have also instituted formal and regular joint review procedures to identify general and project specific problems and work out corrective measures. The first of these reviews was held in early March 1979 and a second, more comprehensive one, in June. In addition, a procurement seminar (planned to be the first of a series) was held in Jakarta in September 1979. As a consequence of these joint initiatives, over the past few months the Government announced several measures to streamline the more complex budgetary and financial procedures affecting project implementation. Finally, to reduce initial project implementation difficulties, many operations are now being presented for Board approval at a later stage in the project cycle. It is still too early to assess the effect of these steps on project implementation, but improvements are expected.

21. From 1968 until 1974, all lending to Indonesia was made through IDA. Due to the country's improved creditworthiness following the commodity and oil price boom in 1973/74, the bulk of the Bank Group's subsequent lending has been through IBRD loans, with a modest amount of IDA lending being justified primarily on poverty grounds - per capita GNP (\$360 in 1978) is well below the IDA cutoff of \$625. Given Indonesia's much improved balance of payment position, no further IDA lending is anticipated beyond the end of the current fiscal year. In the past, due to domestic resource constraints, the Bank has financed local costs, particularly in high priority projects in the rural sector. However, because of the increased availability of finance following the recent oil price increases, financing of local costs will be progressively reduced and will only be limited to occasions where it will make a significant contribution to the project.

22. The proposed project, which is consistent with the strategy discussed above, constitutes the tenth lending operation presented to the Executive Directors this fiscal year, and would bring total lending to date in FY80 to \$754 million. Projects for smallholder coconut development, higher education, seeds and village development are expected to be ready for presentation in the next several months.

PART III - THE ENERGY AND ELECTRICITY SECTORS

The Energy Sector

23. Indonesia is richly endowed with primary energy resources including natural gas, coal, hydropower and geothermal energy. Petroleum reserves have been exploited for several years and the availability of indigenous oil caused Indonesia to develop a petroleum-based energy sector. At present petroleum accounts for about 90% of total energy consumption. The Government has however commenced developing alternative sources of energy.

24. The estimated oil reserves are at about 50 billion barrels, but the proven reserves are between 10-15, a figure that has remained static since 1970. The Government has, however, introduced important incentives since January 1978 which have spurred exploration by concession holders. Production, currently about 1.6 million barrels per day, is expected to increase to about 1.8 million in five years. Since the domestic consumption of oil will continue to increase in absolute terms, the exportable surplus should not be expected to grow, it may even decline. A concerted effort to manage domestic demand through price increase and to develop other energy sources such as coal, hydroelectric, natural gas and geothermal steam will be needed to prevent a decline in the level of oil exports.

25. The estimated natural gas reserve is 34 trillion cu ft of which 5 trillion cu ft represents gas associated with oil production. Pipelines have recently been constructed to utilize gas now being flared for fertilizer and steel factories. The consumption of gas is expected to increase substantially in the next five years. Export of liquified natural gas has also commenced following a recent agreement with Japan, and is expected to increase rapidly. A natural gas reserve and utilization study will be financed under Cr. 451-IND.

26. The country has a hydroelectric potential of nearly 31,000 MW of which only about 2.0% is used. It is proposed to develop over 1,000 MW of hydroelectric generating capacity in Java in the next seven years. Development of Asahan in Sumatra with a capacity of 600 MW is also in progress. Rapid development of other hydro resources is constrained by the lack of demand for electricity in islands having large hydroelectric potential (Irian Jaya, Kalimantan, Sulawesi). However, investigations of potential sites are being accelerated.

27. Indonesia has large reserves of coal estimated at over 1.0 billion tons of bituminous coal, and several billion tons of brown coal and lignite.^{/1} The current production of coal is only 250,000 tons per year. The Government has decided to increase coal production, the first such project being the development of the Bukit Asam coal fields in South Sumatra, having

^{/1} Report of the International Atomic Energy Authority, Vienna, 1976.

recoverable reserves of about 100 million tons, for which the Bank has made an engineering loan (S-9-IND) for \$10 million. It is expected that the mine will produce about 3.0 million tons of coal annually by 1985, primarily for power generation at the Suralaya thermal plant in West Java. It is also expected that the coal production from South Sumatra coal mines can be increased to about 10.0 million tons per year by the mid-1990s, mainly for use in future generating plants in Java and Sumatra.

28. The Government is also exploring possibilities of substituting use of kerosene with charcoal made of firewood for cooking purposes, particularly in rural areas. As Indonesia's forestry resources are abundant and as they represent renewable sources of energy, the country could achieve considerable savings if appropriate technologies are developed to justify use of firewood for energy. Potential also exists to construct small power plants which could burn wood products in remote areas. In 1978 the Bank sent a mission to Indonesia to help the Government prepare outlines for necessary studies to collect reliable data and develop appropriate technologies for using woodfuel for energy and may provide further assistance in these areas.

Energy Policy

29. The basic policy objectives of the Government in the energy sector, as broadly outlined in Repelita III are: (a) intensification of exploration of energy resources and expansion of processing facilities; (b) gradual shift from a mono-energy economy to that of poly-energy (primarily based on coal and natural gas); (c) improving efficiency of conversion and utilization; and (d) expansion of research programs. While the Third Plan recognizes the role of energy pricing and fiscal policy in regulating and directing energy consumption as well as in stimulating exploration and development of energy sources, it does not contain specific policy measures designed to meet these needs. Furthermore, detailed demand projections and cost of alternative development strategies are also lacking. A comprehensive energy policy is yet to be formulated.

30. The Government has taken a number of steps designed to address the shortcomings referred to above. It established in May 1978 a new Ministry with responsibility for mines and energy. This Ministry has started playing a coordinating role in energy policy and planning by establishing a Permanent Committee for Energy Studies and a Technical Committee on Energy Resources. A cabinet level National Energy Board is also expected to be set up soon by the Government. Studies have been undertaken by the Government on electricity and coal pricing. The Bank staff assisted in the electricity pricing study which is the basis of PLN's new tariff structure introduced on May 1, 1980. Consultants employed under the above-mentioned Bank-financed engineering loan (S-9-IND) have recently completed a report which includes an analysis of the coal prices. The Government is expected to request that funds from the Seventh Power Project (Ln 1513-IND) be used to finance a comprehensive energy pricing study as well as development of a management information system for the Indonesian power sector (para. 33). When received, this request will be accepted.

Domestic Oil Subsidies

31. At present one of the critical issues causing concern in the energy sector is the effect of the budgetary subsidies on domestic oil consumption which will amount to about \$1.3 billion in 1980/81. Because of these subsidies the use of oil is favored over other fuels in power generation, and domestic oil consumption is promoted over exports. These subsidies adversely affect Government's domestic resource mobilization efforts. Furthermore, the relatively small difference between the price of diesel and fuel oil biases investments in favor of the diesel generating sets against central plants capable of burning residual fuel oils which have lower marketability.

32. The Bank has, over the last two years or so, urged the Government to implement its stated policy and to phase out the oil subsidies as quickly as possible. The Government took major steps in April/May 1979 and in May 1980 when it raised domestic oil prices by an average of 40% and by a further 50% respectively. In an attempt to realize further reductions in subsidies a general understanding was reached during the negotiations with the Government on the following points:

- (a) the Government reconfirmed its policy of ultimately abolishing subsidies on domestic oil consumption; in so doing the Government will follow a selective and gradual approach which is expected to be based on the consumers' ability to pay;
- (b) in order not to introduce yet another subsidy, the price of coal from the Bukit Asam project will reflect either the production cost, plus a reasonable rate of return on revalued net fixed assets in service, or the opportunity cost; and
- (c) if the oil subsidies cannot be sufficiently reduced by the time the Suralaya Unit No. 1 project is in operation, which is expected to be in 1984, any excess in the equivalent price of coal over that of fuel oil, will be compensated by the Government with a view of encouraging use of domestic coal in energy generation and thereby avoiding further misallocation of resources.

33. To further complement the Government's ongoing efforts, a study on energy pricing is expected to be financed from the proceeds of the Seventh Power Project (Ln 1513-IND). The Bank will review progress toward phasing out of domestic oil subsidies during the processing of each new energy sector operation in the coming years.

The Power Sector

34. The power sector comprises the Directorate General of Electric Power of the Ministry of Mines and Energy, PLN (the Government-owned enterprise, statutorily responsible for all public sector generation, transmission and distribution in the country), captive plant installations, and some municipal franchises. PLN came into being in 1961 when three Dutch-owned electricity utility companies were nationalized, but commenced effective operations only in 1972, when its new charter gave it legal status as an autonomous entity with exclusive responsibility for all electricity supply in the country and adequate foreign financing became available for its expansion programs. Until 1976, captive plants grew rapidly, but since then PLN has begun to fulfill its responsibility as the main electricity supplier and the growth of captive plant declined to only 5% p.a. in FY77 and FY78. PLN's decision to reduce its previously excessive connection charges has played a role in this decline. Last year, PLN's sales registered a 22% increase, the most significant annual increase so far. PLN expects to sustain an annual average growth rate of about 21% through 1986. Hence the share of captive generation which is presently about 40% in the total market is expected to decline to about 25% in 1986.

Existing Public Supply Facilities

35. The total generating capacity available to PLN at the end of FY79 was about 2,200 MW, 34% of which was in the form of gas turbines, 20% diesel, 21% hydro and 25% steam. In Java, gas turbines now account for 40% of the total capacity of 1,550 MW (down from 50% in 1978). This unbalanced development was due to a crash program of gas turbine capacity expansion in the mid-1970s when PLN suffered major breakdowns in generating capacity and gas turbines were seen as the only means of adding new generating capacity quickly. The commissioning of new steam generating capacity at Gresik (East Java), Semarang (Central Java), and Muara-Karang (West Java) should correct this imbalance by adding 1,000 MW of base load capacity by end-1982. At that time, the PLN system in Java will have 27% of gas turbine plant and all its high cost small diesel plants would be retired. PLN operates about 3,800 km of transmission lines, mostly in Java. About 2,000 km of high voltage (70/150 kV) transmission lines are currently under construction and these will be completed during 1979-82 forming an all Java Grid. Despite recent progress, per capita electricity consumption in Indonesia is extremely low at 45 kWh, compared with 570 kWh in Malaysia, 300 kWh in Papua New Guinea, 250 kWh in the Philippines and 250 kWh in Thailand.

The Power Market

36. Several attempts have been made in recent years to prepare a reliable demand forecast as a basis for developing the public power supply in

Indonesia. The most detailed assessment of the underlying demand ^{/1} in Java was made during 1974-76 by Preece, Cardew and Rider (PCR) of the United Kingdom as part of the comprehensive Java System Development Study (financed under the West Java Thermal Power project, Credit 399-IND). The study contains two sets of projections: a high forecast based on the assumption that publicly-owned generating capacity will meet the entire underlying demand, and another, which forecasts a substantially lower rate of growth of public supply based on the premise that PLN's future sales in the short- and medium-term, will depend entirely on the rate at which it is capable of connecting an increasing portion of the existing demand to its supply system; in the long term sales will reflect more accurately the growth of power demand based on the overall level of economic development. No comprehensive demand surveys have been undertaken for the Other Islands.

37. In 1977, PLN and the Bank accepted PCR's lower forecast as a guideline for PLN's development in Java. The PCR study also includes an optimized program of generation and transmission expansion to meet this demand forecast. PLN's latest sales forecast is about 15% lower than PCR's low forecast for 1985, but is in line with it by 1990. Accordingly, the growth rate of PLN's sales is expected to increase at an average annual rate of about 21% through 1986, while PLN's share of the total market would increase to about 80% from about 60% which is the current share; after 1986, the growth rate would gradually decline to about 15% per year.

PLN's Development Program

38. PLN has prepared a development plan for power in Indonesia for the period up to 1986/87, which envisages an increase in the installed generating capacity from about 2,000 MW in 1978 to over 7,300 MW, enabling energy generation to increase from 4,800 GWh to about 25,000 GWh. It also provides for the development of associated transmission and distribution networks. Total investments at late 1978 prices would be about \$9.5 billion with a foreign exchange component of \$6.1 billion. The expenditure is phased over a nine-year period, increasing from \$0.6 billion in FY79 to about \$1.5 billion in FY87. The Government has made appropriate provisions in Repelita III, covering the period up to FY84.

39. The investment program basically covers the country in two geographically divided plans, viz. Java Island and territories outside Java. About 85 million (65%) out of the total population of about 135 million live in Java, which in 1977/78 accounted for 3,500 GWh, or about 81% of the PLN's total energy sales of 4,300 GWh. Out of total generating capacity in 1979 of about 2,200 installed by PLN approximately 1,547 MW was in Java (70%). The territories outside Java cover a large number of islands, the major ones

^{/1} The demand PLN would have served if its installations had been adequate and all self-supplied installations had been served by PLN.

being Sumatra, Kalimantan and Sulawesi. These three islands, together with Java, account for over 95% of the country's electricity consumption.

40. Detailed engineering studies have been carried out to devise the optimal development strategy for the power system in Java and the least cost path has been identified. The plan has been formulated to achieve the following objectives: (a) optimize resource utilization by substituting the use of oil by coal, hydro and geothermal resources for power generation and by replacing/reducing the use of fuel-inefficient installations; (b) realize economies of scale by larger-sized installations; (c) achieve operational economy by the coordinated utilization of plants through interconnected operations; and (d) provide acceptable standards of reliability of supply. The development plan for areas outside Java is not as well founded and requires further review which PLN is undertaking. In particular, PLN will also identify the reasons for the present low utilization of existing plants, which is more of a problem outside Java, and arrange for the optimum utilization of all facilities existing and under construction, both on Java and outside.

The Bank Group's Lending Strategy in the Power Sector

41. To date, the Bank Group's total lending to the Indonesian power sector amounts to \$636 million for eight projects. The major objectives of these operations have been to rehabilitate and expand PLN's distribution, transmission and generation facilities under a balanced system development and to strengthen PLN's operational and financial capabilities. PLN has substantially expanded its facilities and can now provide a more reliable supply. Although PLN will need to make additional efforts to become a fully efficient power company, its operational and organizational capabilities have considerably improved. Future strategy of Bank lending in Indonesia's power sector, including the proposed project, will give greater emphasis, inter alia, to the development of a comprehensive energy policy and planning, economic efficiency in energy pricing, and improvements in planning and operations of PLN's branches in the provinces and the Other Islands.

42. Three distribution projects (Credits 165-IND and 334-IND, and Loan 1259-IND) for the rehabilitation and expansion of the distribution facilities in the greater Jakarta area, and five power generation projects (Credit 399-IND and Loans 1127-IND, 1365-IND, 1513-IND and 1708-IND) for West Java and Central Java were undertaken to help PLN increase its capacity. These loans and credits also provided funds for a variety of consulting services to improve PLN's organizational and operational efficiency. Compared to its status in the early 1970s, PLN is now much more efficiently run; it achieved the financial break-even target in 1977, two years ahead of schedule. It is also providing a much more reliable supply. Cost overruns resulting from the 1973/74 oil crisis, difficulties in obtaining the required local funds, delayed land acquisition, and cumbersome contract approval and payment procedures, caused delays in implementation of some of these projects. The earlier distribution projects (Credits 165-IND and 334-IND) were completed

more than two years behind schedule. Notwithstanding this delay, a recent OED audit report (No. 2741, dated November 16, 1979) indicated that these two projects have achieved their objectives. The major lesson drawn is the need to address the issues related to land acquisition and shortage of local funds as vigorously and as early as possible which is done in the case of the proposed project (paras. 58, 59 and 71).

43. In support of the Government's policy to diversify energy sources, the Bank also made a \$10 million engineering loan (S-9-IND) in FY78 for the preparation of the Bukit Asam coal mining and associated transport facilities project. The optimization reports are presently being reviewed and the Bank expects to appraise the project in FY81. The Suralaya project (Phase 1 financed under Loan 1708-IND and the proposed project) has been designed to utilize the coal from Bukit Asam, constituting a major step in energy diversification in Indonesia. The Bank is also financing part of the costs of consultancy services to prepare a hydroelectric project (Saguling) of 700 MW capacity in West Java under Credits 399-IND and 451-IND. The detailed field investigations are being financed with Japanese aid. The Bank Group's assistance has been requested to finance in FY81 the construction of the project. The Bank will also assist the Government in carrying out energy sector related studies, including a study on energy pricing in Indonesia (para. 33).

PART IV - THE PROJECT

Background

44. The Suralaya project is located at the western tip of Java. It was identified by the comprehensive Java Development Study, financed through Credit 399-IND and carried out by Preece, Cardew and Rider (PCR) of the United Kingdom. The feasibility study for the station, which would have an ultimate capacity of 3,100 MW, was carried out by Montreal Engineering Company of Canada (MONENCO). The first stage of the project consists of the installation of 2x400 MW thermal generating sets (Units No. 1 and No. 2) at Suralaya in West Java, capable of firing both coal and oil as well as 500 kV transmission lines to Semarang in Central Java. The construction of the first stage was phased in two parts in order to reduce the annual financing commitments. The first phase covering the installation of the first 400 MW unit is being financed by the Eighth Power Project, Loan 1708-IND, for \$175 million, approved in May 1979.

45. Merz and McLellan (MM) of the United Kingdom were commissioned to carry out the planning, detailed engineering and design of the necessary extra high voltage (EHV) transmission system, with funds provided under Loan 1365-IND. The planning study, completed in August 1979, has concluded that the EHV transmission voltage should be 500 kV. It has also established that the West and Central Java power systems need to be interconnected by FY85 by constructing the EHV lines from Suralaya up to Semarang. It is critical

that the EHV lines are commissioned at the same time as the Suralaya Unit No. 1 (January 1984) to permit full utilization of its power generation.

46. A Bank mission appraised the project in July 1979. The negotiations were held in Washington on February 25-29, 1980; the Government Delegation was led by Mr. Samaun Samadikun, Director General of Power, Ministry of Mines and Energy. The supplemental data are contained in Annex III. The Staff Appraisal Report (No. 2694-IND dated March 20, 1980) is being distributed separately.

Description of the Project

47. The project comprises:

- (a) installation of the second 400 MW generating set (Unit No. 2) at Suralaya with coal handling and ash disposal facilities for Unit No. 1 and Unit No. 2;
- (b) construction of the 500 kV transmission lines from Suralaya to Semarang with 500 kV substations at Suralaya, Jakarta, Bandung and Semarang;
- (c) provision of a simulator at Suralaya for the training of the operating staff;
- (d) establishment of a Java system control center at Jakarta; and
- (e) consulting services including training.

48. PLN has a rapidly growing need for trained operating personnel for thermal power stations. It is proposed under the project to create training facilities at Surayala by providing a power plant simulator which will duplicate the control panels and operating characteristics of Suralaya units by computer modelling. This facility will enable PLN to implement the necessary training program.

49. A system control center will be established in Jakarta to monitor, coordinate and control the operation of generating facilities and the EHV transmission network in Java to achieve reductions in operating costs and improve the reliability of supply. The center will be equipped with communications, mimic displays and online data acquisition systems.

The Beneficiary

50. The beneficiary would be the National Power Authority (PLN). PLN's current charter is the 1972 Government Regulation No. 18, which changed its status from a department of the Ministry of Public Works and Electric Power

to an autonomous unit. The Directorate-General of the Ministry which then controlled PLN, was abolished in 1972 and PLN began to play a leading role in the country's electricity development. PLN has grown in stature and improved its public image in recent years.

51. PLN is organized and functions as a modern public utility with a fair degree of autonomy. The Board is statutorily bound to have a President Director and at least two other directors. Currently, the Board comprises the President Director and five others; all are executive directors and each heads a department in the head office - planning, operations, construction, finance and administration. In the field, there are 15 regional or Wilayah offices with a total of about 100 branches. Regions are responsible for minor construction and the construction department is responsible for all major project construction. PLN, whose implementation capacity and operational efficiency have shown marked improvement during recent years, is continually reviewing its procedures and operations to ensure that this progress is maintained.

52. After the recent reorganization of the Government in May 1978, including the establishment of a Ministry for Mines and Energy, the post of Director General of Electric Power was revived and the Directorate strengthened. PLN's charter is expected to be amended to take cognisance of a new Act under which private and cooperative agencies are allowed to generate power in the areas not served by PLN. Since the present electricity consumption (45 kWh per person per year) is very low in Indonesia, this change is a welcome step. PLN's status will thus alter from the only agency in the field of power development in Indonesia to the only public sector agency, but its present autonomous status will essentially remain unchanged.

Implementation, Engineering and Construction

53. PLN will be responsible for implementing the project and has appointed project managers for each of the Suralaya and EHV projects. Its Director of Planning has overall responsibility for the implementation of Suralaya and the associated transmission project in the head office. He will, in particular, coordinate and secure action on financing, progress of engineering and procurement.

54. MONENCO will be responsible for engineering, design and construction supervision of the Suralaya power station. The contract was signed in October 1978 and the first phase of work - preparation of designs, bidding documents and assistance in bid evaluating - is now in progress. Bid documents for the main equipment which were received in September 1979 have been evaluated and letter of intent for Turbine Generator contract was issued in January 1980; that for the steam generator contract was issued in April 1980.

55. The design and construction supervision for the 500 kV lines and substations will be carried out by MM. Although the contract for the first

phase of the work of feasibility and engineering was signed in February 1978, MM had commenced work in October 1978; their planning review report was submitted in August 1979. Bid documents are due to be issued in June 1980.

56. The engineering services, including those for the simulator and construction supervision for both units and training, will be provided by the consultants MONENCO, at a total cost of \$18.5 million; which includes salaries, overhead, fees, international and local travel and subsistence. The average expatriate man-month cost is \$6,500 and the local man-month cost is \$3,400. The average man-month cost for the estimated 3,150 man-months of services is \$5,580. The rates are based on April 1978 prices incorporated in the ongoing contract and are subject to escalation.

57. The consulting services of MM including detailed design, aerial survey, procurement and construction supervision and training is estimated to cost \$6.5 million. MM's average man-month cost for 1,300 man-months of services is \$3,800 (which includes salaries, overhead fees, international and local travel and subsistence). The average expatriate man-month cost is \$8,400 and the local man-month cost is \$1,000. The rates are subject to escalation.

58. The implementation program is tight, particularly for the EHV line construction. It is therefore necessary to avoid the long processing time experienced in the past for tender evaluation, approval of awards of the contracts, and issue of letters of credit. Recognizing the high cost of such delays the Government has recently introduced some streamlining in budget system (DIP) and in the procedures for contract awards and payment to contractors, particularly under foreign funded projects. These changes are expected to achieve acceleration in project implementation (para. 20 above).

59. Land for the Suralaya power station has already been acquired. Acquisition of land for the construction of the overhead lines takes a long time in Indonesia and may delay implementation. To obviate such an eventuality, assurances have been received from PLN to complete the acquisition of way leave and land by March 31, 1981 (Section 2.08 of the draft Project Agreement). A task force under the Minister of Administrative Reforms has also been set up to streamline and expedite acquisition of lands for development projects.

Cost Estimates

60. The total cost of the project is estimated at \$700.8 million of which \$444.8 would be in foreign exchange. These cost estimates include taxes on civil works contracts (10%) and sales taxes on locally purchased equipment (5%) but exclude customs duties from which PLN is exempt when external funds are used.

61. For the Suralaya project physical contingencies are provided at 10% on civil works and 3.5% on equipment. Price contingencies are calculated (a) for foreign costs at 10% for 1979, 9% for 1980, 8% for 1981 and at 7% p.a. thereafter, and (b) for local costs at 25% in 1979, 15% in 1980 and 1981 and 10% p.a. thereafter. For the EHV system the estimate

provides 7.5% for physical contingencies but price contingencies are the same as those for the Suralaya project.

Financing Plan

62. The project is expected to be financed as follows:

	<u>Foreign Exchange</u>	<u>Local cost</u>	<u>Total</u>
	-----US\$ million-----		
<u>Suralaya Unit No. 2</u>			
IBRD	169.0	-	169.0
Export credits or Govt. funds	<u>37.0</u>	<u>76.0</u>	<u>113.0</u>
Subtotal	<u>206.0</u>	<u>76.0</u>	<u>282.0</u>
<u>EHV (500 kV Transmission and Control Center)</u>			
IBRD	84.0	-	84.0
ADB	139.0 /a	-	139.0 /a
Export credits or Govt. funds	9.0	-	9.0
Government contribution	-	180.0	180.0
Subtotal	<u>232.0</u>	<u>180.0</u>	<u>426.0</u>
<u>GRAND TOTAL</u>	<u>438.0</u>	<u>256.0</u>	<u>694.0 /b</u>

/a ADB approved a loan of \$83.6 million in November 1979; the balance is expected to be committed in CY80.

/b This total excludes \$6.8 million provided under Ln 1365-IND for the consultant services for the EHV component of the project.

63. The proceeds of the Bank Loan would finance the foreign exchange cost of turbine generator, steam generator, coal handling plant, associated auxiliary equipment, 500 kV transmission lines from Bandung to Semarang, control center, consulting services and training simulator. The proceeds of the proposed loan will be made available to PLN by the Government under a Subsidiary Loan Agreement satisfactory to the Bank, on terms equivalent to those of the Bank's loan. The Government will finance interest and commitment charges during the grace period and bear the foreign exchange risk. The signing of the subsidiary loan agreement would be a condition for loan effectiveness (Section 6.01 of the draft Loan Agreement).

Procurement and Disbursement

64. Procurement of equipment to be financed under the loan would be on the basis of international competitive bidding in accordance with the Bank's guidelines. Indonesian equipment manufacturers are unlikely to be

able to participate, but if they tender for some items, a 15% margin of preference on the c.i.f. bid price, or the prevailing duties, if lower, will be applicable for purposes of bid evaluation. Procurement of equipment for the transmission lines and substations financed by ADB will follow ADB's guidelines. All local costs including civil works will be financed by the Government in accordance with their procedures.

65. The Bank loan will be disbursed on the following basis:
- (a) equipment - 100% of foreign expenditures for directly imported goods, 95% of the ex-factory cost for locally manufactured goods and 65% of the total expenditures for imported goods procured locally; and
 - (b) consultants' services and training - 100% of foreign expenditures.

No disbursements will be made for expenditures incurred prior to loan signing.

Financial Aspects of PLN

66. Past Performance. PLN's performance was closely linked with the Financial Recovery Plan included in the West Java Thermal Power Project, financed under Credit 399-IND, approved in 1973. The plan's objective was to cover operating costs from revenues in FY79; the objective was achieved in FY77, two years ahead of schedule.

Contribution to Investment and Tariffs

67. Under Loan 1513-IND it was agreed that PLN would make gradually increasing contributions to its investment program from its internal cash generation. The indicative targets, over a three-year period (the test year and the two preceding years), for these contributions agreed under Loan 1708-IND were as follows:

<u>Three-year periods ending in</u>	<u>Percentages for consecutive three-year periods</u>
FY80 and 81	12%
FY82 and 83	18%
FY84 and 85	25%

A definitive target of 30% was agreed for FY86 and after.

68. Achievement of the above indicative targets is clearly contingent upon PLN's ability to improve its operational efficiency (reduction of system losses and operational expenditures) and to increase its revenues.

This could result, inter alia, from an aggressive connection policy and adjustments in its tariffs. In 1979, PLN's contribution to its investments amounted to about 29%. Current financial forecasts, based on PLN's recent and expected performance in all these areas, indicate that under the proposed loan PLN should be able to achieve the following targets:

<u>Three-year periods ending in</u>	<u>Percentages for consecutive three-year periods</u>
FY80 through 82	12%
FY83 through 84	20%
FY85	25%

The definitive target for FY86 and after, would be 30% (Section 4.04 of the draft Project Agreement). These forecasts are based on a 38% tariff increase in the level of PLN's basic tariffs which became effective on May 1, 1980.^{/1} In addition a revised tariff structure reflecting as closely as possible the long-run marginal cost of supply was introduced on the same date. Furthermore the Decree which introduced these measures also permitted PLN to further adjust its tariffs, through a surcharge, by Rp 6.4 per kWh to compensate for the 50% increase in domestic oil prices which was also announced on May 1, 1980. As a result, the average level of PLN's present tariffs represents an increase of about 61% over that which had existed prior to May 1, 1980.

69. The Government has indicated to the Bank about a year ago following the negotiations of the Eight Power Project (Ln. 1708-IND) that PLN's tariffs would, no later than March 31, 1980, be increased by 58%. However, PLN's financial position for FY79 improved considerably. This improvement was due to a changed phasing of PLN's expansion program and lower operating expenses than forecast. These two factors, particularly less than anticipated operation expenditures enabled PLN to generate larger internal funds than originally estimated. As a result, in FY79, PLN covered about 29% of its investment expenditures (compared to 6% originally forecast) from self-generated funds. About 20% of this contribution was due to lower operating expenses and 3% to the reduction in capital expenditures resulting from rephasing of investments. In light of these developments, the Government has again reviewed the need for adjustment in PLN's tariffs and recently concluded that a 38% tariff increase would be sufficient for PLN to meet the previously agreed internal cash contribution targets (para. 68). The concern of the Government about inflation was a major factor in the timing of the action on PLN's tariff increase.

^{/1} The Staff Appraisal Report (SAR) assumed that the 38% tariff increase and the introduction of the revised tariff structure would take place on April 1, 1980. Since the effect of a month delay on the financial ratios and the related tables is minimal, no updating was made in the SAR.

70. While improvement in PLN's overall financial and operational performance has been considerable over the last 8 years, there is still scope for the company to improve its operational efficiency. For example, system losses averaged about 23% for the whole of Indonesia in FY79, down from 24% in FY78, which varied from about 18% for Jakarta to about 30% in some areas. These high system losses are due to distribution systems that require rehabilitation, inadequate metering and billing systems and theft. PLN's management is aware of all these problems and is actively addressing them. A targeted loss reduction program is in operation and steps have been taken to reduce theft, resulting in reduced system losses in FY79. PLN has also instituted training programs for regional staff which will enable them to prepare and supervise plans to improve the operational efficiency of their regions. Under these plans the regions will forecast GWh sales and revenues, operating costs and the rehabilitation investments necessary to improve the earning power of the assets used for operations. These plans are expected to culminate by FY82 in fixing performance targets for each region. The two-year preparation period is required because of the need for training, the posting of the necessary staff, and the computer hardware and software that may be required.

71. Delays have occurred in the past in the allocation of Government funds to PLN because of the complicated budget (DIP) system. In such a situation PLN had to cover any shortage from internal funds to maintain the progress of project construction. Delays have also occurred in granting approval for tariff increases which were needed to finance its development program. A substantial portion of PLN's distribution system expansion is financed from its internally generated funds and the delays in budget appropriation and in granting tariff increases created a situation in which PLN had to reduce the rate of distribution expansion, which in turn adversely affected the balance of PLN's development program, i.e. an inadequate distribution network. Although the recent changes made by the Government in the DIP system (para. 20) and the increase in PLN's tariffs (para. 68) are expected to alleviate these problems to ensure timely supply of funds, Section 3.01(b) of the draft Loan Agreement provides that the Government will furnish PLN as and when required sufficient funds to meet its expenditures as annually agreed with the Bank. To avoid shortages of funds due to poor collection the Government has also given assurance that no later than March 31, 1982, amounts owed to PLN by Government agencies shall not exceed the billing of PLN to such agencies for the previous two months (Section 3.03(b) of the draft Loan Agreement).

Revaluation of Assets

72. Agreement was reached during negotiations of Loan 1708-IND that PLN shall revalue its net fixed assets annually, including consumers' contributions, on the basis of the Gross Domestic Investment Deflator as calculated by the Bureau of Statistics, on the understanding that the revaluations need not be incorporated in PLN's books. This provision will also apply to the proposed loan.

73. Debt Coverage Tests. The existing covenants on debt coverage tests which stipulate a debt/equity ratio of 60:40 and a debt service coverage of 1.3 will continue to apply to avoid excessive medium-term borrowing and to keep overall borrowing at reasonable levels (Sections 4.05 and 4.06 of the draft Project Agreement).

Benefits and Justification

74. The project is part of an expansion program to provide urgently needed base load generating capacity in Java. It is the next step in the least-cost sequence of generation expansion, established by the Java System Development Study; this sequence remains unchanged when tested for sensitivity within the wide limits of the latest sales forecasts and the consultants' high load forecast. The results were tested for discount rates up to 15%.

75. The internal economic rate of return (IERR) calculated by a discount rate equalizing the economic costs and benefits attributable to the project is about 12%, which is satisfactory. The expected cost of coal delivered at Suralaya (\$40.0/ton) was used in the cost stream and incremental revenues were based on the expected electricity price of Rp 38.0 to measure benefits. If the coal price is higher by 10%, the IERR would reduce to about 11.6%.

Risks

76. There are no risks of an engineering nature as there are no inherent uncertainties in this type of work. The risk of delays in project implementation may arise mainly due to possible delays in land acquisition for construction of the EHV lines (para. 59). However assurances have been received from PLN to avoid such delays and acquire lands for the transmission line by March 31, 1981 (Section 2.08 of the draft Project Agreement). If coal from Bukit Asam is not available for the power plant by January 1, 1984, it will be necessary to temporarily use fuel oil in the plant. Such an eventuality would reduce the economic benefit from the plant. However, the project is justified on meeting the power demand, even with oil burning.

Ecology

77. Environmental considerations have been carefully considered by MONENCO and PLN in choosing the Suralaya site for the first power station in Java to utilize coal. The site is located in a remote corner of the West Java Coast, the nearest settled area being a small town (Merak), some 10 km away. The station location and design features to deal with stack emission and ash disposal, reduce the environmental impact to a minimum. There will be no detrimental effect on the local ecological system.

78. The construction of the 500 kV lines and substations would also be carried out with due consideration for the ecological factors. The route will be selected to cause minimum dislocation to existing developments, and

substation sites have been located outside populated areas, particularly those near Jakarta and Bandung. Internationally accepted safety practices will be used in the design and construction of the lines. No serious ecological problems are expected in the transmission line construction.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

79. The draft Loan Agreement between the Republic of Indonesia and the Bank, the draft Project Agreement between the Bank and Perusahaan Umum Listrik Negara (PLN), and the report of the Committee provided for in Article III, Section 4 (iii) of the Articles of Agreement are being distributed to the Executive Directors separately.

80. In addition to the special features of the Loan and Project Agreements which are referred to in Section III of Annex III, additional condition of effectiveness of the Loan (Section 6.01 of the draft Loan Agreement) includes that the Subsidiary Loan Agreement has been signed on behalf of the Borrower and PLN.

81. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Bank.

PART VI - RECOMMENDATION

82. I recommend that the Executive Directors approve the proposed loan.

Robert S. McNamara
President

Attachments

May 23, 1980
Washington, D.C.

INDONESIA - SOCIAL INDICATORS DATA SHEET

	INDONESIA			REFERENCE GROUPS (ADJUSTED AVERAGES)		
				- MOST RECENT ESTIMATE)		
	1960	1970	MOST RECENT ESTIMATE	GEOGRAPHIC REGION	SAME INCOME GROUP	NEXT HIGHER INCOME GROUP
	/b	/b	/b	/c	/d	/e
LAND AREA (THOUSAND SQ. KM.)						
TOTAL	2027.1					
AGRICULTURAL	292.9					
GDP PER CAPITA (US\$)						
	80.0	140.0	360.0	528.9	209.6	467.5
ENERGY CONSUMPTION PER CAPITA (KILOGRAMS OF COAL EQUIVALENT)						
	129.0	120.0	218.0	371.1	83.9	262.1
POPULATION AND VITAL STATISTICS						
POPULATION, MID-YEAR (MILLIONS)	94.7	117.6	140.0	.	.	.
URBAN POPULATION (PERCENT OF TOTAL)	14.6	17.1	18.4	27.4	16.2	24.6
POPULATION PROJECTIONS						
POPULATION IN YEAR 2000 (MILLIONS)			207.0	.	.	.
STATIONARY POPULATION (MILLIONS)			357.0	.	.	.
YEAR STATIONARY POPULATION IS REACHED			2143	.	.	.
POPULATION DENSITY						
PER SQ. KM.	47.0	58.0	66.0	154.8	49.4	45.3
PER SQ. KM. AGRICULTURAL LAND	337.0	419.0	456.0	566.7	252.0	149.0
POPULATION AGE STRUCTURE (PERCENT)						
0-14 YRS.	40.8	44.0	41.0	41.3	43.1	45.2
15-64 YRS.	56.1	53.5	56.0	54.9	53.2	51.9
65 YRS. AND ABOVE	3.1	2.5	3.0	3.3	3.0	2.8
POPULATION GROWTH RATE (PERCENT)						
TOTAL	2.1	2.2	2.0	2.4	2.4	2.7
URBAN	..	3.7	3.3	4.3	4.6	4.3
CRUDE BIRTH RATE (PER THOUSAND)						
	47.0	43.0	37.0	30.2	42.4	39.4
CRUDE DEATH RATE (PER THOUSAND)						
	23.0	18.0	16.0	8.3	15.9	11.7
GROSS REPRODUCTION RATE						
	2.8	3.2	2.4	2.1	2.9	2.7
FAMILY PLANNING						
ACCEPTORS, ANNUAL (THOUSANDS)	..	181.1	2213.0	.	.	.
USERS (PERCENT OF MARRIED WOMEN)	..	0.2	19.0	34.1	12.2	13.2
FOOD AND NUTRITION						
INDEX OF FOOD PRODUCTION PER CAPITA (1969-71=100)						
	96.5	100.0	105.0	106.2	98.2	99.6
PER CAPITA SUPPLY OF CALORIES (PERCENT OF REQUIREMENTS)						
	89.0	91.0	98.0	104.1	93.1	94.7
PROTEINS (GRAMS PER DAY) OF WHICH ANIMAL AND PULSE						
	43.0	43.0	43.8	57.4	52.1	54.3
	15.0/1	14.0	16.6	16.9	13.6	17.4
CHILD (AGES 1-4) MORTALITY RATE						
	31.0	22.0	19.0	4.8	18.5	11.4
HEALTH						
LIFE EXPECTANCY AT BIRTH (YEARS)						
	41.0	46.0	48.0	61.1	49.3	54.7
INFANT MORTALITY RATE (PER THOUSAND)						
	..	126.0	..	46.6	105.4	58.1
ACCESS TO SAFE WATER (PERCENT OF POPULATION)						
TOTAL	..	3.0	12.0	21.9	26.3	34.4
URBAN	..	10.0	35.0	46.2	58.5	57.9
RURAL	..	1.0	6.0	12.8	15.8	21.2
ACCESS TO EXCRETA DISPOSAL (PERCENT OF POPULATION)						
TOTAL	..	12.0	15.0	28.4	16.0	40.8
URBAN	..	50.0	60.0	65.0	65.1	71.3
RURAL	..	4.0	5.0	14.7	3.5	27.7
POPULATION PER PHYSICIAN						
	41000.0/2	26830.0	16430.0	3790.5	11396.4	6799.4
POPULATION PER NURSING PERSON						
	..	3010.0	4670.0	1107.4	5552.4	1522.1
POPULATION PER HOSPITAL BED						
TOTAL	1370.0	1670.0	1560.0	613.3	1417.1	726.5
URBAN	..	1130.0	..	203.6	197.3	372.7
RURAL	..	1890.0	..	1110.3	2445.9	1404.4
ADMISSIONS PER HOSPITAL BED						
	..	..	22.4	23.9	24.8	27.5
HOUSING						
AVERAGE SIZE OF HOUSEHOLD						
TOTAL	4.4	4.3	..	5.2	5.3	5.4
URBAN	4.9	5.3	..	..	4.9	5.1
RURAL	4.3	4.7	..	..	5.4	5.5
AVERAGE NUMBER OF PERSONS PER ROOM						
TOTAL	..	1.5	..	..	..	..
URBAN	..	1.0	..	..	..	..
RURAL	..	1.6	..	..	..	..
ACCESS TO ELECTRICITY (PERCENT OF DWELLINGS)						
TOTAL	..	..	..	..	22.5	28.1
URBAN	..	..	..	..	17.8	43.1
RURAL	..	..	..	..	..	3.9

INDONESIA - SOCIAL INDICATORS DATA SHEET

	INDONESIA			REFERENCE GROUPS (ADJUSTED AVERAGES - MOST RECENT ESTIMATE) ^{/a}		
	1960 ^{/b}	MOST RECENT ESTIMATE ^{/b}		SAME GEOGRAPHIC REGION ^{/c}	SAME INCOME GROUP ^{/d}	NEXT HIGHER INCOME GROUP ^{/e}
		1970				
EDUCATION						
ADJUSTED ENROLLMENT RATIOS						
PRIMARY: TOTAL	67.0	75.0	82.0	97.9	63.3	82.7
MALE	79.0	90.0	86.0	98.7	79.1	87.3
FEMALE	55.0	70.0	77.0	97.4	48.4	75.8
SECONDARY: TOTAL	6.0	15.0	20.0	42.2	16.7	21.4
MALE	10.0	20.0	25.0	46.7	22.1	33.0
FEMALE	3.0	11.0	15.0	40.9	10.2	15.5
VOCATIONAL ENROL. (% OF SECONDARY)	20.0	22.0	21.0	12.5	5.6	9.8
PUPIL-TEACHER RATIO						
PRIMARY	39.0	29.0	30.0	32.5	41.0	34.1
SECONDARY	14.0	13.0	18.3	25.8	21.7	23.4
ADULT LITERACY RATE (PERCENT)						
	39.0	57.0	62.0	84.1	31.2	34.0
CONSUMPTION						
PASSENGER CARS PER THOUSAND POPULATION						
	1.0	2.0	3.2	6.1	2.8	9.3
RADIO RECEIVERS PER THOUSAND POPULATION						
	7.0	..	37.0	84.4	27.2	76.9
TV RECEIVERS PER THOUSAND POPULATION						
	..	0.7	2.0	22.4	2.4	13.5
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION						
	..	..	16.0	24.2	5.3	18.3
CINEMA ANNUAL ATTENDANCE PER CAPITA						
	..	..	0.9	3.6	1.1	2.5
LABOR FORCE						
TOTAL LABOR FORCE (THOUSANDS)						
	34027.0	42209.0	51000.0	..	..	..
FEMALE (PERCENT)						
	27.9	31.0	30.5	36.7	24.8	29.2
AGRICULTURE (PERCENT)						
	74.8	66.3	60.1	54.6	59.4	62.7
INDUSTRY (PERCENT)						
	8.4	9.7	12.0	16.3	10.0	11.9
PARTICIPATION RATE (PERCENT)						
TOTAL	36.7	35.3	34.6	40.7	36.9	37.1
MALE	54.2	49.5	48.6	49.9	52.4	48.8
FEMALE	20.0	21.6	20.8	31.0	18.0	20.4
ECONOMIC DEPENDENCY RATIO						
	1.2	1.3	1.1	1.1	1.2	1.4
INCOME DISTRIBUTION						
PERCENT OF PRIVATE INCOME RECEIVED BY						
HIGHEST 5 PERCENT OF HOUSEHOLDS	..	33.7/h	..	14.9	..	15.2
HIGHEST 20 PERCENT OF HOUSEHOLDS	..	52.0/h	..	46.8	..	48.2
LOWEST 20 PERCENT OF HOUSEHOLDS	..	6.8/h	..	6.2	..	6.3
LOWEST 40 PERCENT OF HOUSEHOLDS	..	17.3/h	..	16.8	..	16.3
POVERTY TARGET GROUPS						
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US\$ PER CAPITA)						
URBAN	..	..	221.0	193.1	99.2	141.3
RURAL	..	..	130.0	128.7	78.9	138.6
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US\$ PER CAPITA)						
URBAN	..	..	145.0	136.8	91.9	179.7
RURAL	..	..	98.0	96.8	54.8	103.7
ESTIMATED POPULATION BELOW ABSOLUTE POVERTY INCOME LEVEL (PERCENT)						
URBAN	..	..	39.0	32.0	44.1	34.8
RURAL	..	..	65.0	52.5	53.9	37.5

.. Not available
. Not applicable.

NOTES

- ^{/a} The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Coverage of countries among the indicators depends on availability of data and is not uniform.
- ^{/b} Unless otherwise noted, data for 1960 refer to any year between 1959 and 1961; for 1970, between 1969 and 1971; and for Most Recent Estimate, between 1974 and 1980. Poverty levels are estimated 1980 levels at 1980 prices.
- ^{/c} East Asia & Pacific; ^{/d} Low Income (\$280 or less per capita 1976); ^{/e} Lower Middle Income (\$281-550 per capita, 1976); ^{/f} 1961-63; ^{/g} 1962; ^{/h} Income recipients.
- Most Recent Estimate of GNP per capita is for 1978. For population estimate is for end-1979.

DEFINITIONS OF SOCIAL INDICATORS

Notes: Although the data are drawn from sources generally judged the most authoritative and reliable, it should also be noted that they may not be internationally comparable because of the lack of standardized definitions and concepts used by different countries in collecting the data. The data are, nonetheless, useful to describe orders of magnitude, indicate trends, and characterize certain major differences between countries.

The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Due to lack of data, group averages of all indicators for Capital Surplus Oil Exporters and of indicators of Access to Water and Excreta Disposal, Housing, Income Distribution and Poverty for other country groups are population-weighted geometric means without exclusion of the extreme values and the most populated country. Since the coverage of countries among the indicators depends on availability of data and is not uniform, caution must be exercised in relating averages of one indicator to another. These averages are mostly useful as approximations of "expected" values when comparing the values of one indicator at a time among the country and reference groups.

LAND AREA (thousand sq. km.)

Total - Total surface area comprising land area and inland waters.
Agricultural - Most recent estimate of agricultural area used temporarily or permanently for crops, pastures, market and kitchen gardens or to lie fallow.

GDP PER CAPITA (US\$) - GDP per capita estimates at current market prices, calculated by same conversion method as World Bank Atlas (1976-78 basis); 1960, 1970, and 1978 data.

ENERGY CONSUMPTION PER CAPITA - Annual consumption of commercial energy (coal and lignite, petroleum, natural gas and hydro-, nuclear and geothermal electricity) in kilograms of coal equivalent per capita; 1960, 1970, and 1976 data.

POPULATION AND VITAL STATISTICS

Total Population, Mid-Year (millions) - As of July 1; 1960, 1970, and 1977 data.

Urban Population (percent of total) - Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries; 1960, 1970, and 1975 data.

Population Projections

Population in year 2000 - Current population projections are based on 1975 total population by age and sex and their mortality and fertility rates. Projection parameters for mortality rates comprise of three levels assuming life expectancy at birth increasing with country's per capita income level, and female life expectancy stabilizing at 77.5 years. The parameters for fertility rate also have three levels assuming decline in fertility according to income level and past family planning performance. Each country is then assigned one of these nine combinations of mortality and fertility trends for projection purposes.

Stationary population - In a stationary population there is no growth since the birth rate is equal to the death rate, and also the age structure remains constant. This is achieved only after fertility rates decline to the replacement level of unit net reproduction rate, when each generation of women replaces itself exactly. The stationary population size was estimated on the basis of the projected characteristics of the population in the year 2000, and the rate of decline of fertility rate to replacement level.

Year stationary population is reached - The year when stationary population size has been reached.

Population Density

Per sq. km. - Mid-year population per square kilometer (100 hectares) of total area.
Per sq. km. agricultural land - Computed as above for agricultural land only.

Population Age Structure (percent) - Children (0-14 years), working-age (15-64 years), and retired (65 years and over) as percentages of mid-year population; 1960, 1970, and 1977 data.

Population Growth Rate (percent) - Total - Annual growth rates of total mid-year populations for 1950-59, 1960-70, and 1970-77.
Population Growth Rate (percent) - urban - Annual growth rates of urban populations for 1950-60, 1960-70, and 1970-75.

Crude Birth Rate (per thousand) - Annual live births per thousand of mid-year population; 1960, 1970, and 1977 data.
Crude Death Rate (per thousand) - Annual deaths per thousand of mid-year population; 1960, 1970, and 1977 data.

Gross Reproduction Rate - Average number of daughters a woman will bear in her normal reproductive period if she experiences present age-specific fertility rates; usually five-year averages ending in 1960, 1970, and 1975.

Family Planning - Acceptors, Annual (thousands) - Annual number of acceptors of birth-control devices under auspices of national family planning program.
Family Planning - Users (percent of married women) - Percentage of married women of child-bearing age (15-44 years) who use birth-control devices to all married women in same age group.

FOOD AND NUTRITION

Index of Food Production per Capita 1969=100 - Index of per capita annual production of all food commodities. Production excludes seed and feed and is on calendar year basis. Commodities cover primary goods (e.g. sugarcane) instead of their edible and contain nutrients (e.g. coffee and tea are excluded). Aggregate production of each country is based on national average producer price weights.

Per capita supply of calories (percent of requirements) - Computed from energy equivalent of net food supplies available in country per capita per day. Available supplies comprise domestic production, imports less exports, and changes in stock. Net supplies exclude animal feed, seeds, quantities used in food processing, and losses in distribution. Requirements were estimated by FAO based on physiological needs for normal activity and health considering environmental temperature, body weights, age and sex distributions of population, and allowing 10 percent for waste at household level.

Per capita supply of protein (grams per day) - Protein content of per capita net supply of food per day. Net supply of food is defined as above. Requirements for all countries established by USDA provide for a minimum allowance of 60 grams of total protein per day and 20 grams of animal and pulse protein, of which 10 grams should be animal protein. These standards are lower than those of 75 grams of total protein and 23 grams of animal protein as an average for the world, proposed by FAO in the Third World Food Survey.

Per capita protein supply from animal and pulse - Protein supply of food derived from animals and pulses in grams per day.
Child Mages Mortality Rate (per thousand) - Annual deaths per thousand in age group 1-4 years, to children in this age group; for most developing countries data derived from life tables.

HEALTH

Life Expectancy at Birth (years) - Average number of years of life remaining at birth; 1960, 1970, and 1977 data.
Infant Mortality Rate (per thousand) - Annual deaths of infants under one year of age per thousand live births.

Access to Safe Water (percent of population) - total, urban, and rural - Number of people, total, urban, and rural, with reasonable access to safe water supply. Includes treated surface waters or untreated but uncontaminated water such as that from protected boreholes, springs, and sanitary wells) as percentages of their respective populations. In an urban area a public fountain or standpost located not more than 200 meters from a house may be considered as being within reasonable access of that house. In rural areas reasonable access would imply that the housewife or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs

Access to Excreta Disposal (percent of population) - total, urban, and rural - Number of people (total, urban, and rural) served by excreta disposal as percentages of their respective populations. Excreta disposal may include the collection and disposal, with or without treatment, of human excreta and waste-water by water-borne systems or the use of pit privies and similar installations.

Population per Physician - Population divided by number of practicing physicians qualified from a medical school at university level.

Population per Nursing Person - Population divided by number of practicing male and female graduate nurses, practical nurses, and assistant nurses.

Hospital Bed - total, urban, and rural - Population (total, urban, and rural) divided by their respective number of hospital beds available in public and private general and specialized hospital and rehabilitation centers. Hospitals are establishments permanently staffed by at least one physician. Establishments providing principally custodial care are not included. Rural hospitals, however, include health and medical centers not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.) which offer inpatient accommodation and provide a limited range of medical facilities.
Admissions per Hospital Bed - Total number of admissions to or discharges from hospitals divided by number of beds.

HOUSING

Average Size of Household (persons per household) - total, urban, and rural - Household consists of a group of individuals who share living quarters and their main meals. A boarder or lodger may or may not be included in the household for statistical purposes.

Average number of persons per room - total, urban, and rural - Average number of persons per room in all urban, and rural occupied conventional dwellings, respectively. Dwellings exclude non-permanent structures and unoccupied bars.

Access to Electricity (per thousand population) - total, urban, and rural - Conventional dwellings with electricity in living quarters as percentage of total, urban, and rural dwellings respectively.

EDUCATION

Adjusted Enrollment Ratios

Primary school - total, male and female - Gross total, male and female enrollment of all ages at the primary level as percentages of respective primary school-age populations; normally includes children aged 6-11 years but adjusted for different lengths of primary education; for countries with universal education enrollment may exceed 100 percent since some pupils are below or above the official school age.

Secondary school - total, male and female - Computed as above; secondary education requires at least four years of approved primary instruction; provides general vocational, or teacher training instructions for pupils usually of 12 to 17 years of age; correspondence courses are generally excluded.

Vocational enrollment (percent of secondary) - Vocational institutions include technical, industrial, or other programs which operate independently or as departments of secondary institutions.

Public-teacher ratio - primary and secondary - Total students enrolled in primary and secondary levels divided by numbers of teachers in the corresponding levels.

Adult literacy rate (percent) - Literate adults (able to read and write) as a percentage of total adult population aged 15 years and over.

CONSUMPTION

Passenger Cars (per thousand population) - Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearses and military vehicles.

Radio Receivers (per thousand population) - All types of receivers for radio broadcasts to general public per thousand of population; excludes unlicensed receivers in countries and in years when registration of radio sets was in effect; data for recent years may not be comparable since some countries abolished licensing.

TV Receivers (per thousand population) - TV receivers for broadcast to general public per thousand population; excludes unlicensed TV receivers in countries and in years when registration of TV sets was in effect.

Newspaper Circulation (per thousand population) - Shows the average circulation of "daily general interest newspaper", defined as a periodical publication devoted primarily to recording general news. It is considered to be "daily" if it appears at least four times a week.

Cinema Annual Attendance per Capita per Year - Based on the number of tickets sold during the year, including admissions to drive-in cinemas and mobile units.

LABOR FORCE

Total Labor Force (thousands) - Economically active persons, including armed forces and unemployed but excluding housewives, students, etc. Definitions in various countries are not comparable.

Female (percent) - Female labor force as percentage of total labor force.
Agriculture (percent) - Labor force in farming, forestry, hunting and fishing as percentage of total labor force.

Industry (percent) - Labor force in mining, construction, manufacturing and electricity, water and gas as percentage of total labor force.

Participation Rate (percent) - total, male, and female - Participation or activity rates are computed as total, male, and female labor force as percentages of total, male and female population of all ages respectively; 1960, 1970, and 1975 data. These are ILO's participation rates reflecting age-sex structure of the population, and long time trend. A few estimates are from national sources.

Economic Dependency Ratio - Ratio of population under 15 and 65 and over to the labor force in age group of 15-64 years.

INCOME DISTRIBUTION

Percentages of Private Income (both in cash and kind) - Received by richest 5 percent, richest 20 percent, poorest 20 percent, and poorest 40 percent of households.

POVERTY TARGET GROUPS

Estimated Absolute Poverty Income Level (US\$ per capita) - urban and rural - Absolute poverty income level is that income level below which a minimal nutritionally adequate diet plus essential non-food requirements is not affordable.

Estimated Relative Poverty Income Level (US\$ per capita) - urban and rural - Rural relative poverty income level is one-third of average per capita personal income of the country. Urban level is derived from the rural level with adjustment for higher cost of living in urban areas.

Estimated Population Below Absolute Poverty Income Level (percent) - urban and rural - Percent of population urban and rural who are "absolute poor".

ECONOMIC INDICATORS

	<u>GROSS NATIONAL PRODUCT IN 1978 /a</u>		<u>ANNUAL RATE OF GROWTH (% constant prices)</u>		
	<u>US\$ Mln</u>	<u>%</u>	<u>1960-65</u>	<u>1965-70</u>	<u>1971-78</u>
GNP at Market Prices	47,461	100.0	1.9	4.9	7.8
Gross Domestic Investment	10,022	21.1	3.3	11.5	14.7
Gross National Saving	9,233	19.5	5.8	5.1	12.0
Current Account Balance	-1,155	-2.4	.	.	.
Exports of Goods, NFS	10,278	21.7	1.5	7.8	8.9
Imports of Goods, NFS	9,144	19.3	0.2	10.9	17.9

OUTPUT, LABOR FORCE AND PRODUCTIVITY IN 1976

	<u>Value Added</u>		<u>Labor Force /b</u>		<u>V.A. Per Worker</u>	
	<u>US\$ Mln</u>	<u>%</u>	<u>Mln</u>	<u>%</u>	<u>US\$</u>	<u>%</u>
Agriculture	11,624	31.1	35.3	62.6	329	49.7
Industry	12,672	33.9	4.7	8.3	2,696	407.3
Services	13,043	35.0	13.4	23.8	973	147.0
Unallocated	-	-	3.0	5.3	.	.
<u>Total/Average</u>	<u>37,339</u>	<u>100.0</u>	<u>56.4</u>	<u>100.0</u>	<u>662</u>	<u>100.0</u>

GOVERNMENT FINANCE

	<u>(Rp Billion)</u>		<u>CENTRAL GOVERNMENT</u>	
	<u>1977/78</u>	<u>1978/79</u>	<u>% of GDP</u>	
			<u>1977</u>	<u>1978</u>
Current Receipts	3,535	4,266	18.9	19.6
Current Expenditure	2,149	2,744	11.5	12.6
Current Surplus	1,386	1,522	7.4	7.0
Capital Expenditures	2,157	2,556	11.5	11.7
External Assistance (net)	738	987	3.9	4.5

MONEY, CREDIT and PRICES

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
	(Million Rp outstanding end period)						
Money and Quasi Money	695	987	1,452	1,978	2,631	3,131	3,809
Bank Credit to Public Sector	129	153	209	990	1,051	883	1,442
Bank Credit to Private Sector	524	932	1,186	1,376	1,737	2,017	2,605
	(Percentages or Index Numbers)						
Money and Quasi Money as % of GDP	15.2	14.6	13.5	15.6	17.0	16.7	17.5
General Price Index (1971 = 100)	106	139	196	234	280	311	336
Annual percentage changes in:							
General Price Index	6.4	31.1	41.0	19.4	19.7	11.0	8.1
Bank Credit to Public Sector	-14.0	18.6	36.6	373.7	6.2	-16.0	63.3
Bank Credit to Private Sector	65.3	77.9	27.2	16.0	26.2	16.1	29.2

Note: All conversions to dollars in this table are at the average exchange rate prevailing during the period covered.

/a Exchange rate of Rp 415 = US\$1 up to November 14, 1978, Rp 625 = US\$1, thereafter.

/b Total labor force; unemployed are allocated to sector of their normal occupation. "Unallocated" consists mainly of unemployed workers seeking their first job.

. Not applicable

TRADE PAYMENTS AND CAPITAL FLOWS

<u>BALANCE OF PAYMENTS</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>MERCHANDISE EXPORTS</u> (Average 1976-78)	<u>US\$ Mn</u>	<u>%</u>
1. Exports:	6,573	7,952	7,989			
(a) Oil and LNG (net)	3,710	4,445	4,010	Oil and LNG (net)	4,055	54.1
(b) Nonoil	2,863	3,507	3,979	Timber	986	13.1
2. Imports (incl. net NFS)	-6,657	-7,777	-8,129	Rubber	653	8.7
(a) Imports	-6,167	-7,241	-7,543	Coffee	488	6.5
(b) NFS (net)	-490	-536	586	Palm Oil	190	2.5
3. Resource balance	-84	175	-140	Tin	253	3.4
4. Factor services	-718	-865	-1,015	Manufactures	261	3.5
(a) Interest public debt /a	-314	-436	-499	All others	619	8.2
(b) Other (net)	-404	-429	-516			
5. Balance on current account	-802	-690	-1,155	<u>Total</u>	<u>7,505</u>	<u>100.0</u>
6. Direct foreign investment	287	285	271			
7. Capital grants	100	100	100			
8. Public M & LT loan /a				<u>EXTERNAL DEBT - December 31, 1978</u>		
(a) Disbursement	2,334	1,955	1,627	<u>Disbursed</u>		
(b) Amortization	-457	-825	-969	<u>Undisbursed</u>		
(c) Net disbursements	1,897	1,130	658	<u>Total</u>		
9. Other capital (net)	-481	-174	834	----- US\$ million -----		
10. Change in reserves				Total External Public Debt	12,983	5,794
(- increase)	-1,001	-651	-708			18,777
11. Net official reserves	1,557	2,208	2,916			
Reserves in months of imports + NFS	2.8	3.4	4.3	<u>DEBT SERVICE RATIO</u>		
				Public debt service as % of exports	11.7	15.9
						18.4
				<u>IBRD/IDA LENDING (March 31, 1980) (US\$ million)</u>		
				<u>IBRD</u>		<u>IDA</u>
				Outstanding & Disbursed	817.30	524.00
				Undisbursed	1,873.70	376.70
				Outstanding incl. Undisbursed	2,691.00	900.70

RATE OF EXCHANGE

August 1971 through November 14, 1978

US\$1.00 = Rp 415
Rp 1,000 = US\$2.41

Since November 15, 1978

US\$1.00 = Rp 625
Rp 1,000 = US\$1.60

/a Based on IBRD external debt data.

THE STATUS OF BANK GROUP OPERATIONS IN INDONESIA

A. STATEMENT OF BANK LOANS AND IDA CREDITS (as of March 31, 1980)

Loan/ Credit Number	Fiscal Year	Purpose	US\$ million		
			Amount (less cancellations)		
			Bank	IDA	Undisbursed
Two Loans and twenty-four Credits fully disbursed			98.00	321.60	-
259	1971	Tea		15.00	0.40
300	1972	Population		13.20	1.94
319	1972	Fourth Agricultural Estates		11.00	1.85
355	1973	Beef Cattle Development		3.60	0.02
358	1973	North Sumatra Smallholder Development		5.00	0.80
387	1973	Third Education		13.50	4.25
399	1973	West Java Thermal Power		46.00	3.04
400	1973	Smallholder and Private Estate Tea		7.80	5.38
405	1973	Sugar Industry Rehabilitation		50.00	0.47
428	1974	Pulo Gadung Industrial Estate		16.50	9.20
451	1974	Fourth Technical Assistance		5.00	1.34
479	1974	Bali Tourism		16.00	7.70
480	1974	Fisheries Credit		6.50	1.41
514	1975	Jatiluhur Irrigation Extension		30.00	19.07
785	1978	Small Enterprise Development Project		40.00	20.85
827	1978	Rural Credit		30.00	29.32
869	1979	Polytechnic		49.00	48.42
898	1979	Fifth Technical Assistance		10.00	9.97
919	1979	Transmigration II		67.00	67.00
946	1980	Yogyakarta Rural Development		12.00	12.00
984	1980	Smallholder Rubber Development <u>/a</u> Project		45.00	45.00
995	1980	Fifteenth Irrigation <u>/a</u>		45.00	45.00
996	1980	National Agriculture Extension II <u>/a</u>		42.00	42.00
1040	1975	Jakarta Urban Development	25.00		1.78
1049	1975	Five Cities Water Supply	14.50		4.60
1089	1975	Second Fertilizer Expansion	115.00		0.08
1100	1975	Sixth Irrigation	65.00		40.65
1127	1975	Fourth Power	41.00		1.94
1139	1976	Fertilizer Distribution	68.00		0.83
1179	1976	Agricultural Research & Extension	21.50		15.26
1197	1976	National Resource Survey & Mapping	13.00		7.22
1236	1976	Fourth Highway	130.00		86.26

/a Not yet effective.

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Loan/ Credit Number	Fiscal Year	Purpose	US\$ million Amount (less cancellations)		
			Bank	IDA	Undisbursed
1237	1976	Fourth Education	37.00		27.83
1250	1976	Second Shipping	54.00		36.04
1254	1976	Third Fertilizer Expansion	70.00		7.34
1259	1976	Fifth Power	90.00		41.90
1267	1976	National Food Crops Extension	22.00		11.02
1268	1976	Seventh Irrigation	33.00		17.16
1318	1977	Transmigration and Rural Development	30.00		19.07
1336	1977	Second Urban Development	52.50		13.02
1337	1977	Tanjung Priok Port	32.00		19.12
1363	1977	Second Private Development Finance Co. of Indonesia (PDFCI-II)	15.00		6.35
1365	1977	Sixth Power	116.00		60.29
1373	1977	Nutrition Development	13.00		11.79
1433	1977	Teacher Training-Fifth Education	19.00		16.12
1434	1977	Eighth Irrigation	63.00		55.66
1435	1977	Ninth Irrigation	35.00		26.39
1437	1977	Development Finance Co. (BAPINDO III)	40.00		10.65
1472	1977	Second Population	24.50		21.14
1486	1978	Non-Formal Education	15.00		12.26
1499	1978	Nucleus Estates and Smallholders I	65.00		54.94
1513	1978	Seventh Power	109.00		103.70
S009	1978	Bukit Asam Coal Mining and Transport Engineering	10.00		2.92
1578	1978	Tenth Irrigation	140.00		134.57
1579	1988	Eleventh Irrigation	31.00		27.25
1604	1978	Nucleus Estates and Smallholders II	65.00		64.70
1645	1979	Twelfth Irrigation	77.00		74.01
1653	1979	Third Urban Development	54.00		54.00
1691	1979	Lower Cimanuk Basin Flood Control (Thirteenth Irrigation)	50.00		49.74
1692	1979	Second Agricultural Training	42.00		41.50
1696	1979	Fifth Highway	130.00		128.72
1703	1979	Fourth BAPINDO	50.00		50.00
1707	1979	Transmigration II	90.00		90.00
1708	1979	Eighth Power	175.00		175.00
1709	1979	Second Water Supply	36.00		36.00
1751	1980	Nucleus Estates and Smallholders III	99.00		98.88
1811	1980	Fourteenth Irrigation /a	116.00		116.00

/a Not yet effective.

Loan/ Credit Number	Fiscal Year	Purpose	US\$ million Amount (less cancellations)		
			Bank	IDA	Undisbursed
		Total	<u>2,691.00</u>	<u>900.70</u>	<u>2,250.40</u>
		of which has been repaid	39.96	0.41	
		Total now outstanding	<u>2,651.04</u>	<u>899.29</u>	
		Amount sold		28.24	0.00
		of which has been repaid	-17.57	10.67	
		Total now held by Bank and IDA <u>/a</u>	2,640.37	900.70	
		Total undisbursed	<u>1,873.70</u>	<u>376.70</u>	<u>2,250.40</u>

/a Prior to exchange adjustment.

B. STATEMENT OF IFC INVESTMENTS (as of March 31, 1980)

Fiscal year	Obligor	Type of business	Loan -----	Equity (US\$ million)	Total -----
1971	P.T. Semen Cibinong	Cement	10.6	2.5	13.1
1971	P.T. Unitex	Textiles	2.5	0.8	3.3
1971	P.T. Primatexco Indonesia	Textiles	2.0	0.5	2.5
1971	P.T. Kabel Indonesia	Cable	2.8	0.4	3.2
1972	P.T. Daralon Textile Manuf. Corp.	Textiles	4.5	1.5	6.0
1973	P.T. Jakarta Int. Hotel	Tourism	11.0	-	11.0
1973	P.T. Semen Cibinong	Cement	5.4	0.7	6.1
1974	P.T. Primatexco Indonesia	Textiles	2.0	0.3	2.3
1974	P.T. Monsanto Pan	Electronics	0.9	-	0.9
1974	P.T. PDFCI	Devel. Fin. Co.	-	0.5	0.5
1974	P.T. Kamaltex	Textiles	2.4	0.6	3.0
1976	P.T. Semen Cibinong	Cement	5.0	1.5	6.5
1976	P.T. Semen Cibinong	Cement	-	1.1	1.1
1977	P.T. Daralon Textile Manuf. Corp.	Textiles	0.3	-	0.3
1977	P.T. Kamaltex	Textiles	1.4	0.1	1.5
1979	P.T. Daralon	Textiles	0.9	-	0.9
Total gross commitments			<u>51.7</u>	<u>10.5</u>	<u>62.2</u>
Less: sold or repaid and cancelled			<u>33.9</u>	<u>2.1</u>	<u>36.0</u>
Total held by IFC			<u>17.8</u>	<u>8.4</u>	<u>26.2</u>
Undisbursed (including participant's portion)			<u>-</u>	<u>-</u>	<u>-</u>

C. PROJECTS IN EXECUTION /1

These notes are arranged by sectors in the following order:

	<u>Page No.</u>
<u>Agriculture</u>	
Irrigation (514, 1100, 1268, 1434, 1435, 1578, 1579, 1645, 1691, 1811 and 995)	6-8
Other Agriculture Production (259, 319, 355, 358, 400, 405, 480, 1318, 1707/919, 1499, 1604, 1751 and 984)	8-10 10-12
Agriculture Support Services (1179, 1267 and 996)	12
Rural Development (946)	12
<u>Agro-Business and Credit</u> (785 and 827)	13
<u>Education</u> (387, 869, 1237, 1433, 1486 and 1692)	13-15
<u>Energy</u> (399, 1127, 1259, 1365, 1513 and 1708)	16-17
<u>Industrial Development and Finance</u>	
Fertilizer Production (1089 and 1254)	17
Industrial Estates (428)	18
Development Finance Companies (1363, 1437 and 1703)	18
Coal Mining (S-9)	19
<u>Population and Nutrition</u>	
Population (300 and 1472)	19
Nutrition (1373)	20
<u>Technical Assistance</u> (451, 898 and 1197)	20-21
<u>Transportation</u>	
Fertilizer Distribution (1139)	21
Highways (1236 and 1696)	21-22
Marine Transport (1250)	22
Ports (1337)	23
<u>Tourism</u> (479)	23
<u>Urban Development</u> (1040, 1336 and 1653)	23-24
<u>Water Supply</u> (1049 and 1709)	24-25

/1 These notes are designed to inform the Executive Directors regarding the progress of projects in execution, and in particular to report any problems which are being encountered and the action being taken to remedy them. They should be read in this sense, and with the understanding that they do not purport to present a balanced evaluation of strengths and weaknesses in project execution.

C. PROJECTS IN EXECUTION

AGRICULTURE

Irrigation

Credit No. 514 Jatiluhur Irrigation Extension: \$30 Million Credit of October 3, 1974; Effective Date: January 10, 1975; Closing Date: December 31, 1980.

Initial organizational difficulties and late awarding of contracts have caused a delay of about two years in the project schedule. Based on bid prices for the first contracts and revised quantity estimates on the basis of detailed design, total project cost is now estimated to be about 140% over the appraisal estimate and the project is currently expected to be completed by December 1982. The Closing Date of this credit is expected to be extended.

Loan No. 1100 Sixth Irrigation: \$65 Million Loan of April 10, 1975; Effective Date: June 20, 1975; Closing Date: June 30, 1982

The project is currently expected to be completed by March 1984, about three years behind the original completion date. This is mainly due to a delay of more than one year in the completion of bidding documents, followed by a delay of another year due to delayed land acquisition, delayed payments to contractors and the effects of the 1978 Rupiah devaluation. Because of double digit inflation and the Rupiah devaluation the total project cost is currently estimated at \$227 million, which is \$24 million more than the last mission estimate and about 38% above the appraisal estimate. Disbursements are currently about 50% of the appraisal estimate, but are expected to significantly increase in FY80/81. All major contracts have been awarded and sufficient funds are allocated for the programmed construction this year.

Loan No. 1268 Seventh Irrigation: \$33 Million Loan of June 4, 1976; Effective Date: September 21, 1976; Closing Date: December 31, 1981.

Construction is underway in the North Sadang and tertiary development areas, and studies being funded under the project are expected to be completed shortly. The mapping program is progressing satisfactorily. Disbursements are ahead of schedule.

Loan No. 1434 Eighth Irrigation: \$63 Million Loan of June 6, 1977; Effective Date: July 7, 1977; Closing Date: March 31, 1983.

The project is being implemented satisfactorily, although disbursements are currently about 80% behind the appraisal estimate largely due to

delays in the Madiun rehabilitation and Ciujung drainage components, and partly due to late payment to contractors. Disbursements are expected to improve in succeeding semesters because of increased activity in these components.

Loan No. 1435 Ninth Irrigation: \$35 Million Loan of June 6, 1977; Effective Date: July 7, 1977; Closing Date: December 31, 1981.

Initial delays cannot be expected to be made up during construction and the final completion date is estimated to be March 1983, a delay of 21 months. Further delays would occur if right-of-way lands are not initiated in advance of the construction program. Works are proposed to be executed under small to medium contracts using manual labor instead of equipment.

Loan No. 1578 Tenth Irrigation: \$140 Million Loan of June 6, 1978; Effective Date: August 16, 1978; Closing Date: December 31, 1984.

Delay in implementation of the project components is about 12 months. Some delays have occurred in awarding contracts and the construction program will have to be accelerated to achieve the completion target. Progress of studies of dams and irrigation subprojects is behind schedule due to the late awarding of contracts for aerial mapping for the Kali Progo, Way Seputih and Way Sekampung areas. Progress on studies at Dumoga and Gumbasa has been satisfactory. The staff of the PIBD, the Executive Body for Major Irrigation Projects with World Bank Assistance, will have to be strengthened in order to cope with the increased construction program from FY80/81 onwards.

Loan No. 1579 Eleventh Irrigation: \$31 Million Loan of June 6, 1978; Effective Date: August 16, 1978; Closing Date: December 31, 1983.

A smooth start has been made on some components but two components are behind schedule due to unforeseen technical problems and delays in drawing up tender documents.

Loan No. 1645 Twelfth Irrigation: \$77 Million Loan of December 29, 1978. Effective Date: May 10, 1979; Closing Date: March 31, 1984.

A smooth start to project implementation is being made. Contracts for consulting services were awarded before or only slightly beyond the deadline except for those for the Jatiluhur Tertiary Development component, which is slightly behind schedule. Completion of the Cisedane Drainage Component will be about six months late due to the delay in completing tender documents and in acquiring rights-of-way for the first civil works contract. The initial delays in Jatiluhur are expected to be made up during construction and final completion may still be as projected during appraisal. Similar delays in Cisedane are unlikely to be recovered and a six-month delay in final completion is anticipated. The total project cost is expected to be within the original estimate.

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Loan No. 1691 Lower Cimanuk Basin Flood Control: \$51 Million Loan of
May 7, 1979; Effective Date: October 16, 1979;
Closing Date: March 31, 1984.

This loan became effective last October and the initial progress is satisfactory. Consultants have been engaged for the construction supervision and studies provided under the project. The construction of river training works and flood protection levees under six on-going contracts is progressing well and on schedule. Two major works, the construction of the Rambatan Channel and Bangkir control structure are scheduled for bid opening in June 1980. The major difficulty foreseen at this stage is the land acquisition for the rights-of-way. The implementing agency is aware of this problem and is trying to resolve it. Disbursements are presently below appraisal estimates.

Loans No. 1811 Fourteenth Irrigation Project: \$116 Million Loan of April 3,
1980; Effective Date: Not yet effective;
Closing Date: January 31, 1986

This loan has not yet been declared effective.

Credit No. 995 Fifteenth Irrigation Project: \$45 Million Credit of April 3,
1980; Effective Date: Not yet effective;
Closing Date: January 31, 1985

This credit has not yet been declared effective.

Other Agriculture Production

Credit No. 259 Tea: \$15 Million Credit of June 24, 1971; Effective
Date: September 17, 1971; Closing Date: August 31, 1980.

Nearly all the targets set at appraisal have been achieved one year ahead of project completion, but factory capacity still has to be expanded to take account of the increased production which exceeds appraisal estimates by about 6,000 tons, or 30%. Financial, technical and managerial performance has been excellent. Inflation and additional construction and equipment costs increased project costs by about 17% above appraisal estimate, but the economic rate of return is good and is expected to be over 20%. The closing date has been extended to August 31, 1980, in order to make payment for goods ordered but not delivered by the previous closing date.

Credit No. 319 Fourth Agricultural Estates: \$11 Million Credit of
June 28, 1972; Effective Date: January 30, 1973;
Closing Date: June 30, 1981.

The planting program under the project has been completed and the construction of processing facilities should be completed by the middle of 1981. Production, profitability and costs of PNP X continue to be satisfactory although oil palm output is down as a result of processing problems at Bekri Mill. PNP X has expanded its operations further under Loan 1499-IND

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(NES I), and its work on planting rubber for smallholders under NES I and under Loan 1318-IND (Transmigration I) is progressing well. Nevertheless, there are some temporary difficulties, but overall project performance remains very satisfactory.

Credit No. 355 Beef Cattle Development: \$3.6 Million Credit of January 31, 1973; Effective Date: May 30, 1973; Closing Date: September 30, 1980.

The PT Bina Mulya Ternak Corporation (PTBMT) is now managed by Indonesian staff with satisfactory technical capability. Development of ranch infrastructure and fencing has been completed, but pastures on both Sulawesi ranches remain understocked. Fertility levels of cattle are low and as yet no satisfactory solution has been found to improve the situation. A three-year pasture and grazing research program with Australian bilateral assistance started in early 1979 and it is expected that, inter alia, the cause for low fertility may also be determined in 1980 or 1981. Purchases of domestic stock in 1979 enabled PTBMT to partially utilize its surplus grazing capacity and improve its finances. The budget for 1980 has been approved and sufficient funds are available to meet investment and operating expenditures in 1980 and up to project completion, about mid-1980. The recording system in PTBMT is satisfactory; there are no specific disbursement problems.

Credit No. 358 North Sumatra Smallholder Development: \$5 Million Credit of February 14, 1973; Effective Date: August 13, 1973; Closing Date: December 31, 1981.

The 9,000 ha planting program under the project is now completed. Rubber and oil palm continue to show very satisfactory growth with the 1974/75 plantings of rubber and oil palm coming into production. Control of weeding and general maintenance standards will require close supervision up to 1982/83 when all plantings reach maturity.

Credit No. 400 Smallholder and Private Estate Tea: \$7.8 Million Credit of June 22, 1973; Effective Date: November 30, 1973; Closing Date March 31, 1982

The project provides credit through Bank Rakyat Indonesia and extension advice through a Project Management Unit for improvement of Indonesian smallholder and private estate tea. Of 13,200 ha, 60% was to be rehabilitated and 40% replanted. Participants have preferred more costly replanting and the objective has therefore been changed to 10,500 ha, and the proportions reversed. Production will not be adversely affected since replanting yields are higher. Costs are now estimated to exceed appraisal estimates by about 60% since replanting is more expensive and costs have risen sharply because of inflation. Disbursements are behind appraisal estimates for the same reasons. The project has made a significant impact on the private sector of the Indonesian tea industry. The project training program is especially noteworthy having now involved more than 9,000 smallholders through practical village training schemes.

Credit No. 405 Sugar Industry Rehabilitation: US\$50 Million Credit of
June 26, 1973; Effective Date: April 22, 1974;
Closing Date: December 31, 1980

Factory rehabilitation (PTP XV and XXI/XXII) completed, but performance still below appraisal forecast. PTP XXI/XXII is taking vigorous steps to improve performance and re-orient field staff to the Government decision that all sugarcane be grown by farmers, none on land rented by factories - a traumatic and dislocating change. PTP XV is finding it more difficult to adapt. The three modern project factories at Pesantren, Gempolkrep and Sragi have minor problems on completion of the 1979 season. Cane areas have expanded about as forecast, but average yields are much lower due to switch to farmers' cane and PTP lack of experience in farm extension work (being remedied). PTP XXI/XXII made a substantial profit in 1979 (\$11.3 M); PTP XV made a substantial loss (\$3.6 M), though its lowest loss in five years. Capital reconstruction for PTP XV is being actively considered. Uneven supply and poor quality of cane, through improving, still inhibit results. Cost reduction is being achieved, but desirable factory amalgamation is resisted because it would reduce employment. The Indonesian Sugar Experiment Station (Pasuruan) has been reorganized to meet the need for more intensive research on new varieties, especially rainfed and ratooning, and on intercropping and upland soil fertility; required additional funds are included in the National Agricultural Research Project.

Credit No. 480 Fisheries Credit: \$6.5 Million Credit of June 14, 1974;
Effective Date: January 8, 1975; Closing Date: June 30,
1980

Initial delays have put the project about 18 months behind schedule. The marine fishing complex at Ambon is completed, making a promising start with twenty fishing boats operating, ten by the Government's skipjack tuna enterprise and ten by a cooperative; two 100 gross ton catcher/carriers have been ordered. The quality of fishpond lending by Bank Rakyat Indonesia suffered early deficiencies, but is now completed; results are patchy and arrears excessive in some areas. Coverage is much less than appraisal forecast (31% of farmers, 60% of area) and details not yet available, but inflation and the inability of smaller owners to participate are probably the reasons.

Loan No. 1318 Transmigration and Rural Development: \$30 Million
Loan of July 21, 1976; Effective Date: March 30, 1977;
Closing Date: December 31, 1981

Overall project performance has been slower than expected. An additional 400 families have been settled at Baturaja, bringing the total to 2,200 compared to a target of 3,100. About 1,800 ha is being cropped at Baturaja. Project management has been strengthened by recruitment of some new staff. Infrastructure work at villages 4 to 8 is slow due to

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shortage of funds and for the same reason no new contracts have been signed. No progress has been recorded on the seed farm which is still 70-130 ha short of target and pastures have still not been satisfactorily developed. Detailed plans for villages 9, 10 and 11 are now being prepared by the implementing agency.

Loan No. 1707 Transmigration II: \$90 Million Loan and \$67 Million Credit of (Cr. No. 919) June 1, 1979; Effective Date: October 4, 1979; Closing Date: December 31, 1985

There have been some delays in the implementation of the project owing to the necessity to resurvey and map a significant portion of the project areas. However, rapid progress has recently been achieved and it should be possible to maintain the original implementation schedule. Bids for land clearing and construction of roads have been evaluated and the contract is expected to be awarded shortly.

Loan No. 1499 Nucleus Estates and Smallholder I: \$65 Million Loan of November 18, 1977; Effective Date: January 12, 1978; Closing Date: June 30, 1982

The project's overall physical progress has been generally good but unequal. While in some areas the planting program substantially exceeded the target, in others it remained behind schedule, but recently, energetic measures have been taken to make up for the delays. Housing, roads and village development is behind schedule but preparations are under way which should accelerate implementation in the forthcoming months.

Loan No. 1604 Nucleus Estate and Smallholder II: \$65 Million Loan of July 12, 1978; Effective Date: September 13, 1978; Closing Date: December 31, 1983

The planting program is almost on schedule, but housing, roads and village development is behind. The appointment of new project manager and support staff from local authorities have helped speed up implementation. The management of PTP IV, the local authorities and the Directorate General of Estates have agreed to the Bank's recommendation that preparations for the construction of settlers' houses should start immediately and that the upgrading and staffing of the Sungai Tiga Extension and training Center in Jambi should be implemented.

Loan No. 1751 Nucleus Estates and Smallholders III: \$99 Million Loan of August 13, 1979; Effective Date: November 12, 1979; Closing Date: December 31, 1986

The project is off to a good start. Reasonable progress has been achieved in the estate development components, and preparations being made to start implementation of the smallholder components this year should result in the planting of about 5,000 ha of smallholder rubber and the settlement of the first 600 participating settlers by March 1981.

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Credit No. 984 Smallholder Rubber Development Project: \$45 Million Credit of April 3, 1980; Effective Date: Not yet effective; Closing Date: March 31, 1986

This credit has not yet been declared effective.

Agriculture Support Services

Loan No. 1179 Agricultural Research and Extension I: \$21.5 Million Loan of December 19, 1975; Effective Date: February 23, 1976; Closing Date: December 31, 1981

There has been overall progress in all spheres of activities. Under the Agency for Agricultural Research and Development (AARD) civil work have been started at Sungei Putih, Sembawa (rubber), Pangragajian, Margahayu, Barujak (highland vegetables) and Sukamandi (Phase I, rice and palawija crops). The research programs are now better defined and more purposeful and several new varieties are expected to be released shortly. All of the ten Agricultural Information Centers were inaugurated on September 24, 1979. Although disbursements are still lagging behind appraisal estimates, they are expected to pick up shortly.

Loan No. 1267 National Food Crops Extension; \$22 Million Loan of June 4, 1976; Effective Date: September 21, 1976; Closing Date: June 30, 1982

Good progress is being made in the field and, despite organizational difficulties, an effective extension service is being created. Appointments of extension staff are ahead of schedule and the project directorate has been strengthened by the appointment of three additional Assistant Directors. Civil works have been resumed and the training program has started. Disbursement is lagging in every category due to prefinancing difficulties and delays in submission of withdrawal applications with supporting documentation for equipment and furniture. The new procedure for prefinancing outlined by the Finance Ministry last year is expected to help solve the problem and speed up project implementation and disbursement.

Credit No. 996 Second National Agricultural Extension Project: \$42 Million Credit of April 3, 1989; Effective Date: Not yet effective; Closing Date: March 31, 1986

The credit has not yet been declared effective.

Rural Development

Credit No. 946 Yogyakarta Rural Development: \$12 Million Credit of August 13, 1979; Effective Date: December 5, 1979; Closing Date: March 31, 1987

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This credit became effective in December 1979 and the start of implementation has been smooth. A Project Coordinating Unit has been established and staffed within BAPPEDA (the provincial development planning agency) and the working papers have been translated into Bahasa Indonesia for distribution to the participating agencies. A Project Steering Committee has also been set up by the Governor of Yogyakarta.

AGRO-BUSINESS AND CREDIT

Credit No. 785 Small Enterprise Development: \$40 Million Credit of April 7, 1978; Effective Date: August 17, 1978; Closing Date: December 31, 1981

The project, which provides financial and technical assistance to strengthen Bank Indonesia's (BI) small credit programs, KIK/KMKP, became effective August 17, 1978. Despite start-up difficulties, BI has now established and staffed all project management units. The three field units in Central Java, East Java, and West Sumatra are developing new lending approaches and assisting handling banks in project promotion and preparation. The training and studies components of the project are progressing satisfactorily.

Credit No. 827 Rural Credit: \$30 Million Credit of June 23, 1978; Effective Date: November 3, 1978; Closing Date: March 31, 1985

This project provides long-term credit to about 40,000 smallholders, primarily for fisheries, perennial crops and livestock, and technical assistance to Bank Rakyat Indonesia (BRI) for program development, training, credit procedures and accounting and management information systems. Due primarily to delays in obtaining project consultancy, the project is about nine months behind schedule.

EDUCATION

Credit No. 387 Third Education: \$13.5 Million Credit of June 1, 1973; Effective Date: August 29, 1973; Closing Date: December 31, 1981

The first textbook project is an ambitious undertaking under difficult circumstances. Since the start five years ago, over 150 million books have been printed, 120% of the appraisal target, and about 430,000 teachers have been upgraded, or 23% over the original target of 350,000. About 100 million books have been distributed to schools. Delivery of books takes about one month to a year depending on the location of schools. The Project

Implementing Unit advises that the remaining 50 million textbooks (grades 5 and 6) will have been printed by September 1980 and delivered before the Closing Date. Project costs have increased due to the increased scope of the project and inflation since 1973 which has affected the cost of paper, printing and transportation.

Credit No. 869 Polytechnic: \$49 Million Credit of December 29, 1978;
Effective Date: May 11, 1979; Closing Date: June 30, 1985

The project is designed to help the Government meet the demand for engineering technicians and trained accountants. The engineering technicians (polytechnic) component is making reasonable progress. Staff appointments follow the appraisal schedule. The first civil works contract for grading work of the Technician Education Development Center (TEDC) and the Bandung polytechnic (PT) have been awarded. Contractors for the remaining civil works have been prequalified. Bids for the construction of the TEDC and the Bandung PT were opened in March and evaluation in April, about six months behind schedule. Equipment for the TEDC and Bandung PT is being tendered and is scheduled to be awarded in September 1980, about three months behind schedule. The PT expert services program is progressing satisfactorily.

Loan No. 1237 Fourth Education: \$37 Million Loan of April 15, 1976;
Effective Date: June 17, 1976; Closing Date: December 31, 1980

The three subprojects under the Ministry of Education (MOE), Ministry of Manpower (MOM) and National Institute of Administration (LAN) suffered (a) initial delays due to slow site acquisition and late contracting agencies; and (b) additional delays due to slow awarding of physical facilities because of weak project management, late release of budget funds and late ministerial approvals. Overall delays amount to about two years and will require postponement of the Closing Date. The MOE component's objectives are to build, equip and commission four Technical Training Centers (TTCs) for technical training at secondary level and two Faculties of Technology in Teacher Training Colleges (FKTs). Civil works are completed and 75% of equipment contracted, but due to the necessity to retender some equipment, the project is about two years behind appraisal schedule. The MOM component's objectives are to build, equip and commission 17 new vocational training centers and to provide 26 mobile training units. About 50% of civil works are completed and 45% of equipment contracted. Technical assistance is on schedule. The LAN component's objectives are to provide buildings, furniture, equipment and technical assistance for the principal civil service training Institute in Indonesia. Civil works are 20% complete, two years behind schedule, procurement of furniture and equipment follows the civil works schedule.

Loan No. 1433 Teacher Training: \$19 Million Loan of June 6, 1977;
Effective Date: July 7, 1977; Closing Date: June 30, 1983

The project which finances the development of primary and secondary teacher training has made satisfactory progress with the implementation of the educational aspects. The National Team of 40 educators has completed the in-country training of 110 educators and initiated training of 7,000 staff of primary teacher training colleges (SPGs) and secondary teacher training colleges (IPIPs). The implementation of physical aspects is delayed by 6-12 months because of problems with site acquisition, late release of budget funds, and late approvals of recommended awards. Therefore, only about 15% of civil works have been awarded and 4% completed. Corresponding percentages for equipment are 28 and 16. Despite the delays, the Project Implementing Unit still expects to complete the project on schedule.

Loan No. 1486 Non-Formal Education: \$15 Million Loan of
September 14, 1977; Effective Date: November 4, 1977;
Closing Date: June 30, 1983

The project aims at strengthening the nonformal education programs of the Department of Education in seven provinces by financing civil works to renovate two and establish four provincial centers, instructional equipment and vehicles, in-service training, materials development, a basic learning fund, and related technical assistance. The project is making reasonable progress. Civil works for all six centers have been awarded, two are completed and in use, three are about 90% completed and one, the Center of Semarang has just been awarded. Furniture has been tendered for the four new centers and about 55% of equipment has been awarded. Compared to appraisal estimates, the physical facilities are delayed about 12 months. Progress in the educational aspects is that of 64 fellowships, 54 have been awarded and 44 concluded. Under the expert services program, two experts have completed services, nine are in post, and four are still to be recruited. Staff appointment and material development are on schedule.

Loan No. 1692 Second Agricultural Training: \$42 Million Loan of May 7,
1979; Effective Date: July 31, 1979; Closing Date:
June 30, 1985

The project constitutes the second phase of the Government's long-term strategy to improve the quality and supply of middle level agricultural manpower. It finances the renovation, furnishing and equipping, expansion and relocation of 26 existing agricultural development schools and 16 existing agricultural in-service training centers; and the construction and furnishing and equipping of 5 agricultural development schools and 7 agricultural in-service training centers. It also provides technical assistance for the improvement of curricula, education planning and evaluation. The Project Implementation Unit is now fully staffed and implementation is generally on schedule. No major implementation problems have yet been encountered.

ENERGY

Credit No. 399 West Java Thermal Power: \$46 Million Credit of June 22, 1973; Effective Date: August 28, 1973; Closing Date: June 30, 1980

Project implementation was initially delayed due to the necessity of making additional financing arrangements to meet higher than estimated equipment costs. Thereafter implementation proceeded smoothly. Both the 100 MW generating units are now in commercial operation. Arrangements are being made to release retention payments. Disbursements are expected to be completed before the Closing Date.

Loan No. 1127 Fourth Power: \$41 Million Loan of June 17, 1975; Effective Date: October 23, 1975; Closing Date: June 30, 1980

The third 100 MW generating set at Muara Karang Thermal Power Station was put into commercial operation in November 1980. The set is operating satisfactorily. Disbursements are expected to be completed before the target closing date (mid-1980) as forecast.

Loan No. 1259 Fifth Power: \$90 Million Loan of May 20, 1976; Effective Date: September 20, 1976; Closing Date: March 31, 1981

All equipment required for the project has been ordered in three lots within the cost estimate. By end 1980 about 90% of the disbursement would be complete. However, construction work lags behind schedule. While there has been good progress on construction of 20 kV cables, installation of the associated substations is well behind schedule. This is due to problems of acquisition of land which the Government has been requested to assist in solving.

Loan No. 1365 Sixth Power: \$116 Million Loan of February 4, 1977; Effective Date: June 6, 1977; Closing Date: December 31, 1982

Construction of the fourth and fifth generating sets (200 MW each) has been delayed mainly due to a misalignment of the center line of the turbogenerator and power house foundations. There has been an inordinate delay by the consulting engineer in finding an appropriate solution to the problems. The fourth generating set is expected to be in commercial operation around May 1981, about 9 months later than the contract date, but only 3 months later than forecast at appraisal. Engineering of the Semarang 3 (Seventh Power) project and of the Java Interconnected system is proceeding satisfactorily.

Loan No. 1513 Seventh Power: \$109 Million Loan of February 3, 1978;
Effective Date: June 30, 1978; Closing Date: December 31,
1983

All contracts, except for general construction and steel work have been awarded at highly competitive costs. A reduction in foreign costs of about \$30.0 million is presently expected. Delays in award of contracts for civil works caused by introduction of new procedures for such contract awards by the Government have resulted in a three-month delay in the tight construction program. It will delay commissioning of the 200 MW generating set which is now expected in August 1982.

Loan No. 1708 Eighth Power: \$175 Million Loan of June 1, 1979;
Effective Date: November 5, 1979; Closing Date:
December 31, 1984

Project implementation is on schedule so far, towards a target of commissioning of the unit in January 1984, which was the appraisal estimate. Bids for turbine generator and auxiliary equipment were evaluated and a letter of intent for the contract was issued in January 1980 as scheduled. Bids for steam generator and auxiliary equipment are under evaluation.

INDUSTRIAL DEVELOPMENT AND FINANCE

Fertilizer Production

Loan No. 1089 Second Fertilizer Expansion: \$115 Million Loan of
February 28, 1975; Effective Date: April 29, 1975;
Closing Date: August 31, 1980

The project (PUSRI III) was commissioned April 9, 1977, one month ahead of schedule. During the eight months of operation in 1977, the project operated at 66% capacity utilization, which increased sharply to about 92% in 1978 with the overcoming of initial technical problems. The project is not expected to show a cost overrun.

Loan No. 1254 Third Fertilizer Expansion: \$70 Million Loan of May 20,
1976; Effective Date: August 15, 1976; Closing Date:
December 31, 1980

The project (PUSRI IV) was commissioned on November 26, 1977, about four months ahead of schedule. During 1978, PUSRI IV produced nearly 470,000 tons of urea, reflecting a capacity utilization of 83% in the first year of operation. Some auxiliary facilities are planned to be expanded in 1980. The project is not expected to show a cost overrun.

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Industrial Estates

Credit No. 428 Pulo Gadung Industrial Estate: \$16.5 Million Credit of September 14, 1973; Effective Date: November 13, 1973; Closing Date: December 31, 1980

The Pulo Gadung Industrial Estate is now scheduled for completion in 1982. Of 400 ha of raw land now earmarked for acquisition, 331 ha had been purchased as of early 1979. 127 ha of the 270 ha of developed land reserved for factory use has been sold to 107 firms, with full capacity employment estimated at around 22,000. Slack sales and difficulties in land acquisition have reduced the amount of land planned for sale from 337 ha to 270 ha. Operations are profitable with a cash surplus and bank deposits of Rp 2,389 million over the past three years to the project owners, the Municipal Government of Jakarta and the Government of Indonesia. The project is projected to remain profitable.

Development Finance Companies

Loan No. 1363 Second PDFCI: \$15 Million Loan of January 28, 1977; Effective Date: April 21, 1977; Closing Date: June 30, 1981

The project is proceeding satisfactorily.

Loan No. 1437 Third BAPINDO: \$40.0 Million Loan of June 6, 1977; Effective Date: September 23, 1977; Closing Date: September 30, 1981

The project is being implemented satisfactorily.

Loan No. 1703 Fourth BAPINDO: \$50 Million Loan of June 1, 1979; Effective Date: September 25, 1979; Closing Date: September 30, 1983

This loan became effective last September and progress is satisfactory.

Coal Mining

Loan S-9 Bukit Asam Coal Mining and Transport Engineering:
\$10 Million Loan of May 19, 1978; Effective Date:
December 22, 1978; Closing Date: December 31, 1983

The project consists of identifying and engineering much of an optimum mining and transportation system to mine about 3.0 million tons per year and ship about 2.5 million tons per year of coal to a power station which is under construction at Suralaya in West Java. The project has experienced some initial delays but is now progressing satisfactorily.

POPULATION AND NUTRITION

Population

Credit No. 300 Population: \$13.2 Million Credit of April 20, 1972;
Effective Date: November 2, 1972; Closing Date:
December 31, 1980

The performance of the Indonesian national family planning program continues to show satisfactory results. Since 1972/73 the program targets have been fully achieved and, in some cases, exceeded. The implementation of the project is in its final stages. The construction of all buildings has been completed and furniture and equipment procured, offices in Jakarta and six provinces have been occupied and all provincial and subprovincial training centers and nine nurse/midwife training schools are in operation. Most of the population education activities have been completed and the remainder are expected to be completed this year. The production of films and procurement of a computer financed out of savings under this project will also be completed this year. The only delay expected will be in the training of secretaries and program managers, but this problem is expected to be resolved shortly.

Loan No. 1472 Second Population: \$24.5 Million Loan of July 6, 1977;
Effective Date: August 4, 1977; Closing Date: April 30,
1983

The implementation of the second population project is proceeding satisfactorily. The construction of all buildings has been completed, except the National Family Planning Training Center (NFPTCO which is currently being constructed. Since the Bank is financing only four floors and common services for the eight-storey NFPTC and office building, it has proposed that it reimburse the Government 65% of the total cost and is awaiting their response with regard to the remaining 35%. All furniture has been procured and all vehicles will be delivered shortly. There continues to be delay in implementation of the pilot community incentive scheme, due to protracted discussions between the Government and Bank on the form of the study. With the completion of the ten Provincial Training Centers, it has become necessary for the National

Family Planning Coordinating Board to recruit trainers for these centers, although difficulties are being experienced in finding qualified candidates. Delays have occurred in the implementation of the population education component due to changes in curricula; delays in the release of funds have hampered the training of trainers for vocational schools. However, all the population education activities are expected to be completed on schedule by early 1981.

Nutrition

Loan No. 1373 Nutrition Development: \$13.0 Million Loan of March 14, 1977; Effective Date: March 31, 1977; Closing Date: March 31, 1982

Progress under the project is satisfactory. Construction of the Nutrition Academy has been completed and equipped and it is in full use. Its student enrollment has increased from 100 to 160. The Nutrition Intervention Pilot Project, the anemia control and home gardens components, as well as the fellowships program, are proceeding with minor delays. The Food Technology Development Center civil works construction is virtually complete and services are being installed, and Wings I, II and staff housing of the Center for Research and Development in Nutrition have been constructed and services are being installed; Wing III proceeds according to plan. While monitoring and evaluation units for each component have been operational for six months, the central monitoring and evaluation unit of the Project Secretariat is just starting to be staffed.

TECHNICAL ASSISTANCE

Credit No. 451 Fourth Technical Assistance: \$5 Million Credit of January 2, 1974; Effective Date: February 15, 1974; Closing Date: December 31, 1980

Progress under the project is satisfactory. The Closing Date has been postponed by one year.

Credit No. 898 Fifth Technical Assistance: \$10 Million Credit of May 7, 1979; Effective Date: September 5, 1979; Closing Date: March 31, 1984

This credit became effective in September 1979 and progress is satisfactory.

Loan No. 1197 National Resource Survey and Mapping: \$13 Million Loan of February 5, 1976; Effective Date: April 2, 1976; Closing Date: December 31, 1981

The National Coordinating Agency for Surveys and Mapping (BAKOSURTANAL) complex at Cibinong is completed, and most of the cartographic, photographic processing, and printing equipment required to produce maps is

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installed. Resource evaluation activities, including the compilation of data for Southern Sumatra and a study for the Directorate-General of Estates of coconut lands to be replanted in Sulawesi and Lombok, are also proceeding in the new complex. Recruitment and training of new staff, particularly junior operatives, has accelerated. The new photography financed under the Canadian parallel project will shortly be available, by which time BAKOSURTANAL hopes to have installed color photo processing equipment and to have fully trained specialized teams of operatives in the various map production fields.

TRANSPORTATION

Fertilizer Distribution

Loan No. 1139 Fertilizer Distribution: \$68 Million Loan of July 10, 1975; Effective Date: August 28, 1975; Closing Date: December 31, 1980

The project has been substantially completed at a cost 20% below the appraisal estimate. Work on the five original port deposits is completed and the sixth depot, which was approved in 1977 as an extension financed from project savings, is nearing completion. All four ships, including the additional ship approved in 1977 and paid for from project savings, have been delivered and 52 of 58 inland storage depots are completed. All the ships, port depots and storage depots are operating. Shipping operations have not been as cost effective as they could be, due to some extent to existing large stocks of fertilizer requiring ships to be used for longer distances for exports. Cost have also been increased because of delays in ship turnaround time caused by the need to clear customs on interisland voyages and the cumbersome procedures involved. These matters were taken up with PUSRI and improvements are expected.

Highways

Loan No. 1236 Fourth Highway: \$130 Million Loan of April 15, 1976; Effective Date: August 13, 1976; Closing Date: December 31, 1980

All key activities in the implementation schedule agreed with the Government are completed but with delays of about one year. Construction of 1,200 km are under way and a last retendered contract of 45 km has started. Some problems and delays in executing roads prevailed for contracts started in 1976; delays were also encountered in awards of contracts scheduled for 1977. The 1978 devaluation also contributed to a slower apparent rate of disbursement as cost adjustments to Rupiah construction contracts had to be, and still are, being made. While remedial measures taken in 1978/79 (and others planned) have improved the rate of physical progress and disbursements,

project completion is still forecast at 15-18 months beyond the loan's present Closing Date. Project costs in US\$ are likely to be within appraisal estimates but Rupiah costs are up significantly due to the devaluation.

Loan No. 1696 Fifth Highway: \$130 Million Loan of June 1, 1979;
Effective Date: August 28, 1979; Closing Date:
December 31, 1984

Delays have been encountered in awarding contracts for about 500 km of road works which were tendered in mid-1979, somewhat behind the implementation schedule. The 300 km balance of road works was scheduled for tendering in May 1980, nearly 10 months behind the schedule. Preparation of development programs for eight provincial public works departments (DPUPs) has also fallen behind, and other project components closely linked to, or forming integral parts of, the DPUP programs, such as procurement of road maintenance equipment and construction of major support works, are now about one year behind schedule. Delays have occurred also in appointing consultants, but these delays are less serious.

Marine Transport

Loan No. 1250 Second Shipping: \$54 Million Loan of May 20, 1976;
Effective Date: October 8, 1976; Closing Date:
December 31, 1980

Although the delay in the appointment of a number of consultants had caused a slow start to the project and slowed project implementation and disbursements, progress has now been made in making effective consultant contracts for sea transport planning (ISTS Team); for improving maritime training (IMCO project); and for extending the contract for financial and technical advisers to P.T. PANN, the project entity. Progress has also been made by the new management of PANN and of the state shipping company, PELNI, in their new roles and very encouraging financial results have been achieved by applying cash control as proposed by consultants financed by the Bank. It is likely though that only about 40% of the loan will be disbursed by the December 31, 1980 Closing Date. Some of the major problems facing PANN in acquiring and leasing ships are: (a) the effect of the 1978 devaluation of the Rupiah; (b) continued overtonnage in the fleet; and (c) the reluctance of the Government in undertaking a ship scrapping program and in enforcing its safety and ship classification regulations. It is anticipated that the scope of the loan will be broadened to include other than general cargo inter-island ships and that an extension of the present Closing Date will be requested.

Ports

Loan No. 1337 Tanjung Priok Port Project: \$32 Million Loan of
November 4, 1976; Effective Date: March 3, 1977;
Closing Date: December 31, 1981

Slow progress on the construction of Government-financed works has delayed construction of the first component, but progress is being made. The Government-financed works in Basin III, delayed due to the impact of the 1978 Rupiah devaluation, are 98% completed, and the Basin III civil works financed by the Bank loan, also delayed due to the devaluation, are 65% completed. Civil works financed by the Bank loan in the Regional Harbor, are 37% completed. The work is now three months in arrears and a revised construction schedule is being prepared. These delays will probably postpone overall completion of the project to mid-1981 but it is too early to estimate the full effect of delays on project cost. The Closing Date has been extended by two years from December 31, 1979.

TOURISM

Credit No. 479 Bali Tourism: \$16.0 Million Credit of June 14, 1974;
Effective Date: December 4, 1974; Closing Date: June 30,
1982

Construction of major infrastructure and related facilities for the Nusa Dua tourism estate is under way and scheduled for completion in mid-1980; construction of the hotel training school has been completed. The completion of project components outside the estate (i.e. roads) is scheduled for December 1981. Visitor traffic to Bali has been growing; it rose by 8% in 1977 to 286,000 visitors and by a further 13% in 1978 to 328,000; the trend continued in 1979 but the increase in the number of foreign visitors has been modest due to re-emerging air access difficulties, particularly by foreign carriers to Bali. Three potential hotel projects for Nusa Dua are under consideration; however, while no final commitment has yet been made. Construction of a first hotel at Nusa Dua is expected to start in 1980 for completion by mid-1982.

URBAN DEVELOPMENT

Loan No. 1040 Jakarta Urban Development: \$25 Million Loan of
September 27, 1974; Effective Date: January 15, 1975;
Closing Date: December 31, 1980

The kampung improvement part of the project has been completed. Some 2,080 ha have been upgraded, compared with the original plan of 1,980 ha. The Klender sites and services component is about 98% complete. Of the total, 6,872 lots have been allocated to date, about 6,500 lots having been occupied.

The entire 7,250 units are expected to be available this year. The Closing Date was recently extended by nine months due to delay in completion of the project.

Loan No. 1336 Second Urban Development: \$52.5 Million Loan of November 4, 1976; Effective Date: March 28, 1977; Closing Date: December 31, 1981

The project consists of provision of basic sanitary facilities including footpaths, drainage, water supply and human waste disposal to about 3,000 ha of densely populated areas in Jakarta and 374 ha in Surabaya. Community health workers are to be trained under a pilot program in both cities. Upgrading costs for the first two-year program have been within the appraisal estimates. However, the costs for the third-year program have been affected by the 1978 Rupiah devaluation. About 3,435 ha of kampungs in Jakarta and 441 ha of kampungs in Surabaya have been covered so far, benefitting a total population of about 1.4 million. About 180 community health workers in Jakarta and 45 in Surabaya have been trained and are working in the kampungs. Land acquisition problems still continue to cause some delays in completing the requisite number of health facilities and the Closing Date was recently extended.

Loan No. 1653 Third Urban Development: \$54 Million Loan of January 31, 1979; Effective Date: September 26, 1979; Closing Date: December 31, 1983

The project provides basic infrastructural facilities including roads, footpaths, water supply, and sanitation to impoverished, low-income kampungs (neighborhoods) in the cities of Jakarta (750 ha), Surabaya (580 ha), Ujung Pandang (375 ha), Semarang (310 ha) and Surakarta (170 ha), benefitting a total population of about 2.25 million. A comprehensive solid waste management program is also included in Jakarta and Surabaya, together with a drainage program in Surabaya. About 775 community health workers are to be trained in the above two cities to work in the improved kampungs. The project is at an early stage of implementation.

WATER SUPPLY

Loan No. 1049 Five Cities Water Supply: \$14.5 Million Loan of October 31, 1974; Effective Date: May 21, 1975; Closing Date: December 31, 1981

Due to administrative and managerial problems the project is now running 24 months behind schedule and the Closing Date has been extended by eighteen months. All equipment supply and all major civil works contracts, with the exception of pipe laying contracts (delayed because of slow procurement of pipe), are under execution. A cost overrun of about 30%,

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caused by increases in local costs due to project delays and devaluation, is expected. The reorganization of the Directorate of Sanitary Engineering has been completed, and the establishment and development of local water enterprises is proceeding satisfactorily. Also, disbursements are expected to accelerate now that contracts are signed and equipment and supplies are being delivered.

Loan No. 1709 Second Water Supply: \$36 Million Loan of June 1, 1979;
Effective Date: February 29, 1980; Closing Date: December
31, 1984

This loan has just been declared effective.

INDONESIA

NINTH POWER PROJECT

Supplementary Project Data Sheet

Section I: Timetables of Key Events

- (a) Time taken to prepare the project: Two years
- (b) Project prepared by: Suralaya Unit No. 2 by the Montreal Engineering Company (MONENCO) of Canada and EHV by Merz and McLellan of the United Kingdom.
- (c) First presented to the Bank: August 1977
- (d) Departure of the Appraisal Mission: July 1979
- (e) Completion of Negotiations: February 28, 1980
- (f) Planned Effectiveness: September 1980

Section II: Special Bank Implementation Actions

To review progress in phasing out subsidies on domestic fuel consumption.

Section III: Special Conditions

- (a) The Government will:
 - (i) provide to PLN sufficient funds on a timely manner to carry out its development program as agreed with the Bank (para. 72); and
 - (ii) ensure that by no later than March 31, 1982, Government agencies' outstanding electricity bills will not exceed two months of billing (para. 71).
- (b) PLN will:
 - (i) acquire by March 31, 1981 the lands required to install the EHV lines (paras. 59 and 76); and
 - (ii) by 1986 meet 30% of its investment costs from its internal revenues (para. 68).

