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**Report No. P-3072-CE**

REPORT AND RECOMMENDATION  
OF THE  
PRESIDENT OF THE  
INTERNATIONAL DEVELOPMENT ASSOCIATION  
TO THE  
EXECUTIVE DIRECTORS  
ON A  
PROPOSED CREDIT  
TO THE  
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
FOR A  
VILLAGE IRRIGATION REHABILITATION PROJECT

May 22, 1981

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### CURRENCY EQUIVALENTS

US\$1	=	Rs 18.0
Rs 1	=	US\$0.056
Rs 1 million	=	US\$55,556

### WEIGHTS AND MEASURES

1 acre	=	0.405 hectare (ha)
1 long ton	=	1.016 metric tons
1 bushel of paddy	=	20.87 kg

### PRINCIPAL ABBREVIATIONS AND ACRONYMS USED

DA	-	Department of Agriculture
DAS	-	Department of Agrarian Services
DI	-	Department of Irrigation
M	-	Million
MLLD	-	Ministry of Lands and Land Development
PSC	-	Project Steering Committee

### GLOSSARY

chena	-	slash and burn or "shifting" agriculture
maha	-	northeast monsoon, October-February
tank	-	reservoir for local rainwater storage
yala	-	southwest monsoon, April-September

### FISCAL YEAR

January 1 - December 31

SRI LANKAVILLAGE IRRIGATION REHABILITATION PROJECTCredit and Project Summary

Borrower: The Democratic Socialist Republic of Sri Lanka.

Amount: Special Drawing Rights 24.5 M (US\$30.0 M equivalent at the time of negotiations).

Terms: Standard.

Project Description: The project aims to increase agricultural production and farmer income in existing but presently under-utilized village irrigation schemes which have deteriorated through inadequate maintenance and repair. The project consists of: (i) rehabilitation of about 12,000 village tanks and anicuts; (ii) strengthening of major government institutions involved in village irrigation; (iii) initiating a systematic water management program; and (iv) establishing evaluation program designed to assist project implementation and preparation of further village irrigation schemes. The project does not involve any unusual risk.

Estimated Cost:

<u>Component</u>	<u>US\$ Million Equivalent</u>		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
A. <u>Civil Works</u>	16.9	4.5	21.4
B. <u>Equipment and Vehicles</u>	.2	2.3	2.5
C. <u>Incremental Recurrent Costs</u>	1.1	.2	1.3
C. <u>Training, Evaluation and Technical Assistance</u>	.6	.2	.8
Base Cost	18.8	7.2	26.0
E. <u>Price Contingency</u>	<u>15.4</u>	<u>2.3</u>	<u>17.7</u>
TOTAL COST	<u>34.2</u>	<u>9.5</u>	<u>43.7</u>

Financing Plan:

	<u>US\$ Million Equivalent</u>		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
IDA	20.5	9.5	30.0
Government	<u>13.6</u>	<u>-</u>	<u>13.6</u>
Total	<u>34.1</u>	<u>9.5</u>	<u>43.6</u>

Estimated  
Disbursement:

<u>IDA FY</u>		<u>US\$ Million Equivalent</u>					
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Annual		3.0	3.5	5.0	7.0	8.0	3.5
Cumulative		3.0	6.5	11.5	18.5	26.5	30.0

Economic Rate of Return: 20%

Staff Appraisal Report: No. 3363-CE, dated April 30, 1981

Map: No. IBRD 15450.

INTERNATIONAL DEVELOPMENT ASSOCIATION

REPORT AND RECOMMENDATION OF THE PRESIDENT  
TO THE EXECUTIVE DIRECTORS  
ON A PROPOSED CREDIT  
TO THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA FOR A  
VILLAGE IRRIGATION REHABILITATION PROJECT

1. I submit the following report and recommendation for a proposed development credit to the Democratic Socialist Republic of Sri Lanka for Special Drawing Rights 24.5 M (US\$30.0 M equivalent) on standard terms to help finance a Village Irrigation Rehabilitation Project.

PART I - THE ECONOMY 1/

2. The most recent economic report, "Sri Lanka: Policies and Prospects for Economic Adjustment" (Report No. 3466-CE, May 15, 1981) was distributed to the Executive Directors on May 21, 1981. Country Data are provided in Annex I.

3. After several years of relative stagnation, Sri Lanka's economy is experiencing sustained growth. This growth has been the direct result of the economic liberalization of 1977, and the development push associated with it. Until 1977, Sri Lanka's growth performance had been below both need and potential. Although GDP growth in the 1960s, at 4.4% per annum, was above the average for low income countries, growth slackened sharply in the 1970-77 period to 2.9% per annum, just below the average for low income countries. Through much of this period, the terms of trade deteriorated steadily, eroding even these modest gains; as a consequence, per capita gross national income rose by a mere 0.9% per annum during the 1960-76 period. The slowdown in economic growth in the 1970-77 period is attributable to a combination of factors, including inadequate investment, poor management of the economy, and a policy environment unconducive to growth and investment, which were compounded by bad weather and a sharp rise in the cost of imported food and petroleum.

4. The three tree crops--tea, rubber and coconuts--which are still the mainstay of the economy, suffered from low replanting and inadequate incentives. These problems were exacerbated by a dual exchange rate, introduced in 1968, that discriminated against these crops, and by the uncertainties surrounding a protracted nationalization (1972-75) of the larger estates. After the exceptional output growth of the 1960s, rice yields and cropping intensities declined in the 1970s due to poor institutional support. Investment in manufacturing was low, and the inefficiency of most public and private sector firms nurtured in a highly protected environment resulted in industrial growth of less than 2% per annum. The only bright spots were subsidiary food crops and industrial exports which benefited from good incentives.

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1/ This part is substantially the same as Part I of the Report and Recommendation of the President to the Executive Directors on a credit to the Democratic Socialist Republic of Sri Lanka for a Construction Industry Project (Report No. P-2996-CE, dated March 17, 1981), which was approved on April 7, 1981.

5. An inadequate public savings effort, caused by inelastic revenues and an uncontrolled increase in recurrent expenditures, inhibited public investment. Private savings and investment were constrained by an unfavorable policy environment. The high incremental capital output ratio in the 1970s (5.5 as against 3.5 in the 1960s), reflected the fact that the investment that did take place was both inefficient and highly capital intensive.

6. The low growth rates and the slow changes in the structure of output matched neither the jobs nor the changes in employment structure that the labor force required. Slow output growth, the excessive capital intensity of investment, the mismatch between the job aspirations of those with post-primary education and the jobs available to them, the post war demographic bulge, and rising female participation rates contributed to a massive increase in open unemployment, estimated at over 1 million, or some 18% of the labor force in 1977.

7. In sharp contrast to this poor economic performance, Sri Lanka's social achievements in relation to per capita income have been outstanding. Sri Lanka has about one and one-half times the life expectancy, almost thrice the literacy, one-quarter the infant mortality and half the birth rate that would be expected for a country at its per capita income level. Nutrition levels have been adequate, and in the 1960s there were parallel gains in income distribution.

8. Improvements in the quality of life, in particular the rise in health standards, the spread of education and the availability of subsidized food, have been important factors in the decline in mortality. The increasing age of marriage, the spread of female education and employment, and a vigorous family planning program, have also contributed to a sharp decline in fertility. As a consequence, the growth rate of population has dropped from 2.6% per annum in the 1953-63 intercensal period to 2.0% per annum in the 1963-73 period. Allowing for net migration, population is currently increasing at only 1.7% per annum.

9. The gains in the social field were made possible by favorable initial conditions. Compulsory primary education was introduced as early as 1901. The food ration was introduced in 1942. Thus, at the time of Independence in 1948, Sri Lanka already enjoyed high levels of adult literacy and life expectancy. These initial gains were consolidated and expanded in the post-Independence period through large expenditures on social services and the food subsidy, which accounted for two-fifths to one-half of government revenues in the 1960s and early 1970s. These expenditures were traditionally financed by harnessing the surpluses of the three major tree crops, which provided the Government with easy sources of revenue and foreign exchange. These surpluses began to disappear in the late 1960s as government policies discriminated against these crops and the terms of trade deteriorated. With growth in other productive sectors in the economy also decelerating in the 1970-77 period, the budgetary resources available for social programs were squeezed by inelastic revenues and rapid inflation. As a consequence, expenditures on social services other than the food subsidy began to decline as a proportion of total current expenditures and of GDP, threatening the hard-won gains in health and education. In sum, the economy was no longer generating the resources needed to sustain a large program of welfare expenditures. Moreover, the very size

of those programs reduced the scope for policy makers to shift resources to development.

10. The policy changes introduced in 1977, following the election of the United National Party, were intended to break this vicious circle. The new Government identified its objectives as the sustained revival and resuscitation of the economy and increased employment through (i) increased capacity utilization in the productive sectors, (ii) stimulation of savings and investment, and (iii) efforts to encourage exports and import substitution in foodgrains. A program of policy reforms was developed in close consultation with the IMF. Its principal aim was to dismantle controls over resource allocation and initiate price adjustments with a view to establishing more realistic relative prices. These reforms were supported initially by an IMF standby arrangement covering 1978 for SDR 93 million. On January 26, 1979 the Fund's Executive Board approved an SDR 260 million Extended Arrangement covering the 1979-81 period.

11. The following broad policy reforms were introduced:

Exchange Rate Reform: The exchange rate was unified on November 16, 1977 at a depreciated rate of Rs 16 = US\$1.00 and allowed to float. This implied a depreciation of 46% against the official rate prevailing prior to unification, 11.2% with respect to the Foreign Exchange Entitlement Certificate rate, and 29.5% with respect to a transactions-weighted average rate of the two markets. <sup>1/</sup> Between end 1977 and 1979 the rupee appreciated by about 5% against the dollar; however, it began depreciating in early 1980 and reached a level of Rs 18 per US dollar by December 1980.

Import Liberalization: The trade and payments regime was liberalized. With the exception of petroleum products, public sector import monopolies were terminated. Prior licensing of imports was abolished for all but a handful of commodities. The tariff structure was revised and simplified.

Interest Rate Reform: To encourage financial savings and discourage speculative imports, interest rates were raised sharply. However, inflation eroded these rates, and in April 1980 further upward adjustments were made.

Price Controls: These ended for most commodities.

Budgetary Policies: The unification and depreciation of the exchange rate caused tree crops export tax revenues and the cost of food, fertilizer, and petroleum subsidies to rise sharply. Business Turn-over Tax rates were also substantially lowered and rationalized to be consistent with the new import tariff and exchange rate. To limit

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<sup>1/</sup> Prior to unification, all exports other than tea, rubber and coconut products and all imports other than food, fertilizers and drugs were channelled through the certificate market. Since November 1972, the FEEC rate was maintained at a 65% premium over the official rate.

the increase in cost of food subsidies, rice and sugar rations were initially confined to the poorer half of the population, and the subsidy on imported wheat flour was reduced through a series of adjustments in the domestic price. On September 1, 1979 the Government introduced a system of food and kerosene stamps for families with monthly incomes less than Rs 300 to replace specific subsidies and food rationing, and to target benefits to the poorest. This was accompanied by a move to full cost pricing for rice and flour. Initially about seven million persons were issued with food and kerosene stamps. To help offset the adverse impact of these changes on real incomes, public sector wages were adjusted upwards on four occasions. Public corporations were asked to pass on cost increases, except for fertilizer, petroleum, milk, and public transport, where price increases were initially deferred to cushion the impact on consumers. The Government subsequently eliminated the subsidy on petroleum products and made sizable adjustments in bus and train fares, electricity and fertilizer prices. The burden of subsidies and transfers, as a consequence, fell from around 9% of GDP in 1978 to around 5% in 1980. These changes, taken together with higher aid receipts, have permitted a sizable increase in capital expenditures.

Tax Reform: The tax structure was rationalized and simplified with a view to increasing the elasticity of revenues. The burden of personal and company taxation was lowered. However, taxes on slowly growing treecrop exports accounted for over 45% of 1978 revenues; as a result, the overall elasticity of revenues to economic growth and domestic inflation has been low.

Agricultural Pricing Policies: The domestic support price for paddy was increased by 21% in November 1977, by 25% in November 1980 and by a further 5% in February 1981. With the related increase in flour prices, incentives for paddy and other flour substitutes benefited. Fresh coconut prices were also increased and the export duty on coconut products was appropriately adjusted. While the unification of the exchange rate ended formal discrimination against tree crops, the export duty on tea was initially set at a level which effectively siphoned off most of the benefits to the Government. As tea prices fell and production costs rose in 1978-79, the Government responded to the reduced producer margins by a lowering of taxes on tea. Further adjustments in both the structure and level of tea and coconut taxation will be needed to maintain and improve incentives. Similarly, the support price for paddy will need to be increased further to maintain strong producer incentives, especially since the substantial increase in fertilizer prices announced in February could have an adverse effect on fertilizer consumption.

12. The economic reforms have been accompanied by a major effort at stepping up public investment. The Government's capital expenditures jumped from 6% of GDP in 1977 to an average of 15% in 1979 and 19% in 1980, as government departments responded to the initial improvement in the budgetary resource position by embarking on long overdue replacement investments and new

projects that had been shelved earlier for lack of resources. At the same time, the Government embarked on four major new programs which are to be the lead projects in a five-year rolling public investment program. These are: (i) accelerated implementation of the Mahaweli Ganga Development Program, by far the largest multi-purpose river basin development program ever undertaken in Sri Lanka; (ii) a 200 square-mile free trade zone north of Colombo under a newly constituted Greater Colombo Economic Commission which has established the first of several Investment Promotion Zones near Colombo's international airport and has signed agreements with some 64 foreign investors involving a total investment of US\$117 million by end-1980; (iii) a massive housing and urban renewal program with its main focus on the Colombo metropolitan region; and (iv) the construction of a new capital complex at Kotte, a suburb of Colombo. These four programs will together cost an estimated Rs 34 billion, or 44% of the identified public investments over the 1981-85 period. By 1980, their share in the investment program had already risen to 33%.

13. The underlying public investment strategy is to balance the large investment requirements of the Government's high priority programs against the urgent rehabilitation and fresh investment needs in other sectors. The main thrust of the public sector program is to lay the foundation for longer term development, both by improving the efficiency of use of existing infrastructure investments and by expanding the longer term growth capacity of the economy. The strategy thus implicitly relies on the private sector to respond to the economic reforms and the stimulus of the public sector investment program, and provide much of the short-term growth.

14. A difficulty with the 1981-85 investment program, as currently proposed, is that identified investment activities, which in most cases, have already gathered substantial momentum, will result in government capital expenditures far in excess of available financial resources in the earlier years (1981-1983) of the program. The experience during 1980 (paras 16-19), when government capital expenditures rose to nearly 19% of GDP at market prices, and contributed to the severe pressures on prices and the balance of payments, underscores the dangers arising from this "front-loading" of the investment program. The Government is aware of this and has taken measures to reduce substantially its capital expenditures in 1981. It is also proposing to examine various policy options that will enable it to reduce substantially the gap between projected resources and projected investment expenditures in 1982. The local cost financing (para 47) of the proposed project would support the Government's strong efforts to mobilize resources for public investment by reducing the burden of subsidies and transfer payments (para 11), despite declining tree crop export tax revenues.

15. The initial response of the economy to the policy reforms and the accompanying acceleration in investment has been encouraging. Economic growth in 1978-1980 averaged an impressive 6.8% per annum. This growth was shared by almost all sectors of the economy, with the most dynamic sectors being construction; mining and quarrying; electricity, gas and water; transport; and manufacturing. The only major exception has been the tree crop sector. This impressive performance is due to a number of factors including the improved availability of inputs following import liberalization, an increased role for the private sector in distribution, and the removal of price controls. Although there is little data available on employment,

Central Bank estimates suggest that unemployment dropped from 18% of the labor force to 15% between 1977 and 1979.

16. The rapid rise in investment has not, however, been accompanied by a concomitant rise in the national savings effort. Gross national savings fluctuated around 15% of GDP during the 1978-80 period, while the use of foreign savings increased from 4.6% of GDP in 1978 to 19.5% in 1980. Although the Government has succeeded in containing the costly consumer subsidy and transfer programs, which has led to their decline as a percent of GDP (para 11), relatively inelastic revenues combined with steadily rising other recurrent expenditures and declining terms of trade have resulted in practically no public savings over the 1978-80 period. As a result, the Government has financed its rapidly rising capital expenditures through foreign aid, and by increasing its level of domestic borrowings. Initially the Government was able to meet its domestic financing requirements through non-expansionary borrowings from captive financial institutions, which had been able to mobilize increased private savings following the interest rate reform. However, resources mobilized through these channels have not grown as rapidly as the budgetary deficit, and the Government has been increasingly forced to undertake expansionary borrowings from the Central Bank. Between 1978 and 1979, these rose from 0.4% to 1.2% of GDP and in 1980 rose sharply to 10.5% of GDP.

17. The exchange rate adjustment, other policy-induced price increases and related wage increases, the removal of price controls, and the build-up of external assets contributed significantly to inflationary pressures in 1978 and 1979. However, they were moderated in 1978 and 1979 by bumper paddy harvests, increased capacity utilization in the economy, increased availability of imports, and the beneficial effects of competition from imports and in domestic distribution. Thus, annual inflation, as measured by the official Colombo consumer price index, averaged 11% in 1978 and 1979. However, with broad money increasing by 38% in 1979 and 27% in 1980, compared to a 6% growth in GDP, there has been a sizable "built-in" price increase. This, together with the corrective price increases designed to reduce budgetary subsidies, and the rapid increases in the price of petroleum, wheat and sugar imports have led to an overall inflation rate of 26% for 1980.

18. The rapid growth of the economy since 1977 has also been reflected in the balance of payments. As a result of the import liberalization, the acceleration in economic growth in the domestic economy, and the decline in the terms of trade, imports grew at over 42% annually between 1977 and 1979; on the other hand, exports (of which sluggishly growing treecrop exports still account for about 60%) grew at only 15% annually. Tourism receipts and private transfers from abroad both grew rapidly, partially offsetting the rapid growth in the trade deficit; nevertheless, the current account deficit rose to 4.6% of GDP in 1978 and 11.1% of GDP in 1979. In both years, however, the current account deficits were more than offset by non-monetary capital inflows, and Sri Lanka continued to add to its net international reserves, albeit at a declining rate. At the end of 1979, Sri Lanka's net international reserves stood at US\$258 million; its gross international reserves at US\$517 million, equivalent to more than four months of imports of goods and non-factor services. In 1980, however, the balance of payments deteriorated rapidly and net reserves declined by about US\$220 million. The principal cause of the deterioration has been the sharp increase in the trade deficit. Imports grew by 10% in volume

terms, while exports recorded almost no volume growth and the terms of trade declined by about 15%. While all categories of imports, but particularly capital goods imports, grew rapidly, exports rose only slightly above 1979 levels with a drought-induced decline in tree crop exports offsetting non-traditional export growth. Sri Lanka's petroleum import bill doubled between 1979 and 1980 and was a significant factor behind the deterioration on the trade account. Although gross petroleum imports accounted for less than one-fourth of total imports, net petroleum imports accounted for more than 36% of non-oil exports. Other elements of the current account continued to perform well; nevertheless, they could not offset the deterioration of the trade account, and as a result the current account deficit more than doubled to over US\$800 million and rose to 19.5% of GDP. Net aid disbursements, together with net direct foreign investment, will cover only about one-half of the current account deficit. With the consequent rapid drawdown in international reserves, the public sector, especially the public corporations, have begun to make significant use of commercial financing arrangements.

19. Aid donors have responded enthusiastically to the Government's development initiatives - aid commitments totalled US\$560 million in 1979 and \$633 million in 1980. Continued high levels of aid will, however, depend upon the Government maintaining donor confidence in its economic policies and management.

20. External public debt outstanding and disbursed stood at US\$1,328 million at the end of 1980, amounting to about 35% of GDP. However, it is almost all long-term concessional debt. As a result, the debt service burden is relatively low--the debt service ratio in 1980 excluding IMF repurchases stood at 7.3% of exports of goods and non-factor services, declining from 16.6% in 1977. While this sustained decline is due in part to improved export earnings, the main cause has been a decline in outstanding short and medium term commercial borrowings. Unless the ratio of the current account deficit to GDP improves, Sri Lanka will again have to begin undertaking significant shorter maturity commercial borrowings to fill the gap between the current account deficit and likely concessional aid flows. In that case, the debt service ratio could deteriorate quickly.

## PART II - BANK GROUP OPERATIONS IN SRI LANKA

21. Since the beginning of its operations in Sri Lanka in 1954, the Bank Group has approved eight loans totalling US\$72.9 million (net of cancellations) and 27 credits totalling US\$409.0 million (net of cancellations and exchange adjustments) in support of 33 projects. About 43% of Bank Group assistance has been for agriculture (irrigation, agricultural, and dairy development), 17% for power, 15% for transport, and the remainder for development finance company operations, a program credit (mainly involving the import of raw materials for industry), water supply, telecommunications, and small and medium industries. Eight loans and eight credits have been fully disbursed so far. Annex II contains a summary statement of Bank Group operations as of March 31, 1981, together with notes on the execution of ongoing projects.

22. An IFC equity investment of about US\$100,000 equivalent in the Development Finance Corporation of Ceylon (DFCC) and an IFC non-revolving line of credit of US\$2.0 million to the government-owned Bank of Ceylon for on-lending to private small- and medium-scale industrial enterprises were approved in FY78. IFC also approved an investment of US\$3.68 million in a synthetic textile mill, and about US\$986,000 in a polypropylene bag manufacturing plant in FY79. During FY80, IFC approved an increase in equity investment of about US\$51,000 equivalent in DFCC and an investment of about US\$260,000 in an equipment leasing company. In FY81, an investment of about US\$0.7 million in equity and about \$17 million in loans for a new hotel project in Colombo was approved.

23. The Bank Group's current strategy is focused on the agricultural sector to support Government efforts to increase food production and reduce its dependence on food imports, and to raise productivity, employment, incomes and living standards of the rural population in Sri Lanka. Projects to support basic infrastructure are also included. The IDA lending program includes a Mahaweli Ganga Development III project, a second tea rehabilitation project, a second small and medium industries project, a second tea diversification project and a seventh power project.

24. In 1979, the Bank Group accounted for 10.2% (IBRD, 3.0%; IDA, 7.2%) of Sri Lanka's total debt outstanding and disbursed, and 8.5% (over 90% IBRD) of debt service. It is projected that the Bank Group's share in total external debt will increase to 15% by 1985 (with the IBRD's share declining to 2%). The Bank and IDA shares in the debt service are expected to decline to about 5% by 1985.

### PART III - THE AGRICULTURAL AND IRRIGATION SECTORS

#### Overview

25. Agriculture remains of central importance to the economic development of Sri Lanka. In 1979, it contributed about 30% of total GDP, over 50% of total employment, 75% of export earnings, and 40% of government revenues. In addition, much of the activity in the manufacturing, transport, and the services sectors relates to either the supply of agricultural inputs or the processing of agricultural output.

26. Agricultural development has been concentrated to date in the wet zone which lies in the southwest portion of the island. This zone, accounting for only one-third of Sri Lanka's surface area, contains about two-thirds of the population, virtually all its tea and rubber, 50% of its paddyland, and a substantial proportion of the area under other crops. Agricultural growth depends primarily on increasing productivity of already developed land. In contrast, the dry zone to the north and southeast is sparsely populated and underdeveloped despite continuing migration and colonization. Permanent agriculture there accounts for less than 30% of the 6.0 M acres (2.4 M ha) which are considered potentially arable, with an additional 40% under subsistence-type slash and burn (chena) agriculture. Cultivation in the southwest monsoon season (yala) is confined to irrigated areas, but even in these, water and other constraints limit average land use intensities to about 110-120%. In summary, considerable potential exists in Sri Lanka for both

increasing cropping intensities on already developed land and expanding cultivated area. A total of about 1.5 M acres (0.6 M ha) could be brought under irrigation, compared to less than 0.75 M acres (0.3 M ha) at present. The balance of arable land would probably remain under rainfed conditions; however, even on these lands there is considerable scope for stabilizing chena and raising productivity. While paddy will continue to be the dominant crop in irrigated areas, the dry zone in general holds most promise for agricultural diversification.

#### Irrigation in the Dry Zone

27. The dry zone accounts for some 60% of total paddy production, and contributes significantly to the production of other field crops. In the dry zone, irrigation is normally essential for paddy cultivation. Most existing schemes are based on storage tanks designed to supplement rainfall in the maha (northeast monsoon) season, with residual supplies being used for limited yala cropping. There are a total of about 180 major schemes which have a storage capacity of 2,000 acre ft or more, irrigating nearly 0.4 M acres (0.16 M ha), together with a large number of smaller village schemes. Although often based on ancient systems, many of the larger schemes have been developed through colonization programs designed to relieve population pressure in the wet zone. In contrast, most of the smaller tanks are associated with traditional villages which often have a long history of continuous settlement. In addition to the development of tank irrigation, past colonization programs have included a number of more complex river basin developments of which the most important were the Gal Oya and Uda Walawe projects. These have now culminated in the ambitious Mahaweli Ganga Development Program which envisages the ultimate development of 0.9 M acres of new land (effectively doubling the total irrigated area) and 970 MW of hydroelectric generating capacity. The present Government has greatly accelerated the Mahaweli program which now accounts for about 36% of the total 1981-85 public sector investment budget.

28. While the major emphasis in the irrigation sector is on the expansion of the irrigated area, there is a growing realization that the utilization of existing systems, and even of newly developed systems, remains well below their potential due to inadequate maintenance and the wasteful use of water. Despite its preoccupation with the Mahaweli Program, the Government has begun to give greater attention to smaller scale projects designed to make more efficient use of existing systems. The resources available for this purpose are limited but a number of projects have been developed, including the proposed project. Investments in such smaller schemes are generally less capital-intensive, the gestation periods are considerably less than those for major schemes, and benefits tend to be more equitably distributed because investments are widely scattered and touch directly on the livelihoods of small farmers in the traditional (and still largely subsistence) agricultural sector.

#### Village Irrigation Programs

29. Minor irrigation schemes are defined as having a command area of 200 acres (80 ha) or less. Most were constructed initially by the proprietors themselves with Government assistance being confined at most to the provision of headworks and sluices. It is estimated that there may be as many as 25,000

such schemes throughout the country, with an irrigable area commanded in excess of 0.4 M acres (0.16 M ha). Of these about 15,000 are village tank schemes located in the dry and, to a lesser extent, the intermediate zones. In contrast, 10,000 or so anicut (diversion) schemes lie very largely in the wet zone. Many schemes have seriously deteriorated or been abandoned and it is estimated that only about 50% are in working condition at varying degrees of efficiency. Current water management practices lead to excessive water losses and to the under-utilization of the available land and water resources. Operation and management of minor irrigation schemes have traditionally been the responsibility of the farmers themselves, with Government support confined to arranging pre-cultivation meetings, resolving water disputes and undertaking major repairs. Frequent administrative changes and other factors, however, have tended to undermine the traditional system while population pressure has led to an increasing orientation to rainfed farming, including chena. With the Agrarian Services Act of 1979, the Government has sought to reestablish the traditional role of the irrigation headman, supported now by officials of the Department of Agrarian Services (DAS). However, the role of DAS in support of minor irrigation has been limited so far. Under the proposed project, a more systematic water management program is to be introduced which will make more effective use of the water resources available, and will help stabilize agriculture as a whole in the dry zone, for instance through discouraging chena.

30. Over the years, the Government has implemented a number of village irrigation rehabilitation programs. These have included a food-for-work program supported by the World Food Program (some 6,000 village tanks were repaired between 1974-79), and projects financed under the Decentralized Budget. When the present Government came to power, a more systematic approach to the improvement of village irrigation was adopted. Three types of programs can now be distinguished:

- (a) Rural Development Projects - Implemented by the Ministry of Plan Implementation. A major component of these is the rehabilitation of minor and major irrigation schemes. Such projects are being implemented for Kurunegala (IDA Credit No. 891-CE), Puttalam and Matale (IDA Credit No. 1079-CE), Hambantota, Matara, and Nuwera Eliya districts. Further projects are envisaged for Badulla, Vavuniya and Mannar.
- (b) Department of Irrigation (DI) Programs - The first major program was implemented in 1980 with the rehabilitation of about 150 small tanks in six districts. This program can be considered as the first phase of the proposed project.
- (c) Dry Zone Farming Projects - To be implemented by the Ministry of Agricultural Development and Research (MADR). The first of these is to be initiated in Anuradhapura, with Asian Development Bank support. In contrast to most of the other programs, the Dry Zone Farming Projects include the settlement of new areas by tank-based communities and the concurrent development of an overall farming system.

31. Although these various programs are implemented by different Government agencies, the civil works component in each is the responsibility of the

Department of Irrigation. Measures have been taken to ensure that implementation of the proposed project would complement other programs. The dry zone farming project areas (notably Anuradhapura) have been excluded from the proposed project while the districts covered by rural development projects will only be included once their minor irrigation components have largely been completed. Kurunegala in particular accounts for a major proportion of the national total area under minor tanks, and even after completion of the Rural Development Project (para 30a), there will be a substantial number of schemes still to be rehabilitated. The proposed project will be implemented in accordance with criteria based on experience with the irrigation components of IDA-assisted rural development projects. The Kurunegala Rural Development Project (Cr 891-CE), the only one of these projects implemented for a sufficiently long time to evaluate its performance, has proceeded quite well. Cost overruns due to inflation may however, dictate a reduction of targets as originally established.

#### Bank Group Support to Agriculture

32. During the last several years, Bank Group lending to Sri Lanka has heavily emphasized agriculture and rural development. Since 1968, a total of 12 projects with loans and credits of US\$168.5 M have been financed in this sector. Two of these projects--Lift Irrigation (Cr. 121-CE, US\$2.0 M) and Drainage and Reclamation (Cr. 168-CE, US\$2.5 M)--related to irrigation have been completed, and project performance audit reports have been prepared. The audit reports found that both projects suffered from design inadequacies, in particular over-optimism concerning the response of beneficiaries to opportunities offered under the projects, and also from inadequate attention to research and extension services and, in the case of the Drainage and Reclamation Project, to unusual soil conditions. As a consequence, the net project benefits have been lower than envisaged at project appraisal although the estimated revised rates of return remain satisfactory. Over the course of the last several years, project preparation activities have been directed towards obtaining a fuller understanding of the systems and institutions expected to have significant impact on expected project results, such as inputs supply, marketing, extension, operation and maintenance, cultural practices, and pricing. The Agricultural Extension and Adaptive Research Project (Cr. 931-CE, US\$15.5 M) would strengthen extension and research in the proposed project area. The Mahaweli Ganga Development I has been recently completed. The other ongoing projects are progressing satisfactorily.

#### PART IV - THE PROJECT

33. The proposed project was prepared during late-1979/early-1980 by the Government with the assistance of the FAO/IBRD Cooperative Program. The preparation report was submitted in July 1980, and the project was appraised in August/September 1980. A follow-up mission took place in January 1981. Negotiations were conducted in Washington, D.C. in April 1981. The Borrower's delegation was led by Mr. Chandrananda de Silva, Additional Secretary, Ministry of Lands and Land Development. A staff appraisal report (No. 3363-CE dated April 30, 1981) is being distributed separately. A timetable of key events relating to the project and special conditions of the project are given in Annex III.

### Project Objectives

34. The project is concerned with the scattered irrigable areas commanded by small tanks and anicuts (diversion schemes) in fourteen of Sri Lanka's twenty four districts. The project area excludes two major dry zone districts (Anuradhapura and Polonnaruwa) but, apart from these, covers essentially the whole of the dry and intermediate zones, together with minor parts of the neighboring wet zone. The project aims to increase agricultural production and farmer incomes in existing--but underutilized--village schemes which have deteriorated through inadequate maintenance and repair. The principal season (maha) crop grown in minor schemes is rice, the production of which will be significantly increased and stabilized. To a lesser extent, the project would also lead to increased second season (yala) rice cultivation and to some crop diversification.

### Project Description

35. The major part of project expenditure will improve existing irrigation facilities to ensure farmers a more dependable irrigation water supply. These investments will be complemented by institutional and infrastructural support designed to assist farmers in operating and maintaining minor irrigation facilities more productively, and to enable them to make more efficient use of the total available water resources.

36. The main components of the proposed project are:

#### (a) Civil Works

- (i) Rehabilitation of about 1,200 village irrigation schemes by the Department of Irrigation (DI), including repairs to and remodelling of tank bunds, anicuts, sluices, spillways, water conveyance and distribution systems, and the provision of appropriate field structures. Labor-intensive methods and farmer labor will be used where feasible;
- (ii) Modernization of about 500 working irrigation schemes near rehabilitated tanks by the DAS in order to facilitate the introduction of water management programs. Modernization will include minor repairs to headworks, the provision of sluices, main supply channels, secondary delivery channels and structures.

#### (b) Operation, Maintenance and Water Management

- (i) Strengthening the DAS to service the operation and maintenance of minor irrigation, and to initiate the implementation of water management programs on project schemes. This would include additional staff in the project areas,

together with the provision of office, survey and construction equipment, and transport vehicles; 1/

- (ii) Support for on-going DAS training programs in basic technical skills at the University of Moratuwa and the Hardy Institute (Amparai), as well as for new water management training programs to be provided by the Department of Agriculture at the Maha Illuppallama Research Institute.

(c) Investigations and Evaluation

- (i) Monitoring of project impact on agricultural production;
- (ii) Systematic data collection and evaluation programs to improve design procedures and selection criteria. These studies will cover the hydrology of village tanks, soils, land use and related information;
- (iii) Socio-economic evaluation studies of project impact on agricultural production, farm income and employment.

Organization and Implementation

37. Overall responsibility for coordination and management of the project would rest with the Ministry of Lands and Land Development (MLLD). The National Committee for Village Tank Rehabilitation (NCVTR) is responsible for coordination and planning of all minor irrigation works in the country and would ensure that the proposed project is complementary to other projects involving minor irrigation. The NCVTR is headed by the Chairman of the Mahaweli Authority and includes the Secretaries of the main ministries concerned with minor irrigation, notably Secretary, MLLD and Secretary, MADR as members.

38. A Project Steering Committee (PSC) has been established (draft DCA, Section 3.08) in the MLLD, with the Secretary of Lands and Land Development as Chairman, and representatives from the Ministry of Agricultural Development and Research, the Ministry of Finance and Planning, the Department of External Resources, the DI, the DAS, the Freedom From Hunger Campaign (FFHC) and the University of Peradeniya. The PSC would be responsible for: (a) approving the annual district programs comprising both the civil works to be undertaken by the DI and DAS and their budgets, (b) reviewing and monitoring of project progress, (c) resolving implementation bottlenecks, and (d) recommending modifications in project design.

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1/ Success of the water management program will depend to a great extent upon the simultaneous introduction of several new agronomic techniques (e.g., new rice varieties, earlier land preparation, greater input use, etc.). The Department of Agriculture (DA), whose staff and extension program are being strengthened under the IDA-supported Agricultural Extension and Adaptive Research Project (Credit No. 931-CE) will provide appropriate extension support for the proposed project.

39. A District Agricultural Committee (DAC) has been established in each district (draft DCA, Section 3.08) under the Irrigation Ordinance. The DAC is chaired by the Government Agent and consists, in addition, of all regional and district officers concerned, with the Development Officer of the Kachcheri (district office) as secretary. It would be responsible for (a) identifying the annual district program consistent with the agreed criteria, (b) scheduling an appropriate program of investigations by DI and DAS officers, (c) submitting this annual program of works for the approval of the Project Steering Committee, and (d) monitoring progress and resolving implementation problems at the district level.

40. The MLLD will coordinate the activities of the various departments and agencies involved through the Project Steering Committee. A coordinator appointed in MLLD will have particular responsibility for the supervision of the agencies involved in project evaluation (para 36c above). Funds for the project will be included in the budget of the DI, which is the major implementing agency. A Project Management Division has been established in DI, and will be responsible for the implementation of the DI program, as well as for maintaining overall project accounts, submitting IDA reimbursement claims and functioning as the general secretariat for the project as a whole. A Project Management Division in the DAS, under the proposed Deputy Commissioner for Water Management (para 42), will supervise the water management and other programs to be undertaken by that department.

41. The DI has long experience of the straightforward rehabilitation work to be carried out under the project and, with some strengthening of quality control, workshop and other supporting services, no serious problems are foreseen for its assuming the additional work involved. With financial constraints likely to curtail the initiation of other major projects, it is judged that the DI Range Offices will have the capacity to implement the proposed work program. Nevertheless, DI as a whole does have a shortage of qualified engineers and although shortages of technical assistants (who will be primarily responsible for carrying out the surveys and supervising construction) are less severe, it will be important to keep the staffing position under review. The Government will undertake an annual review of the program, adjust the program and reallocate funds and staff as may be necessary to meet the needs of the approved program (draft DCA, Section 3.07(b)).

42. Responsibility for the Government's role in supporting the operation and maintenance of minor irrigation was only recently returned to DAS under the Agrarian Services Act of 1979, following abolition of the Territorial Civil Engineering Organization which had been responsible for the work during most of the 1970s. The Department is still in the process of establishing its capability to undertake such a role, and its present technical cadre is well below the approved strength. Moreover, the water management principles and practices to be introduced under the project are mostly new to Sri Lanka. Therefore, the project provides both for strengthening DAS support for minor irrigation and for a substantial training program to ensure the effectiveness of the new organization. Seven regional offices will be established covering the whole country, with those in the project area provided support under the project. These offices will direct three main activities: (i) the planning and implementation of water management programs on identified schemes;

(ii) the operation of a new water management service to maintain and if necessary modify agreed programs; and (iii) the ongoing repair and maintenance activities of the department. As a condition of effectiveness, the Government will appoint a Deputy Commissioner (Water Management) and a Water Management Engineer in DAS (draft DCA, Sections 3.09(b) and 5.01). The Government will also establish, by December 31, 1981, twelve agricultural planning teams to plan and design water management programs (draft DCA, Section 3.09(c)). Basic training of technical assistants at Moratuwa University and the Hardy Institute at Amparai will be supported under the project and new training courses in water management will be developed at the Maha Illuppallama Research Institute of the Department of Agriculture. With this support, and with the technical assistance to be provided (para 44), it is judged that DAS will be in a position to implement the water management and maintenance components of the project. Nevertheless, the effectiveness of DAS's role will be kept under review during the course of the project implementation.

43. Project implementation will take five years starting in 1981. The overall scope of the project, and the approximate number of schemes scheduled for rehabilitation in each year, are in line with the Government's Investment Program, 1981-85. The divisibility of the civil works program is such that there should be no difficulty in adjusting the annual program to actual annual budget allocations. Selection of schemes for rehabilitation will be made according to agreed criteria covering hydrological factors (notably the minimum storage to be provided) and socio-economic considerations (including a maximum cost limit per hectare of command area). Preparation of plans and designs for each scheme would be in accordance with specifications and guidelines satisfactory to IDA (draft DCA, Section 3.06).

#### Technical Assistance

44. Thirty-six man-months of technical assistance in water management at a per man-month cost of about US\$5,000 have been incorporated in the project to strengthen the capacity of DAS to implement the water management component and to accelerate its staff and program development. This technical assistance would take the form of a full-time water management adviser for a period of two years, who would coordinate the training program and help train the instructors from the DA in the techniques to be adopted under the program. The Government will appoint the water management adviser by October 31, 1981 (draft DCA, Section 3.02). He would assist DAS in strengthening the organizational framework and preparing guidelines for the proposed water management program, prepare design manuals for distribution systems, and also provide assistance to the DA's physical resource evaluation study (para 46). At the end of the two-year assignment, the status of the water management program would be reviewed and a decision taken whether the water management adviser should be extended full-time for a third year, or whether the remaining 12 man-months could be more advantageously utilized in more flexible, short-term technical assistance in response to specific requirements.

#### Monitoring and Evaluation

45. The Project Management Division in DI will monitor and summarize progress reports from the districts, reflecting operational and financial performance. It will submit monthly progress reports on the implementation

of the DI civil works to the Project Steering Committee. The project management division of DAS will have comparable responsibilities for all aspects of the water management, operation and maintenance activities implemented through DAS. The DAS, in association with the FFHC and the Department of Census and Statistics, will also be responsible for monitoring the agricultural production impact of the rehabilitation and water management programs. Joint quarterly reports will be submitted to IDA through the Project Management Division in DI.

46. Arrangements have been made with the Department of Agriculture under the Ministry of Agricultural Development and Research to undertake a physical resource evaluation study directed at improving the data base on the hydrology and irrigation potential of village tanks. In addition, and in coordination with the Department of Agriculture, the University of Peradeniya (UP) will undertake a regular annual socio-economic survey of a sample of about 25 schemes to provide evidence on project progress in terms of its economic and social justification and to monitor its impact on agricultural production, farm incomes and employment. As part of preparation for the project, the UP carried out a socio-economic survey in the project area. The Government will by December 31, 1981 furnish to IDA a detailed program for monitoring and evaluation studies (draft DCA, Section 3.10). These evaluation studies will assist in both carrying out the project, in particular as a basis for improving the selection criteria (para 43) and reviewing implementation performance (para 41), as well as contributing to the planning of further programs and projects in support of minor irrigation in Sri Lanka.

#### Costs and Financing

47. The total project cost is estimated to be US\$43.6 million equivalent with a foreign exchange component of US\$9.5 million (22%). Taxes and duties are waived on machinery imported by the public sector and have, therefore, been excluded. Base cost estimates are at mid-1980 prices. The civil works component accounts for about 82% of the total base costs and includes 10% for supervision and administration. Average cost estimates are based on analysis of 375 preliminary estimates by the DI, and on unit rates prevailing in 1980. Price contingencies have been calculated on the following basis: 25% in 1980 and 1981, 15% in 1982, 12% in 1983, 10% in 1984 and 8% in 1985 for local costs and 12.5% in 1980, 9% in 1981, 8.5% in 1982, and 7.5% in 1983-85 for foreign costs. The proposed credit of US\$30.0 million would finance the full foreign exchange cost and contribute US\$20.5 million equivalent to local costs or about 69% of total project costs. The remaining local costs, amounting to US\$13.6 million equivalent would be met by the Government. Despite a number of recent measures to raise additional resources in support of its investment program (para 14), Sri Lanka's budgetary situation remains tight. A major reason for this is the adverse impact on revenues of the relatively slow increase in export volumes and prices, and the pressures on expenditures arising from the rapid increase in import prices. Even though additional resource mobilization measures are under consideration, the tight budgetary situation will take time to resolve. Local cost financing in support of Sri Lanka's own resource mobilization efforts will not only provide valuable relief to these budgetary pressures but also supplement foreign exchange resources needed in support of the balance of payments.

### Procurement

48. Equipment and vehicles with an estimated cost of US\$2.5 million will be procured through international competitive bidding (ICB) in accordance with IDA guidelines. A preference of 15% of the cif price of imported goods would be extended to local manufacturers in the evaluation of bids. Due to strong individual preferences, motorcycles and bicycles supplied to DAS staff would be purchased by the individuals concerned through normal commercial channels. Small off-the-shelf items costing less than US\$20,000 each, for which international tendering is impracticable, would be procured after comparing prices from not less than three independent suppliers in accordance with procurement procedures acceptable to IDA. Such purchases including motorcycles and bicycles will not exceed the equivalent of US\$0.5 million in total.

49. Civil works under the project will be individually small and scattered throughout the project area. Construction will be seasonal and it would be neither feasible nor economic to group schemes into large contracts suitable for ICB. Approximately 80% of the civil works is expected to be undertaken through local domestic contractors using predominantly labor-intensive methods. The balance will be undertaken by force account using the limited amount of construction machinery supplied under the project, particularly in those districts where labor shortages are encountered. The DI and the DAS will retain full responsibility for construction standards including those for works undertaken by contract.

### Disbursements

50. Disbursements under the Credit would be made for: (i) 70% of expenditures on civil works; (ii) 100% of foreign expenditures for directly imported, 100% of local expenditures (ex-factory) for locally manufactured, and 80% of expenditures on locally procured equipment and vehicles; and (iii) 100% of expenditures on training, evaluation studies and technical assistance.

51. Disbursements for civil works and training would be made against statements of expenditures, submitted to IDA through the office of the Project Management Division of DI. This division will also maintain project accounts which will be audited according to procedures acceptable to IDA. Disbursements for equipment, vehicles, studies and technical assistance would be made against full documentation. It is anticipated that the final disbursements of the Credit would be made by December 31, 1986, about one year after the scheduled completion of project implementation. To facilitate the smooth implementation of the 1981 program and to ensure the early start of the monitoring and evaluation activities, the project would include up to US\$1.0 million of retroactive financing for eligible project expenditures incurred after October 1, 1980. If signing of the credit documents is delayed, additional retroactive financing may be made available at the Government's request.

### Agricultural Impact and Farm Incomes

52. A combined irrigable area of about 31,500 ha (78,000 acres) would benefit under the project from a better managed, more reliable water supply. In addition to higher yields and cropping intensities on existing irrigable land, it is expected that about 7,000 ha of this irrigable land would represent land previously cultivated under rainfed conditions. Rice is virtually the only crop grown at present under minor irrigation, but on the lighter

soils some diversification into upland crops is expected in response to the proposed water management program. Conditions will vary substantially from scheme to scheme, but at full development in 1991 crop production is estimated to amount to about 90,000 tons of paddy and 2,000 tons of chillies and cowpeas, compared to an estimated 52,500 tons of paddy without the project. Further agricultural benefits would be obtained on schemes to be modernized by the DAS, and the successful implementation and extension of the water management program could lead to production increases significantly higher than those projected above.

53. Some 20,000-25,000 farm families will have their incomes supplemented as a result of the rehabilitation works and water management programs completed under the project, and will be provided with greater assurances against the risks of weather. The extent of the project's impact on family incomes will vary substantially, depending on the conditions prevailing under different schemes, and on the relative importance of the paddy holding in relation to other sources of income. Paddy accounts for about one-third of present family incomes of representative farms, which are expected to increase by about 30-45% as a result of the project. With the project, per capita incomes of such representative farms would rise from about US\$90 to about US\$120, equivalent to a little more than half the national average.

54. No water charges are levied by the Government on village irrigation schemes, given their traditional form of ownership and management. It is not thought practicable to institute them in the context of the project given the variability of the project's impact; the relatively modest impact on per capita incomes; the widely dispersed nature of the schemes involved; and the large number of benefitting farmers. Farmers will, however, contribute free labor for construction of the field channel system and possibly other civil works activities, and will also meet the majority of O&M costs notably through the provision of free labor for annual maintenance. It is estimated that the farmers will contribute about 15% of the present value of the total incremental costs associated with the project. After allowing for management and family labor, it is further estimated that the farmer contribution will equal about 9-11% of project rent. These shares are thought acceptable given the relatively low per capita incomes. The actual impact of the project on farm incomes will be closely evaluated (para 46) and the University of Peradeniya study will also review the potential for additional cost recovery measures in relation to subsequent village irrigation programs.

#### Project Benefits and Risks

55.\* The project will permit the intensification of agricultural activities on existing but currently underexploited minor irrigation schemes. The emphasis on rehabilitation and quick-yielding investments is appropriate in the light of Sri Lanka's evolving overall economic situation, and benefits from the project can be expected to flow as from the first year's investments. In contrast to major new settlement schemes, the benefits of the project will be widely dispersed throughout the country in areas which frequently remain untouched by other government programs. The project should therefore help to reduce regional imbalances and reach some of the least advantaged communities in the country.

56. The overall scope and phasing of the project have been adjusted to correspond to the allocations provided for in the most recent review of the Government's Public Investment, 1981-85. Nevertheless, it is conceivable that financial stringency will entail further adjustment in the future. The divisibility of the project is such that this could be readily accommodated through a reduction in the number of schemes rehabilitated in any one year. Since this would reduce costs and benefits virtually pro rata, the economic viability of the project would remain secure. The technical risks of the project are no greater than would normally be associated with operations of this type.

57. The economic rate of return (ERR) of the project is estimated to be 20%, on the basis of preliminary evidence obtained under the rural development projects and an initial evaluation study undertaken by the University of Peradeniya. If the difference in cropping intensities declines by 25% relative to the levels projected, then the ERR would fall to 14.7%. The project maintains an ERR above 12% for a 20% reduction in paddy price; a 20% increase in farm costs; a 20% decrease in total command area; and a delay in benefits by two years.

#### PART V - LEGAL INSTRUMENTS AND AUTHORITY

58. The draft Development Credit Agreement between the Democratic Socialist Republic of Sri Lanka and the Association and the Recommendation of the Committee provided for in Article V, Section 1(d) of the Articles of Agreement are being distributed to the Executive Directors separately. Additional conditions of effectiveness include the appointment of a Deputy Commissioner (Water Management) and a Water Management Engineer in the DAS (para 42). Special conditions of the credit are listed in Section III of Annex III.

59. I am satisfied that the proposed credit would comply with the Articles of Agreement of the Association.

#### PART VI - RECOMMENDATION

60. I recommend that the Executive Directors approve the proposed credit.

Robert S. McNamara  
President

by

Moeen Qureshi

SRI LANKA - SOCIAL INDICATORS DATA SHEET

LAND AREA (THOUSAND SQ. KM.)	SRI LANKA			REFERENCE GROUPS (WEIGHTED AVERAGES - MOST RECENT ESTIMATE) <sup>a</sup>	
	1960	1970	MOST RECENT ESTIMATE	LOW INCOME ASIA & PACIFIC	MIDDLE INCOME ASIA & PACIFIC
	/b	/b	/b		
TOTAL	65.6				
AGRICULTURAL	25.7				
<b>GNP PER CAPITA (US\$)</b>	60.0	100.0	230.0	212.4	1114.7
<b>ENERGY CONSUMPTION PER CAPITA</b> (KILOGRAMS OF COAL EQUIVALENT)	107.0	138.0/f	109.0	166.0	842.4
<b>POPULATION AND VITAL STATISTICS</b>					
POPULATION, MID-YEAR (MILLIONS)	9.9	12.3	14.3	.	.
URBAN POPULATION (PERCENT OF TOTAL)	17.9	21.9	23.6	20.8	39.1
<b>POPULATION PROJECTIONS</b>					
POPULATION IN YEAR 2000 (MILLIONS)			21.0	.	.
STATIONARY POPULATION (MILLIONS)			31.0	.	.
YEAR STATIONARY POPULATION IS REACHED			2070	.	.
<b>POPULATION DENSITY</b>					
PER SQ. KM.	151.0	191.0	218.0	193.2	376.1
PER SQ. KM. AGRICULTURAL LAND	507.0	518.0	556.0	409.6	2350.4
<b>POPULATION AGE STRUCTURE (PERCENT)</b>					
0-14 YRS.	42.1	41.9	37.6	42.0	40.4
15-64 YRS.	54.3	54.5	58.3	55.0	56.2
65 YRS. AND ABOVE	3.6	3.6	4.1	3.0	3.4
<b>POPULATION GROWTH RATE (PERCENT)</b>					
TOTAL	2.5	2.4	1.7	2.2	2.4
URBAN	4.8	4.3	3.7	3.9	4.1
<b>CRUDE BIRTH RATE (PER THOUSAND)</b>					
CRUDE BIRTH RATE (PER THOUSAND)	36.0	30.0	26.0	37.4	28.7
CRUDE DEATH RATE (PER THOUSAND)	9.0	7.0	6.0	14.6	7.9
GROSS REPRODUCTION RATE	2.5	2.3	1.8	2.6	1.9
<b>FAMILY PLANNING</b>					
ACCEPTORS, ANNUAL (THOUSANDS)	..	55.3	113.0	.	.
USERS (PERCENT OF MARRIED WOMEN)	..	8.0	41.0	15.6	39.0
<b>FOOD AND NUTRITION</b>					
<b>INDEX OF FOOD PRODUCTION</b>					
PER CAPITA (1969-71=100)	93.0	103.0	119.0	101.4	116.9
<b>PER CAPITA SUPPLY OF CALORIES (PERCENT OF REQUIREMENTS)</b>					
PER CAPITA SUPPLY OF CALORIES (PERCENT OF REQUIREMENTS)	97.0	108.0	96.0	92.4	108.9
PROTEINS (GRAMS PER DAY)	44.0	47.0	43.0	49.8	60.3
OF WHICH ANIMAL AND PULSE	13.0	13.0	7.0	12.0	18.8
CHILD (AGES 1-4) MORTALITY RATE	7.0	3.0	2.0	17.9	5.3
<b>HEALTH</b>					
LIFE EXPECTANCY AT BIRTH (YEARS)	62.0	67.0	69.0	50.8	63.0
INFANT MORTALITY RATE (PER THOUSAND)	63.0	51.0	..	..	52.8
<b>ACCESS TO SAFE WATER (PERCENT OF POPULATION)</b>					
TOTAL	..	21.0	20.0	30.2	42.4
URBAN	..	46.0	45.0	66.0	62.1
RURAL	..	14.0	13.0	20.0	29.7
<b>ACCESS TO EXCRETA DISPOSAL (PERCENT OF POPULATION)</b>					
TOTAL	..	64.0	59.0	17.7	52.8
URBAN	..	76.0	68.0	71.3	71.1
RURAL	..	61.0	55.0	..	42.4
<b>POPULATION PER PHYSICIAN</b>					
POPULATION PER PHYSICIAN	4500.0	..	6274.0	6322.7	4120.1
POPULATION PER NURSING PERSON	4150.0	2730.0	2259.0	9459.0	2213.6
<b>POPULATION PER HOSPITAL BED</b>					
TOTAL	319.0	331.0	331.0	1758.4	819.4
URBAN	..	130.0	140.0	..	..
RURAL	..	570.0	600.0	..	..
ADMISSIONS PER HOSPITAL BED	..	54.0	51.3	..	28.8
<b>HOUSING</b>					
<b>AVERAGE SIZE OF HOUSEHOLD</b>					
TOTAL	5.4/c	5.8	..	..	..
URBAN	6.3/c	6.3	..	..	..
RURAL	5.2/c	5.5	..	..	..
<b>AVERAGE NUMBER OF PERSONS PER ROOM</b>					
TOTAL	2.0/c	2.5	..	..	..
URBAN	2.1/c	2.7	..	..	..
RURAL	2.0/c	2.5	..	..	..
<b>ACCESS TO ELECTRICITY (PERCENT OF DWELLINGS)</b>					
TOTAL	7.5/c	9.0	..	..	..
URBAN	35.9/c	34.5	..	..	..
RURAL	2.3/c	2.8	..	..	..

SRI LANKA - SOCIAL INDICATORS DATA SHEET

	SRI LANKA			REFERENCE GROUPS (WEIGHTED AVERAGES - MOST RECENT ESTIMATE) <sup>/a</sup>	
	1960 <sup>/b</sup>	1970 <sup>/b</sup>	MOST RECENT ESTIMATE <sup>/b</sup>	LOW INCOME ASIA & PACIFIC	MIDDLE INCOME ASIA & PACIFIC
<b>EDUCATION</b>					
ADJUSTED ENROLLMENT RATIOS					
PRIMARY: TOTAL	95.0	99.0	86.0 <sup>/d</sup>	80.9	98.6
MALE	100.0	104.0	89.0 <sup>/d</sup>	94.3	99.2
FEMALE	90.0	94.0	82.0 <sup>/d</sup>	66.7	97.7
SECONDARY: TOTAL	27.0	47.0	47.0 <sup>/d</sup>	26.6	55.5
MALE	38.0	46.0	47.0 <sup>/d</sup>	34.8	60.7
FEMALE	16.0	48.0	48.0 <sup>/d</sup>	18.2	49.9
VOCATIONAL ENROL. (% OF SECONDARY)	..	1.0	1.0	9.9	13.7
PUPIL-TEACHER RATIO					
PRIMARY	31.0	..	29.0	41.1	34.6
SECONDARY	..	..	..	20.5	28.5
ADULT LITERACY RATE (PERCENT)	75.0 <sup>/e</sup>	77.6	78.1	40.9	85.8
<b>CONSUMPTION</b>					
PASSENGER CARS PER THOUSAND POPULATION	8.0	7.0	6.8	1.8	9.0
RADIO RECEIVERS PER THOUSAND POPULATION	36.0	..	38.0	25.8	118.9
TV RECEIVERS PER THOUSAND POPULATION	..	..	..	2.4	39.4
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION	36.0	49.0	..	13.4	..
CINEMA ANNUAL ATTENDANCE PER CAPITA	3.0	..	4.0	..	4.9
<b>LABOR FORCE</b>					
TOTAL LABOR FORCE (THOUSANDS)	3390.9	4186.9	4930.6	.	.
FEMALE (PERCENT)	22.6	23.7	24.0	29.4	36.8
AGRICULTURE (PERCENT)	56.3	55.1	54.0	70.5	51.9
INDUSTRY (PERCENT)	13.5	14.4	15.0	11.6	21.9
PARTICIPATION RATE (PERCENT)					
TOTAL	34.3	33.5	34.6	37.9	39.1
MALE	50.8	49.2	48.2	51.3	48.5
FEMALE	16.2	16.5	20.3	23.7	29.6
ECONOMIC DEPENDENCY RATIO	1.3	1.4	1.2	1.2	1.1
<b>INCOME DISTRIBUTION</b>					
PERCENT OF PRIVATE INCOME RECEIVED BY					
HIGHEST 5 PERCENT OF HOUSEHOLDS	26.4	..	18.6	..	..
HIGHEST 20 PERCENT OF HOUSEHOLDS	52.1	43.4	42.8	..	..
LOWEST 20 PERCENT OF HOUSEHOLDS	4.5	7.5	7.3	..	..
LOWEST 40 PERCENT OF HOUSEHOLDS	13.7	19.2	19.3	..	..
<b>POVERTY TARGET GROUPS</b>					
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US\$ PER CAPITA)					
URBAN	..	..	..	107.8	..
RURAL	..	..	..	86.5	192.1
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US\$ PER CAPITA)					
URBAN	..	..	..	..	..
RURAL	..	..	..	..	182.5
ESTIMATED POPULATION BELOW POVERTY INCOME LEVEL (PERCENT)					
URBAN	..	..	..	46.2	..
RURAL	..	..	..	51.7	33.2

.. Not available  
 . Not applicable.

NOTES

<sup>/a</sup> The group averages for each indicator are population-weighted arithmetic means. Coverage of countries among the indicators depends on availability of data and is not uniform.

<sup>/b</sup> 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 1978.

<sup>/c</sup> 1963; <sup>/d</sup> Due to changes in duration of levels in education, the ratios are not strictly comparable over time; <sup>/e</sup> 1962; <sup>/f</sup> 1972.

Most recent estimate of GNP per capita is for 1979, all other data are as of April, 1980.

## 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 reference groups are (1) the same country group of the subject country and (2) a country group with somewhat higher average income than the country group of the subject country (except for "Capital Surplus Oil Exporters" group where "Middle Income North Africa and Middle East" is chosen because of stronger socio-cultural affinities) in the reference group data the averages are population weighted arithmetic means for each indicator and shown only when at least half of the countries in a group has data for that indicator. Since the coverage of countries among the indicators depends on the availability of data and is not uniform, caution must be exercised in relating averages of one indicator to another. These averages are only useful in comparing the value 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** - Estimate of agricultural area used temporarily or permanently for crops, pastures, market and kitchen gardens or to lie fallow; 1977 data.

**GNP PER CAPITA (US\$)** - GNP per capita estimates at current market prices, calculated by same conversion method as World Bank Atlas (1977-79 basis); 1960, 1970, and 1979 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 1978 data.

**POPULATION AND VITAL STATISTICS**

**Total Population, Mid-Year (millions)** - As of July 1; 1960, 1970, and 1978 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 1978 data.

**Population Projections**

**Population in year 2000** - Current population projections are based on 1980 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 1978 data.

**Population Growth Rate (percent)** - **total** - Annual growth rates of total mid-year populations for 1950-60, 1960-70, and 1970-78.

**Population Growth Rate (percent)** - **urban** - Annual growth rates of urban populations for 1950-60, 1960-70, and 1970-78.

**Crude Birth Rate (per thousand)** - Annual live births per thousand of mid-year population; 1960, 1970, and 1978 data.

**Crude Death Rate (per thousand)** - Annual deaths per thousand of mid-year population; 1960, 1970, and 1978 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 1977.

**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 (1969-71=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 sugar) which are edible and contain nutrients (e.g. coffee and tea are excluded). Aggregate production of each country is based on national average producer price weights; 1961-65, 1970, and 1978 data.

**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 for all countries established by USDA provide for 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; 1961-65, 1970 and 1977 data.

**Per capita protein supply from animal and pulse** - Protein supply of food derived from animals and pulses in grams per day; 1961-65, 1970 and 1977 data.

**Child (ages 1-4) 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; 1960, 1970 and 1977 data.

**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 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; 1961-65, 1970 and 1977 data.

**Per capita protein supply from animal and pulse** - Protein supply of food derived from animals and pulses in grams per day; 1961-65, 1970 and 1977 data.

**Child (ages 1-4) 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; 1960, 1970 and 1977 data.

**Life Expectancy at Birth (years)** - Average number of years of life remaining at birth; 1960, 1970 and 1978 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** - N. 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.

**Population per 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 and 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 in-patient accommodation and provide a limited range of medical facilities. For statistical purposes urban hospitals include WHO principal general and specialized hospitals, and rural hospitals local or rural hospitals and medical and maternity centers.

**Admissions per Hospital Bed** - Total number of admissions to or discharges from hospitals divided by the number of beds.

**HOUSING**

**Average Size of Household (persons per household) - total, urban, and rural** - A 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 include non-permanent structures and unoccupied parts.

**Access to Electricity (percent of dwellings) - 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.

**Popul-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 most 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; 1960, 1970 and 1978 data.

**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; 1960, 1970 and 1978 data.

**Industry (percent)** - Labor force in mining, construction, manufacturing and electricity, water and gas as percentage of total labor force; 1960, 1970 and 1978 data.

**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 total labor force.

**INCOME DISTRIBUTION**

**Percentage 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".

SRI LANKA: ECONOMIC INDICATORSOUTPUT IN 1980 BY SECTORANNUAL RATE OF GROWTH (% constant prices)

	Value Added		1970-77	1977-80	1970-80
	\$ Million	%			
Agriculture	1,038	27.6	2.0	3.5	2.5
Industry <u>a/</u>	1,116	29.6	2.1	8.6	4.0
Services	1,612	42.8	3.7	7.6	4.9
Total <u>b/</u>	3,766	100.0	2.9	6.8	4.0

GROSS DOMESTIC PRODUCT IN 1980

	US\$ Million	%
GDP at Market Prices	4,130	100.0
Investment	1,480	35.8
Gross National Savings	675	16.3
Current Account Balance	805	19.5
Exports of Goods and NFS	1,295	31.3
Imports of Goods and NFS	2,211	53.5

GOVERNMENT FINANCE

	Central Government			
	(Rs Million)	% of GDP at Market Prices		
	1980	1975	1979	1980
Current Receipts <u>c/</u>	12,927	17.2	23.1	18.9
Current Expenditures <u>d/</u>	14,594	18.3	22.8	21.4
Current Surplus	-1,667	-1.1	0.2	-2.4
Capital Expenditures <u>e/</u>	12,772	7.3	14.1	18.7
External Assistance	5,717	3.2	7.2	8.4

a/ Manufacturing, mining, construction, and utilities.

b/ GDP at factor cost.

c/ Includes capital revenue.

d/ Includes advance accounts.

e/ Includes net lending.

COUNTRY DATA - SRI LANKA

ANNEX I

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MONEY, CREDIT, AND PRICES (end of period)	1970	1975	1976	1977	1978	1979	November
							1980
	(Rs Million)						
Money and Quasi Money	3,061	4,712	6,251	8,636	10,803	14,957	18,948
Bank Credit to Public Sector	2,680	2,460	3,725	4,834	4,518	6,703	12,273
Bank Credit to Private Sector	1,446	3,363	3,919	5,714	8,666	11,853	16,145
(Percentages or Index Numbers)							
Money and Quasi Money as % of GDP	22.4	17.8	20.9	24.0	25.3	28.7	-
General Price Index (1970 = 100)	100.0	143.3	145.2	147.0	164.8	182.6	230.3 a/
Annual Percentage Changes in:							
General Price Index	+5.9	+6.7	+1.3	+1.2	+12.1	+10.8	+26.1 a/
Bank Credit to Public Sector	+15.9	+9.4	+51.4	+35.0	-6.5	+48.4	+83.1
Bank Credit to Private Sector	+0.7	+5.5	+16.5	+45.8	+51.7	+36.8	+36.2

BALANCE OF PAYMENTS

	1979	1980
	(US\$ Million)	
Exports of Goods, NFS	1,135	1,295
Imports of Goods, NFS	1,539	2,211
Resource Gap (deficit = -)	-404	-916
Interest Payments (net)	-9	-12
Workers' Remittances	-	-
Other Factor Payments (net)	-7	-14
Net Transfers	48	137
Balance on Current Account	-372	-805
Direct Foreign Investment	47	43
Net MLT Borrowing	162	247
Disbursements	225	309
Amortization	63	62
Capital Grants	144	138
Other Capital (net)	+67	+157
Change in Reserves (+ = increase)	+48	-220
Gross Reserves (end-year)	626	377
Net Reserves (end-year)	258	38

MERCHANDISE EXPORTS (1980)

	\$ Million	%
Tea	373	35.7
Rubber	156	14.9
Coconut Products	45	4.3
All Other Commodities	471	45.1
Total	1,045 b/	100.0

EXTERNAL DEBT (\$ Million) c/

	December 1979	December 1980
Total Outstanding	1,773.3	2,264.9
Total Outstanding and Disbursed	1,091.1	1,327.6

DEBT SERVICE RATIO d/ (%)

9.8 9.3

RATE OF EXCHANGE

1967-71	End 1976
US\$1.00 = Rs 5.93	US\$1.00 = Rs 8.83
Rs 1.00 = US\$0.17	Rs 1.00 = US\$0.11
End 1972	End 1977
US\$1.00 = Rs 6.70	US\$1.00 = Rs 15.56
Rs 1.00 = US\$0.15	Rs 1.00 = US\$0.06
End 1973	End 1978
US\$1.00 = Rs 6.75	US\$1.00 = Rs 15.51
Rs 1.00 = US\$0.15	Rs 1.00 = US\$0.06
End 1974	End 1979
US\$1.00 = Rs 6.69	US\$1.00 = Rs 15.45
Rs 1.00 = US\$0.15	Rs 1.00 = US\$0.06
End 1975	End 1980
US\$1.00 = Rs 7.71	US\$1.00 = Rs 18.00
Rs 1.00 = US\$0.13	Rs 1.00 = US\$0.06

IBRD/IDA LENDING, December 31, 1980 (\$ Million)

	IBRD	IDA
Outstanding and Disbursed	30.7	97.9
Undisbursed	-	263.8
Outstanding, including Undisbursed	30.7	361.7

Foreign Exchange Entitlement Certificate (FEEC) Rates e/

1968	US\$1.00 = Rs 8.54 (44% FEEC)
1969 to 1971	US\$1.00 = Rs 9.19 (55% FEEC)
1972 (end)	US\$1.00 = Rs 10.38 (55% FEEC)
1973 (end)	US\$1.00 = Rs 11.13 (65% FEEC)
1974 (end)	US\$1.00 = Rs 11.04 (65% FEEC)
1975 (end)	US\$1.00 = Rs 12.72 (65% FEEC)
1976 (end)	US\$1.00 = Rs 14.57 (65% FEEC)
1977 (until Nov. 15)	US\$1.00 = Rs 13.02 (65% FEEC)

a/ Full year data.

b/ Customs data.

c/ Repayable in foreign currencies and with a maturity over one year.

d/ Ratio of debt service, excluding short-term capital repayments and IMF repurchases to exports of goods and non-factor services.

e/ The certificates were abolished on November 15, 1977.

THE STATUS OF BANK GROUP OPERATIONS IN SRI LANKA

A. STATEMENT OF BANK LOANS AND IDA CREDITS (as of March 31, 1981)

Loan or Credit	No.	Year	Borrower	Purpose	Bank	US\$ Million		
						IDA	Undisbursed	
Eight loans and eight credits fully disbursed						72.9	66.8	
	504	1974	Sri Lanka	Dairy Development		9.0	5.7	
	666	1976	Sri Lanka	Tank Irrigation Modernization		5.0	3.4	
	701	1977	Sri Lanka	Mahaweli Ganga Development II		19.0	14.8	
	709	1977	Sri Lanka	Water Supply		9.2	.7	
	742	1977	Sri Lanka	DFC - Industrial IV		8.0	1.8	
	818	1978	Sri Lanka	Tree Crop Rehabilitation (Tea)		21.0	17.3	
	819	1978	Sri Lanka	Tree Crop Diversification (Tea)		4.5	1.2	
	891	1979	Sri Lanka	Kurunegala Rural Development		20.0	17.2	
	900	1979	Sri Lanka	Road Maintenance		16.5	15.9	
	931	1979	Sri Lanka	Agricultural Extension and Adaptive Research		15.5	14.7	
	942	1979	Sri Lanka	Small and Medium Industries		16.0	12.6	
	979	1980	Sri Lanka	Mahaweli Ganga Technical Assistance		3.0	2.8	
	994	1980	Sri Lanka	Road Passenger Transport		53.0	52.4	
	1017	1980	Sri Lanka	Rubber Rehabilitation		16.0	15.8	
	1020	1980	Sri Lanka	Telecommunications		30.0	30.0	
	1041	1980	Sri Lanka	Second Water Supply		30.0	30.0	
	1048	1980	Sri Lanka	Sixth Power		19.5	19.5	
	1079	1981	Sri Lanka	Second Rural Development		33.5	33.5	
		1981	Sri Lanka	Construction Industry Project		13.5	13.5	
Total,						72.9	409.0	302.8
of which has been repaid						42.4	0.4	
Total now outstanding						30.5	408.6	
Amount sold,								3.6
of which has been repaid								3.6
Total now held by Bank and IDA /a						30.5	361.6	

/a Prior to exchange adjustments.

B. STATEMENT OF IFC INVESTMENT (as of March 31, 1981)

Year	Obligor	Type of Business	Amount (US\$ Million)		
			Loan	Equity	Total
1970	Pearl Textile	Textiles	2.50	0.75	3.25
1977	The Development Finance Corporation of Ceylon	Development Banking	-	0.10	0.10
1978	Bank of Ceylon	Development Banking	2.00	-	2.00
1979	Cyntex	Textiles	3.15	0.53	3.68
1979	Mikechris Industries	Polypropylene Bag	0.90	0.10	1.00
1980	Development Finance Corporation of Ceylon	Development Banking	-	0.05	0.05
1980	LOLC	Leasing	-	0.26	0.26
Total Gross Commitments			8.55	1.79	10.34
Less: Cancellations, Terminations Repayments and Sales			3.78	0.74	4.52
Total Commitments now held by IFC			4.77	1.05	5.82

C. PROJECTS IN EXECUTION 1/

Cr. No. 504 - Dairy Development Project; US\$9.0 million of August 9, 1974;  
Effective Date: February 10, 1975; Closing Date:  
December 31, 1981

Project focus has been shifted from the provision of credit for cattle purchase and on-farm development to the establishment of Dairy Producer Associations along the lines of the successful Anand pattern in India. The successful ongoing calf/heifer rearing and pasture production components have been expanded. The closing date was extended by one year to permit Credit proceeds to be used to finance preparation of the feasibility study for the proposed milk processing plant near Kandy. The extension also provides IDA with the opportunity to continue its dialogue with the Government on the milk price/subsidy issue.

Cr. No. 666 - Tank Irrigation Modernization Project; US\$5.0 million of  
January 12, 1977; Effective Date: April 12, 1977;  
Closing Date: June 30, 1981

Excellent progress has been made on the progress of the project during the last six months. The staff and equipment provided are capable and adequate to complete the project by end 1982 if required rupee funds are made available by the Government as needed. However, the Government currently is experiencing a severe shortfall of local funds and most Departmental budgets have been sharply reduced (average of 25-35%). The water management program initiated during the last maha season went very well (in fact, the program averted a complete crop failure which would have occurred due to drought conditions) and farmers' reaction to it was good. A similar program will be introduced in the other four tanks during the next maha season.

Cr. No. 701 - Mahaweli Ganga Development II Project; US\$19.0 million  
of June 27, 1977; Effective Date: December 29, 1977;  
Closing Date: June 30, 1983

Project implementation progress has slowed, primarily due to the severe shortage of local funds for the project during the last quarter of 1980 and for 1981. Management problems and the turning over of settlement and operation and maintenance responsibilities to Mahaweli Authority from Mahaweli Development Board have also contributed to a slowing of work activities. It now appears that project completion will be delayed at least one year beyond the date anticipated at appraisal (from June 1982 to June 1983). The primary and secondary irrigation works are nearly completed and, with

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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.

the exception of some measurement structures, are of good quality. Over 80% of the farms have now been settled. The farmer settlers appear, for the most part, to be satisfied with their new farms and with the project.

Cr. No. 709 - Water Supply Project; US\$9.2 million of June 30, 1977;  
Effective Date: February 8, 1978; Closing Date:  
June 30, 1983

The Project has made good progress in the procurement of equipment and materials and in the construction of civil works. The IDA Credit and the IDA administered CIDA Credit are almost entirely disbursed; however, disbursements from the EEC Special Action Credit continue to be slow. Financial Management of the National Water Supply and Drainage Board (WDB) has improved with WDB now producing the financial information required for management.

WDB's progress in implementing consumer metering is unsatisfactory. It has recently taken steps to accelerate the program.

Cr. No. 742 - Fourth Development Finance Corporation of Ceylon Project;  
US\$8.0 million of September 30, 1977; Effective Date:  
December 16, 1977; Closing Date: December 31, 1981

Subprojects for US\$7.8 million have been authorized. DFCC remains a competent institution, with a rapidly increasing level of activity, which could increase further now that DFCC's staffing problems are being addressed, and possibilities for expanding DFCC's low equity base are being pursued.

Cr. No. 818 - Tree Crop Rehabilitation (Tea) Project; US\$21.0 million  
of July 12, 1978; Effective Date: December 28, 1978;  
Closing Date: December 31, 1984

Project progress is close to target for field work, in spite of severe drought in early 1980. Housing and health components are behind schedule. Consultants have been engaged to help implement these components. Tea margins have deteriorated due to doubling of tea fertilizer prices. The Government is expected to take compensatory measures to restore tea margins.

Cr. No. 819 - Tree Crop Diversification (Tea) Project; US\$4.5 million  
of July 12, 1978; Effective Date: December 15, 1978;  
Closing Date: June 30, 1983

The National Agricultural Development and Settlement Authority, the project executing agency, has developed into a mature development organization. Despite some delay in procurement of equipment, progress in field work is impressive. Cluster selection and homestead and farm demarcation, and soil conservation work have been completed. About 2,000 settlers have occupied their houses. Farm planting schedule was disrupted by the severe and prolonged drought last year. With better conditions this year, all plantings are expected to be completed by end-1981.

Cr. No. 891 - Kurunegala Rural Development Project; US\$20.0 million of April 26, 1979; Effective Date: August 27, 1979; Closing Date: June 30, 1984

The project is generally on schedule; rural electrification works have already been completed; and rural roads and education works should be completed by the end of the year. Problems on quality of construction of irrigation and education works were identified at early stage of project implementation. Supervisory consultants, appointed for the Second Rural Development Project (Cr. No. 1079), will help improve construction activities. Improvements on the institutional arrangements for agricultural credit and agricultural extension are somewhat slower than expected. High cost overruns were noted in nearly all project components. Efforts are being made to cut down cost by introducing farmers' donated labor for some of the activities.

Cr. No. 900 - Road Maintenance Project; US\$16.5 million of June 22, 1979; Effective Date: December 19, 1979; Closing Date: June 30, 1984

A general 25% reduction in budget allocations for the present financial year, followed by a further 10%, has meant a rescheduling of proposed expenditure for the project. This has been possible without sacrificing principal project objectives but at the cost of deferring major rehabilitation work until towards the end of the project. Meantime, institution building and introduction of improved road maintenance methods continues, and providing it is possible for Government to provide increased funds for subsequent years, project completion is expected by March 1984, six months later than planned at appraisal.

Cr. No. 931 - Agricultural Extension and Adaptive Research Project; US\$15.5 million of July 24, 1979; Effective Date: October 4, 1979; Closing Date: June 30, 1985

Implementation during the first year has been slower than anticipated due to delays in procurement and staffing. Recently, however, most full time staff have been recruited and procurement of vehicles and equipment are underway. With these, implementation is likely to improve. Civil works are progressing satisfactorily. Some questions have been raised as to the feasibility of operating the T&V method of extension in the wet zones dominated by tree crops, absentee landlord and inadequate infrastructure. These and other implementation issues would be reviewed by IDA and the Government in July, 1981.

Cr. No. 942 - Small and Medium Industries Project; US\$16.0 million of July 24, 1979; Effective Date: October 23, 1979; Closing Date: June 30, 1984

The principal objectives of the project would be to encourage and assist growth and productivity improvement of small and medium firms, defined as enterprises having plant and equipment valued at less than Rs 1 million, so as to increase their contribution to efficient low cost employment creation, export expansion, regional development and economic growth. About 80% of the

total subloan amount has been committed, and disbursements which have accelerated during the last six months, are expected to be completed one year ahead of schedule. Most technical and marketing service assistance activities have been launched.

Cr. No. 979 - Mahaweli Ganga Technical Assistance Project; US\$3.0 million of April 16, 1980; Effective Date: July 7, 1980; Closing Date: September 30, 1982.

The consultants for System C and Minipe Right Bank Transbasin Canal are nearing the end of their consulting agreement with GOSL. The designs and preliminary layouts of the irrigation system and hamlet infrastructure, for the 1,000 ha sample area (actually 1,677 ha) have been completed and reviewed. The detailed studies pointed up significant differences between the consultant's and MDB's design criteria. However, agreed criteria were finally adopted, which will require a redesign of irrigation and settlement infrastructure in Zones 3 and 4 previously completed by MDB. The preparation of working drawings for the transbasin canal is keeping pace with the contractor's requirements. The consultants plan to phase out their operations in June and July 1981. The consultants for the Transbasin Diversion Study continue to make good progress, however delays in completion of topographic maps required for the Mi Oya Basin and the South East Dry Zone by the Surveyor General's Department and the addition of a new study area have delayed submission of the consultants' Planning Report by about five weeks. The report will now be submitted by June 15, 1981 and a full review of the consultants' alternative development plans is scheduled for the week of June 29, 1981 in Colombo between the consultants, GOSL and IDA. Additional staff time will be required by the consultants, which was anticipated at the time of contract approval. It appears adequate funds are available in the credit.

Cr. No. 994 - Road Passenger Transport Project; US\$53 million of April 16, 1980; Effective Date: October 27, 1980; Closing Date: June 30, 1983.

Consultants have commenced work in the fields of procurement, industrial engineering and accounting and route planning. Procurement is lagging about 18 months behind appraisal estimates. No disbursements have been made except for consultancy services. Because of the present delays, the original plan of 2,100 bus chassis is unlikely to be accomplished either in time or within the project costs. Current indications are that only 1,600 new buses will be put into service during the project period.

Cr. No. 1017 - Smallholder Rubber Rehabilitation Project; US\$16.0 million; Effective Date: September 10, 1980; Closing Date: June 30, 1986.

Most of the proposed institutional reorganization has been completed and recruitment of extension staff is continuing. Preparation for the first planting season (1981) is well underway. Response by farmers to participate in replanting under the project has been highly satisfactory.

Cr. No. 1020 - Telecommunications Project; US\$30.0 million of June 24, 1980;  
Effective Date: September 10, 1980; Closing Date: June 30, 1985.

The Government has already established a separate Telecommunications Department as part of organizational improvements under the project. The Government has also increased overseas telephone and telex rates. Procurement is about two to three months behind schedule but all bid invitations are expected to be issued by the end of September 1981.

Cr. No. 1041 - Water Supply and Sewerage II Project; US\$30.0 million of  
September 24, 1980; Effective Date: February 26, 1981;  
Closing Date: September 30, 1985.

WDB has appointed engineering consultants to supervise the construction of the sewerage works under the Project and the financial consultants for completion of WDB's organization management and financial study. On January 8, 1981, WDB signed an agreement for parallel financing in the amount of US\$30 million with the Saudi Fund for Development.

Cr. No. 1048 - Sixth Power Project; US\$19.5 million of September 24, 1980  
Effective Date: March 30, 1981; Closing Date: March 31, 1985.

Procurement is proceeding satisfactorily; tender documents for four of the five contracts to be financed by IDA have been advertised. An agreement for cofinancing in the amount of US\$20.0 million was signed between the Government and Saudi Fund for Development on January 8, 1981. The average tariff for power supplied by the Ceylon Electricity Board was increased from about Rs 0.30 to Rs 0.58/kWh on October 1, 1980. The first phase of management consultancy has been completed and engineering consultants have been appointed to design the project components to be financed by the Saudi Fund.

Cr. No. 1079 - Second Rural Development Project; US\$33.5 million of February 2,  
1981; Not Yet Effective; Closing Date: June 30, 1986.

The Credit Agreement was signed on February 2, 1981. Supervisory consultants have been appointed and procurement of essential vehicles and equipment initiated.

Cr. No. .... - Construction Industry Project; US\$13.5 million; Not Yet  
Signed.

The Project was approved by the Executive Directors on April 7, 1981.

SRI LANKA

VILLAGE IRRIGATION REHABILITATION PROJECT

Supplementary Project Data Sheet

Section I: Timetable of Key Events

- (a) Time taken by the Country to prepare the project  
Ten months
- (b) The agency which has prepared the project  
Ministry of Lands and Land Development, with the assistance of FAO/CP.
- (c) Date of first presentation to the Association and date of the first mission to consider the project  
July 5, 1980 - August 25, 1980
- (d) Date of departure of appraisal mission  
August 25, 1980
- (e) Date of completion of negotiations  
April 24, 1981
- (f) Planned date of effectiveness  
October 31, 1981

Section II: Special IDA Implementation Actions

None.

Section III: Special Conditions

Condition of Effectiveness

- (a) Appointment of a Deputy Commissioner (Water Management) and a Water Management Engineer (para 42);

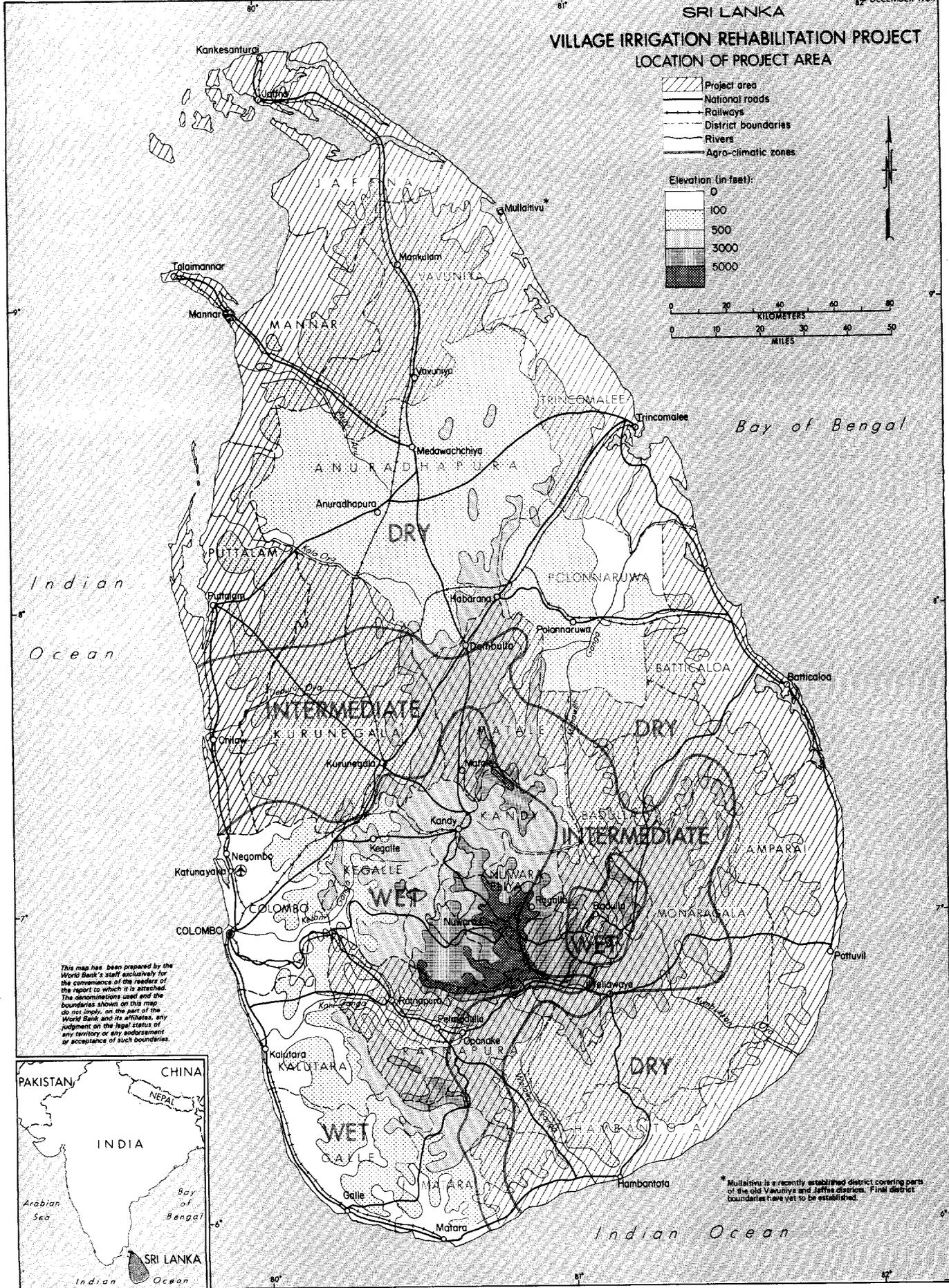
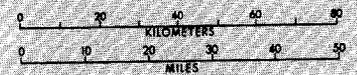
Other Conditions

- (b) annual review and appropriate adjustment of the district irrigation programs and staff (para 41);
- (c) establishment of twelve agricultural planning teams by December 31, 1981 (para 42);
- (d) selection of rehabilitation schemes and plans and designs of works to be in accordance with specifications and guidelines satisfactory to IDA (para 43);  
and
- (e) preparation and submission to IDA by December 31, 1981 of details of monitoring and evaluation studies (para 46).

# SRI LANKA VILLAGE IRRIGATION REHABILITATION PROJECT LOCATION OF PROJECT AREA

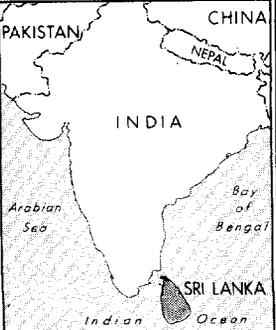
-  Project area
-  National roads
-  Railways
-  District boundaries
-  Rivers
-  Agro-climatic zones

Elevation (in feet):



Indian Ocean

Bay of Bengal



This map has been prepared by the World Bank's staff exclusively for the convenience of the readers of the report to which it is attached. The circumstances used and the boundaries shown on this map do not imply, on the part of the World Bank and its affiliates, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

\* Mullativu is a recently established district covering parts of the old Vavuniya and Jaffna districts. Final district boundaries have yet to be established.

Indian Ocean