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**Report No. P-2569-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 AN  
AGRICULTURAL EXTENSION AND ADAPTIVE RESEARCH PROJECT

May 31, 1979

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### CURRENCY EQUIVALENTS

US\$1.00	=	Rupees (Rs) 15.8
Rs 1	=	US\$0.0633
Rs 1 million (m)	=	US\$63,291

### WEIGHTS AND MEASURES

1 long ton (lt)	=	2,240 lb	=	1.016 metric tons (mt)
1 hundred weight (cwt)	=	112 lb	=	50.8 kg
1 bushel (bu) of paddy	=	45 lb	=	20.4 kg
1 acre (ac)	=		=	0.405 hectare (ha)
1 foot (ft)	=		=	30.5 centimeters (cm)
1 mile (mi)	=		=	1.609 kilometers (km)
1 square mile (sq mi)	=	640 ac	=	259 ha

### FREQUENTLY USED ABBREVIATIONS

DA	-	Department of Agriculture
DAS	-	Department of Agrarian Service
MADR	-	Ministry of Agricultural Development and Research
DAEO	-	District Agricultural Extension Officer
KVS	-	Village Level Extension Officer (Krushikarma Viyaptha Sevaka)

GLOSSARY

- Chena - Slash and burn or shifting agriculture.
- District - The principal administrative unit in the country.  
There are 24 Districts in Sri Lanka.
- Division - An administrative unit under the district.  
There are about 160 Divisions in the country.
- Electorate - A unit from which Parliament members are elected.  
Its boundary is roughly equal to a Division.
- Range - A part of a Division.
- Maha - Northeast monsoon season (October to January).
- Yala - Southeast monsoon season (March to June).

FISCAL YEAR

January 1 - December 31



SRI LANKA

AGRICULTURAL EXTENSION AND ADAPTIVE RESEARCH PROJECT

Credit and Project Summary

Borrower: The Democratic Socialist Republic of Sri Lanka.

Amount: US\$15.5 million equivalent

Terms: Standard

Project Description: The project would help Sri Lanka to (a) introduce a Training and Visit (T&V) extension system throughout the entire country, (b) strengthen adaptive research, and (c) improve and expand training of extension officers. The project would establish a link between research and extension and enhance the intensity, coverage and the content of agricultural extension services. A unified extension system would be developed, under which extension workers would receive biweekly training, visit farmers according to planned schedules, and transmit extension messages. The project would raise production and income levels on about 4.8 m acres of land, cultivated by about 1.4 m farm families. The output includes rice, a wide range of upland crops, coconut and undercrops, vegetables and fruits, and livestock. The main risk is that the Government may find it difficult to maintain a single line of command for extension workers, who would work exclusively on agricultural extension. The Government's agreement to the proposed project approach reflects its commitment to a unified extension service. Experience in other countries shows other risks to be minimal.

Estimated Cost: 1/

<u>Component</u>	<u>US\$ Million Equivalent</u>		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Extension	5.8	3.6	9.4
Adaptive Research	1.3	.9	2.2
Education Training	2.1	1.4	3.5
Monitoring and Evaluation	.2	.2	.4
Overseas Training and Technical Assistance	-	1.6	1.6
Engineering and Administration	<u>.1</u>	<u>.2</u>	<u>.3</u>
Base Cost	9.5	7.9	17.4
Physical Contingencies	.9	.8	1.7
Price Contingencies	<u>2.3</u>	<u>1.0</u>	<u>3.3</u>
Total Cost	<u>12.7</u>	<u>9.7</u>	<u>22.4</u>

Financing Plan:

IDA	5.8	9.7	15.5
Government	<u>6.9</u>	-	<u>6.9</u>
Total	<u>12.7</u>	<u>9.7</u>	<u>22.4</u>

<u>Estimated Disbursement:</u>	<u>IDA FY</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Annual		.7	3.8	3.3	3.2	3.0	1.5
Cumulative		.7	4.5	7.8	11.0	14.0	15.5

Economic Rate  
of Return:

50% (para 72).

Staff Appraisal  
Report:

No. 2396a-CE, dated May 17, 1979.

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1/ Including taxes and duties of \$0.4 m equivalent.

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 AN  
AGRICULTURAL EXTENSION AND ADAPTIVE RESEARCH PROJECT

1. I submit the following report and recommendation on a proposed development credit to the Democratic Socialist Republic of Sri Lanka for the equivalent of US\$15.5 million on standard IDA terms to help finance an Agricultural Extension and Adaptive Research Project.

PART I - THE ECONOMY 1/

2. The latest economic report, "Development in Sri Lanka: Issues and Prospects" (Report No. 1937-CE, March 22, 1978) was distributed to the Executive Directors on March 23, 1978. Country Data are provided in Annex I.

3. Sri Lanka has achieved social progress far beyond that of other countries with comparably low per capita incomes. Literacy, health, and life expectancy are high; nutrition is adequate, and mortality and population growth rates have been declining. These impressive gains have been achieved despite generally low output and employment growth. Per capita GDP growth was only 0.9% per annum in the 1948-60 period; it accelerated to 2.1% in the 1960s and then declined to 1.3% per annum in the 1970s. Throughout the 1960s and through much of the 1970s, these modest output gains were eroded by adverse terms of trade trends. This disappointing performance has been accompanied by a disturbing increase in the level of open unemployment. In the 1970s, while the labor force has been growing at about 125,000 per year, employment has been rising by about 85,000, much of it in the form of unproductive jobs. The number of unemployed has, therefore, been rising, and open unemployment is estimated at over one million or 20% of the labor force.

4. 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 food subsidies, which accounted for two-fifths to one-half of government revenues in the 1960s and 1970s. These expenditures have been financed by harnessing the surpluses of Sri Lanka's three major tree crops (tea, rubber and coconut), which provided the Government with both an easy revenue source and foreign exchange earnings.

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1/ This part is substantially the same as Part I under the Road Maintenance Project (Report No. P-2512-CE).

5. There were both measurable and non-measurable socio-economic benefits flowing from these improvements in health, nutrition, and education, such as the decline in fertility and the relatively low rate of urbanization. At the same time, there were significant costs arising from the firm commitment of successive governments to maintaining these social gains. The fiscal burden of these expenditures imposed a high degree of inflexibility on Sri Lanka's policymakers in their attempts to accelerate long-term growth. That inflexibility increased over time as growth slowed down and in particular, the ability of the tree crop subsector to provide the resources for the social programs weakened as commodity prices kept falling and productivity suffered due to inadequate incentives. Moreover, the gains in education had a negative impact in the form of large numbers of educated unemployed who posed a challenge to the established political order. With political parties competing with each other to offer inducements to the electorate, governments have failed to focus social expenditure programs more narrowly on specific groups living in poverty, making these unnecessarily costly.

6. In the 1960-77 period, gross domestic product at constant prices rose by 3.8% per annum. This impressive performance masks a marked deceleration in the growth of the productive sectors of the economy between the 1960s and the 1970s. GDP growth slowed down from 4.4% per annum in the 1960s to 3.0% in the 1970-77 period. Growth fell from 3.4% to 1.9% in agriculture; from 6.2% to 2.3% in manufacturing.

7. The key to the slowdown in GDP growth lies largely in the slow growth of agriculture, which accounts for over one-third of GDP and four-fifths of export earnings. Tea and coconut output has been declining steadily from the mid 1960s; rubber, after showing a rapid increase in the 1960s, stagnated in the 1970s. Erratic weather conditions, declining commodity prices, a rising effective tax burden, and low producer returns combined with the uncertainties caused by a long, drawn-out land reform (1972-75) depressed producer incentives (and hence investment and production) to new lows. These problems were aggravated by a dual exchange rate, introduced in 1968, which discriminated against traditional exports and in favor of food imports.

8. Paddy production, which grew at 4% per annum in the 1960s, slowed down to 0.7% per annum in the 1970-77 period. The decline in yields and cropping intensities that is reflected in this slowdown, is attributable principally to a sharp deterioration in the institutional support for production programs. The only bright spot on the agricultural scene has been the rapid increase in output of subsidiary food crops in the 1970s. This represents gains in acreage rather than yields and is in response to the improved incentives arising from a 1970 ban on imports of these crops.

9. Manufacturing output in the 1970s also decelerated due to the cumulative impact of declining investment levels, severe foreign exchange shortages that necessitated import rationing (with serious consequences for a sector in which imported raw materials account for 70% of the value of raw materials used), the exhaustion of import substitution possibilities, and inefficiencies in management of the public sector, which now accounts for 66% of the gross value of production in organized industry.



10. In general, economic growth was constrained by a persistent foreign exchange shortage throughout the 1960s and 1970s, inadequate levels of saving and investment, and the low efficiency of resource use. Sri Lanka's terms of trade have deteriorated steadily since the early 1960s and worsened sharply in the mid 1970s following increases in the price of imported food, fertilizer, and petroleum. The share of these three items in Sri Lanka's total imports jumped from about 50% in 1972 to 70% in 1975. This sharp increase has, to some extent, offset the improvement in export prices (particularly of tea) since 1973. Trade policies that discriminated against exports and encouraged import substitution caused a slow growth in exports of 2.5% per annum between 1960 and 1976, which acted as a significant constraint on growth for an economy in which exports account for nearly one-third of GDP.

11. The share of consumption in GDP has remained relatively stable and high (at 86%) over the last decade and a half. Domestic savings, when adjusted for the dual exchange rate, averaged 11.5% of GDP in 1966-70 and 10.5% in 1971-75. Public savings averaged a mere 1% of GDP in the 1960s, shrinking rapidly in the 1970s, and eventually becoming negative. This poor performance is attributable to the large burden of subsidies and transfers, which increased in the 1970s because of the growing disparity between import costs and officially determined prices. Private savings were adversely affected in the 1970s by political uncertainties, a confiscatory tax burden, and falling real interest rates.

12. Gross investment has averaged 16% of GDP at current market prices in the 1960-1976 period. In real terms, investment has been declining, and there has been persistent failure throughout this period to raise the level of public investment (around 6-7% of GDP) while private investment in productive activities was, on the whole, given little encouragement. The efficiency of investment has also been rather low due to both a neglect of some key sectors and a failure to exploit the full potential of past investments. Much of the investment in agriculture has been directed to paddy; but tree crop sub-sector was neglected, resulting in an erosion of the latter's production base. In the manufacturing sector, capital-intensive import substitution was pursued to the neglect of labor-intensive export-oriented production. Utilization of the potential already established has been uniformly low. This has been reflected in low cropping intensities and yields in the agricultural sector, and low-capacity utilization in manufacturing.

13. In the elections of July 1977, the eighth since Independence, the United National Party won a large majority. In the relatively short period that it has been in office, it has embarked on a major reform of political institutions and economic policies. A new constitution has been enacted introducing a presidential form of government. Proportional representation has replaced the first-past-the-post voting system. A new District Ministerial system has been established and District Ministers have been appointed to each of the 24 districts in Sri Lanka to help increase local level participation in district planning and administration, and improve implementation of development programs. District Ministers are appointed by the President from the Members of the Parliament and function as ex officio Deputy Ministers to

all development-oriented ministries for development programs in their respective districts. The District Minister presides over a Development Council comprising Members of Parliament from the electorates in the district and others nominated to the Council. The Secretary to the District Minister is also the Government Agent for the District. The development councils are entrusted with the tasks of planning, coordination, implementation and evaluation of district programs and allocation of the district's share of funds from the decentralized budget.

14. The policy changes introduced by the new government are designed to address the economic problems described in paras 3-12 above. The Government identified its objectives as the 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 increase exports and encourage import substitution in food-grains. A program of policy reforms has been developed in close consultation with the IMF. Its principal aim is to dismantle controls over resource allocations 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.

15. The policy reforms introduced so far include:

Exchange Rate Reform: The exchange rate was unified on November 16, 1977, and allowed to float at a depreciated rate of Rs 16 = US\$1.00. 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>

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

Interest Rate Reform: To encourage financial savings and discourage speculative imports, interest rates have been raised sharply.

Price Controls. These have 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

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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.

petroleum subsidies to rise sharply. Export tax rates on tree crops were raised further to mop up windfall profits while attempting to leave adequate producer margins. Business Turnover Tax rates have been substantially lowered and rationalized to be consistent with the new import tariff and exchange rate. To limit the growth in food subsidies, the rice and sugar rations were confined to the poorer half of the population and the subsidy on imported wheat flour was reduced through adjustments in the domestic price. To offset the adverse impact of these changes, public sector wages have been adjusted upwards on two occasions, and an income supplement has been introduced at Rs 50 per month to benefit the poorest households in which one or more persons has no gainful employment. Public corporations have been asked to pass on cost increases, except in the case of fertilizer, petroleum, milk and public transport, where price increases were initially deferred to cushion the impact on consumers. The Government has subsequently made some adjustments in bus fares, petroleum and fertilizer prices. These changes, taken together, have enabled an increase in public savings and contributed, together with higher aid receipts, to a sizable step up in capital expenditures.

Tax Reform: The tax structure has been rationalized and simplified with a view to increasing the elasticity of revenues. The burden of personal and company taxation has been lowered.

Agricultural Pricing Policies: The domestic procurement price for paddy has been increased by 21%. With the related increase in flour prices, incentives for paddy and other flour substitutes have been improved. Fresh coconut prices have recently been increased by 30% and the export duty on coconut products has been appropriately adjusted. The unification of the exchange rate also ends discrimination against tree crops; however, the increase in export taxes takes away a substantial part of these gains. These reforms constitute only a beginning, and the Government anticipates the need for further price adjustments designed to reduce the continuing large burden of subsidies and current transfers (currently at over one-third of government revenues).

16. The economy's response to the policy reforms has been encouraging. Real gross national product in 1978 is estimated to have increased by 8.2%. The improved availabilities of inputs following import liberalization, an increased role for the private sector in distribution and good weather helped attain a record paddy harvest. Industries, other than tree crop processing, benefited from the removal of price controls and increased access to imported raw materials and spare parts. Output of manufacturing industries is estimated to have risen by 11%, and electricity consumption by 13%, in 1978. After an initial slow start, private investment has also responded well to the reforms. This is partly reflected in the near threefold increase in capital goods imports from US\$83 million in 1977 to an estimated US\$230 million in 1978. Transport operators, in particular, have rushed to modernize their antiquated fleets, resulting in sizable imports of transport equipment. Others have taken advantage of accelerated depreciation provisions to replace worn out machinery and equipment. Applications for new investments have been encouraging. Public investment has also shown a major increase in 1978, resulting in a total investment level of 20% of GNP.

17. Despite the ending of price controls, policy-induced price increases, and related wage increases, inflation in 1978 is estimated at 14%. Money supply growth has slackened, and the budget has had a contractionary effect due to under-expenditure on capital account. Interest rate reform has ensured positive real interest rates, contributing to a shift in asset preferences and easing the task of managing the balance of payments.

18. With import liberalization, merchandise imports in 1978 rose by 40% to US\$1,009 million. Merchandise exports rose by 13% to US\$847 million. Thus the current account deficit swung from a surplus of US\$77 million in 1977 to a deficit of US\$116 million in 1978. However, since aid disbursements also rose sharply, net foreign exchange reserves rose by US\$94 million in 1978. Gross foreign exchange reserves rose to US\$397 million, or 4.5 months of imports. Thus, despite import liberalization, Sri Lanka's balance of payments remained well in control. The exchange rate averaged Rs 15.60 = US\$1.00 during 1978, appreciating modestly against the dollar and depreciating against currencies of Sri Lanka's major trading partners.

19. While the overall performance of the economy has been good, there remained several underlying weaknesses, particularly the inadequacy of incentives and the poor quality of management of the tea estates, severe managerial problems in the State industrial corporations, shortages of skilled manpower and inadequate construction capability. The Government is aware of these weaknesses, and technical and financial assistance programs are in the process of being developed to address some of these problems.

20. The economic reforms have been accompanied by a major effort at stepping up public investment. In this context, the Government attaches the highest priority to three major new programs: (i) Accelerated implementation of the Mahaweli Ganga Development Program involving telescoping construction of key remaining works of the 30-year Master Plan for Sri Lanka's largest river into a 7-10 year period. (Three major reservoir projects are to be launched with international assistance in 1979 and 1980 at a cost of over US\$1,000 million (in 1978 prices), to be spread over eight to ten years. When completed, these projects will irrigate 215,000 hectares of new and existing land in the dry zone and generate 390 MW of power.); (ii) A 200 square-mile free trade zone north of Colombo, under a newly constituted Greater Colombo Economic Commission. (The first Investment Promotion Zone near Colombo's international airport, Katunayake, is off to a good start, and some 50 proposals involving a total investment of \$100 million have been approved by end December 1978.); (iii) A housing and urban renewal program with its main focus on the Colombo metropolitan region.

21. Recognizing the enormous financial and manpower burden of these schemes, the Government has, in consultation with the Bank, begun preparation of a medium-term public investment program which will attempt to ensure consistency between the multiple objectives of Government policy and the financial, administrative and manpower resources available for attaining those objectives. An initial outline of the program, incorporating the capital budget for 1979, is to be presented to the May/June 1979 Aid Group meeting. The program itself is to be completed in late 1979. It is seen

as a rolling program, emphasizing the annual capital budget and making such adjustments in objectives and content as are deemed necessary by short-term developments and opportunities that present themselves.

22. The Government has identified three major policy objectives in the medium term: (i) the creation of over one million new jobs between 1979 and 1983 to absorb the 630,000 expected additions to the labor force and make a significant dent in the backlog of the unemployed; (ii) acceleration of economic growth to 5.5% per annum; (iii) structural improvement in the balance of payments through reduced dependence on tree crop exports and import substitution in food. The program envisages a total public investment of Rs 46 billion over the 1979-83 period (\$2,900 million), some 60% of total (gross) investment. Investment is expected to average 24.5% of GNP in the 1979-83 period, as against 16% in the 1971-76 period. To enable this increase to materialize, domestic savings are expected to average about 14% of GNP, a substantial improvement over the 9% recorded in the 1971-76 period. The program, however, relies heavily on a substantial increase in net external inflows, which are estimated to average 11% of GNP throughout the period, as against an average of 2.3% in the 1970-76 period. These external flows will finance over two-thirds of the public investment program.

23. The underlying public investment strategy is to balance the large investment requirements of the Government's high priority program 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.

24. The success the Government enjoys in attaining its medium term development objectives is dependent on the further reforms needed to improve price and export incentives, and management in the public sector. It is also dependent on additional efforts to mobilize domestic resources and address absorptive capacity constraints such as manpower shortages and planning and implementation capability. However, success is ultimately contingent on a well designed program of external financial and technical assistance. This is particularly because the proposed increase in investment, together with the new import liberalization policy, will cause imports to grow much more rapidly than in the past. Moreover, Sri Lanka's terms of trade are expected to worsen over the medium term, due in the main to an expected decline in real tea unit values and an increase in foodgrain import costs. Thus larger aid flows are needed to ensure that an ambitious development program, with a strong rehabilitation component, can be implemented within the framework of a liberalized import regime. Such assistance will also help finance about two-thirds of the public investment program. In this context, local cost financing will be needed to support this effort, particularly in the early years, as domestic resource mobilization efforts begin to gather momentum.

25. Aid donors have responded enthusiastically to the new policy environment in Sri Lanka. Aid commitments in 1978 from members of the Sri Lanka Aid Group totalled \$353 million, an increase of 57% over 1977. At the 14th Meeting, donors also expressed strong support for the accelerated Mahaweli Program. The grant element of aid commitments is currently around 63% and is expected to improve further. The debt service ratio in 1978 stood at 10.0%, declining from 15.0% in 1977, due to improved export earnings and the decline in outstanding short and medium term borrowings. The ratio is expected to drop further to 8.9% in 1979.

PART II - BANK GROUP OPERATIONS IN SRI LANKA 1/

26. Since the beginning of its operations in Sri Lanka in 1954, the Bank Group has made eight loans totalling US\$73.4 million (net of cancellations) and seventeen credits totalling US\$183.7 million (net of cancellations and exchange adjustments) in support of 23 projects. About 50% of Bank Group assistance has been for agriculture (irrigation and agricultural and dairy development), 24% for power, and the remainder for Development Finance Company operations, highways, a program credit (mainly involving the import of raw materials for industry), and water supply. Seven loans and six credits (including cancellations) have been fully disbursed so far. During FY78, IDA credits for a total of US\$33.5 million were approved for a Tree Crop Rehabilitation (Tea) Project, a Tree Crop Diversification (Tea) Project and a credit line for DFCC. IDA credits for a Rural Development Project of US\$20.0 million and a Road Maintenance Project of US\$16.5 million have been approved in FY79. Annex II contains a summary statement of Bank Group operations as of April 30, 1979, together with notes on the execution of ongoing projects.

27. An IFC equity investment of about US\$100,000 equivalent in 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 also approved in FY78. An investment of US\$3.25 million to the Pearl Textile Mills, Ltd. (Ceylon) was approved by IFC's Board of Directors in 1970, but cancelled the same year because Government approval for the project was withdrawn. IFC has also recently approved an investment of US\$3.32 million in a synthetic textile mill, and US\$986,000 in a polypropylene bag manufacturing plant.

28. 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 industry and basic infrastructure are also included. The Bank Group has agreed to assist the Government of Sri Lanka to accelerate the development

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1/ This part is substantially the same as Part II of the Road Maintenance Project (Report No. P-2512-CE).

of the Mahaweli Ganga development areas by helping to develop an implementation strategy and to coordinate external assistance for project preparation and implementation. It is expected that significant investment opportunities for IDA and other sources of external aid will be associated with this effort. Negotiations have been completed for a small and medium scale industry project. Projects in other fields, including water supply and sewerage, tree crop rehabilitation (rubber), road transport and telecommunication, are also being prepared for possible IDA financing.

29. The Bank Group presently accounts for 10.3% (IBRD 3.3%; IDA, 7.0%) of Sri Lanka's total debt outstanding and disbursed, and 6.5% (almost totally Bank) of debt service. It is projected that the Bank Group's share in total external debt will increase to 16% by 1985 (with the Bank's share declining to 0.7%). The Bank and IDA shares in the debt service are expected to decline to about 4.4% by 1985.

### PART III - THE AGRICULTURAL SECTOR

30. Agriculture dominates Sri Lanka's economy. It accounts for about 39% of the gross domestic product, 50% of total employment, 80% of total export earnings and a large share of Government revenues. Much of the activity in the manufacturing, transport and services sectors is related either to the supply of inputs to agriculture or to the processing of agricultural output. Almost 95% of the rural population of Sri Lanka is directly or indirectly involved in agricultural activities.

31. Sri Lanka's wide variations in precipitation, topography and soils make it possible to grow a wide range of crops, including tea, rubber, coconuts, paddy, tubers and roots, coarse grains, pulses, oilseeds and condiments, vegetables and fruits. Out of a total 5.5 m acres used for permanent cultivation, about 2.4 m acres are under tree crops, 1.6 m acres under paddy and 1.5 m acres under mixed rainfed farming. In addition, about 0.5 m acres are planted annually for assorted field crops, out of a total 2.5 m acres of slash and burn land, locally called chena. Where sufficient water is available, it is common practice to produce two or more crops a year. The overall cropping intensity ranges from about 170% in the wet zone to about 100% in the dry zone, the average of the whole country being about 120%. However, neither yields nor cropping intensity have improved significantly since 1970 and Sri Lanka continues to import about 38% of its food requirements. An improvement would call for improved cultural practices, increased use of fertilizers and improved seeds, and better water management.

32. The agriculture sector performance over the past two decades has been rather mixed. There have been modest increases in production and employment and some progress has been made towards food self-sufficiency. The sector has not, however, been able to provide a major stimulus to the rest of the economy or to make any significant dent in the chronic unemployment problem faced by Sri Lanka.

33. Agricultural production in the 1960s grew at an annual rate of 3.4% with a relatively good growth in paddy (4%) and rubber (5%), but a meager 1% growth in tea and coconut. The increased paddy production enabled substantial progress towards food self-sufficiency -- from about 50% of food requirements in 1960 to about 80% in 1970. Despite this growth, the net surplus (in current prices) in the country's international trade in agricultural commodities declined from about US\$200 m in 1960 to only US\$120 m in 1970 due to stagnation in tea and coconut production as well as adverse price trends in external markets. Performance in the 1970s has been much worse. Except for subsidiary food crops and minor export crops such as spices, production has virtually stagnated or even declined. For example during the 1970s, paddy production increased at an average annual rate of less than 1%. For tea, rubber and coconut, production declined.

34. The main reasons for this inadequate performance relate to the strategies and policies pursued in this sector over the past two decades. Sectoral development has suffered from: (i) the inability to mobilize adequate investment resources for agriculture; (ii) inadequate attention to operation and maintenance, which necessitated frequent and costly rehabilitation; (iii) ineffective and demoralized agricultural support services due to institutional uncertainties as well as excessive political interference; (iv) inadequate planning for disposal and proper management of lands acquired under land reform; and (v) a system of controls, subsidies and taxes which discouraged private initiative and investment.

#### Objectives and Strategy for the Future

35. The present Government recognizes the pivotal role of agriculture in stimulating economic growth and employment in Sri Lanka. It is also aware of the constraints imposed on growth by past policies and programs. The major objectives of the Government's medium-term plans and programs for the agricultural sector are:

- (a) increased agricultural employment and incomes, particularly for the economically disadvantaged groups;
- (b) increased production of basic food items such as paddy, milk, sugar, fish and pulses so as to improve nutritional standards and insulate the economy from excessive fluctuations in external markets; and
- (c) expanded export earnings both from traditional agricultural exports (rubber, tea and coconut) and from non-traditional items such as cocoa, coffee, pepper and spices.

36. The Government's strategy for achieving these objectives emphasizes better utilization of the existing potential through institutional and policy improvements as well as rehabilitation of the production base. Among the policies and programs being given high priority are: (i) establishment of appropriate price incentives for producers; (ii) strengthening of agricultural



support services such as research and extension, credit, farm power supply, and fertilizer distribution; (iii) improved irrigation and water management; (iv) improved management of state controlled lands; (v) stepped-up programs for rehabilitation of plantation crops; and (vi) improvements in living conditions of plantation labor. Through these measures, the Government hopes to step up the agricultural growth rate to 4.5% per annum over the next five years. For the longer-term needs of the economy, the Government is emphasizing further expansion of irrigated agriculture in the dry zone through accelerated development of the Mahaweli Ganga basin and a major replanting/rehabilitation program in the tree crop sector.

#### Agricultural Extension and Research

37. Extension. The Extension Division of the Department of Agriculture is responsible for agricultural extension throughout the country. However, the Department of Animal Production and Health under the Ministry of Rural Industrial Development has its own field officers for livestock extension, and the Ministry of Coconut Industry has its own field officers who do some extension work on coconut. Extension work in Special Projects areas (under the Ministry of Lands and Land Development) and in Mahaweli Project areas (under the Ministry of Mahaweli Development) is also the responsibility of the Department of Agriculture.

38. The number of extension officers is inadequate at present and extension work suffers from a shortage of vehicles and housing for extension officers and systematic up-to-date technical backstopping. Moreover, the extension officers often perform non-extension duties at the instance of government authorities at various levels. There are no extension officers for coconut at the village level. Village level livestock officers at present provide mainly veterinarian services. These drawbacks have resulted in: (a) wide variations in the density, quality and delivery system of extension work, both area-wise and crop-wise; (b) lack of a coordinated and clearly defined annual plan to decide priority extension messages to be passed on to farmers in any given area; (c) uneconomic use of an already understaffed extension system; and, most of all, (d) lack of an efficient delivery system of extension messages to small farmers.

39. The Training and Visit (T&V) Extension system was first introduced into Sri Lanka in 1976 as a component of the Tank Irrigation Modernization Project (Cr. 666-CE) in the Anuradhapura District. The pilot work demonstrated that transmission of extension messages was much more effective through the T&V system than through the traditional system. The pilot work also revealed a number of weaknesses: (a) diverting extension workers to non-extension duties; (b) outside pressure to replace extension officers with new ones, thus impairing the effectiveness of biweekly training tied to local crop calendars; and (c) improper selection of contact farmers. The proposed project would seek to rectify these weaknesses.

40. Research. The Department of Agriculture (DA) under the Ministry of Agricultural Development and Research (MADR) conducts research on paddy, other

field crops, and minor exportable tree crops. Five regional centers with a total of twelve branch stations have already been established. Three more Regional Research Centers are to be established bringing the total number of regional centers to eight. The DA has a Central Rice Experiment Station and a Minor Exportable Crops Research Institute. Sri Lanka has always been strong in rice breeding, and in recent years the DA has stepped up research on other crops. Local paddy HYVs were widely adopted by farmers long before IRRI varieties came into being. National Coordinated Research Programs are now in operation for ten groups of crops with the participation of regional centers. Thus, from viewpoints of conception, infrastructure and knowledge accumulation on a broad front, Sri Lanka's agricultural research on paddy and other field crops is now in a relatively strong position to provide technical support to extension. On the other hand, adaptive research is very weak, limited to field trials in rice for varieties, fertilizer and agrochemicals only. The proposed project would establish an adaptive research program, to be conducted in farmers' fields. The adaptive research program would be backstopped by the Regional Research Centers and would provide the link between research and extension.

41. Training. The Department of Agriculture has three regional training centers, 14 district training centers and one School of Agriculture. Additional training facilities will be needed in order to train and strengthen the extension staff and services.

42. Agricultural statistics with reliability and consistency are essential for planning and evaluating agricultural development programs. Sri Lanka is particularly weak in statistics on field crops other than rice. Information is also needed on prices received and paid by farmers and on farmer expenses and income. Strengthening of the Economic Unit of the DA will be needed for this purpose. In addition, the Economic Unit will perform monitoring and evaluation of the project.

#### Supply of Inputs

43. During 1961-1976, annual consumption of fertilizer in Sri Lanka fluctuated between 342,000 metric tons in 1971 and 210,000 metric tons in 1975. In general, there was a decline in the consumption of fertilizer by tree crops and an increase in consumption in paddy and other field crops. Fertilizers are imported by the Ceylon Fertilizer Corporation and distribution is made to farmers through various channels including the Agrarian Service Center godowns, cooperative societies and private dealers.

44. The fertilizer subsidy for paddy was first introduced in 1962. From 1968-1974, the subsidy rate was 50%. It was removed in July 1974 but reinstated at 33% in October 1974. In November 1975, the rate was readjusted back to 50% for all crops. It was raised to 75% in 1977 but was changed back to 50% in 1978. In the last decade, fertilizer consumption by paddy and other field crops seems to have been affected partly by frequent adjustments in fertilizer prices.

## Marketing

45. The Paddy Marketing Board of MADR handles the purchase of paddy by the Government. Farmers can sell as much paddy to the Board as they wish at the guaranteed price of Rs 40 per bushel (1978). However, farmers can also sell paddy in the commercial market, where a higher price may be received. Internal prices are lower than import price (equivalent to about Rs 53 per bushel, cif Sri Lankan port). In 1977, the Board purchased about 30% of the paddy crop. Rice milled from the Board's paddy stock is transferred to the Food Commissioner for distribution under the Government rationing system. The Marketing Department of the Ministry of Trade plays an active role in the marketing of vegetables and fruits, as does the Cooperative Marketing Federation. These organizations handled about 25%-30% of the vegetables and fruits production in recent years but most of the output was marketed through private channels. Unfortunately, reliable data on prices received for these products are not available. The project would include funds for expanding the Economic Unit to provide the Government with such information in the future. Also the Coconut Marketing Authority, under the Ministry of Coconut Industry, operates copra salesrooms where auctions of copra are conducted. The copra auction prices are used to derive prices for fresh nuts and for other coconut products by the trade. Thus, there is a well developed Governmental and private marketing system in the country which can handle additional output resulting from the project.

## PART IV - THE PROJECT

46. The project was identified by the Government of Sri Lanka and prepared with assistance from FAO/UNDP Project SRL-75/058 (entitled "Reorganization of Research, Extension and Training Resources for Agriculture"). A Staff Appraisal Report entitled "Agricultural Extension and Adaptive Research Project" (No. 2396a-CE dated May 17, 1979) is being distributed separately to the Executive Directors. A timetable of key events relating to the project and special conditions of the Credit are given in Annex III. Negotiations were held in Washington, D. C. in May 1979. The Borrower's delegation was led by Mr. R. Wijeratne, Secretary, Ministry of Agricultural Development and Research.

### Project Objectives

47. The project is designed to establish a unified, professional agricultural extension service throughout Sri Lanka. The proposed extension system would operate through a single line of command from the extension headquarters to full-time village-level extension workers (KVS), cover all crops (except tea and rubber) and animal husbandry, and be capable of serving all farmers. The project aims at raising production and income levels of about 4.8 m acres of permanent and chena farmland, cultivated by about 1.4 m farm families for the production of paddy, a wide range of upland crops, coconut and undercrops, minor export crops, fruits and vegetables, and livestock. The project would help Sri Lanka: (a) adopt the Training and Visit (T&V)

extension system throughout the entire country; (b) strengthen adaptive research; and (c) improve and expand training of extension officers.

#### Project Description

48. The main components of the proposed project are: (a) establishment of a unified T&V extension system for all crops (except tea and rubber) and animal husbandry throughout the country; (b) establishment of an adaptive research network on the basis of the agro-ecological regions; (c) improvement and expansion of agricultural training institutions; (d) strengthening of the Economic Unit and the Civil Engineering Unit of the Department of Agriculture; (e) construction of buildings for offices, living quarters, laboratories and workshops; (f) provision of vehicles and equipment for farms, laboratories, workshops, extension and training; (g) provision of funds for salaries and allowances for additional staff; (h) provision of incremental operating and maintenance costs for project works, buildings, vehicles and equipment; and (i) overseas training and technical assistance for project implementation. The major items of project costs include buildings, vehicles, equipment, salaries and allowances for additional staff, incremental operating and maintenance costs, overseas training and technical assistance.

49. Strengthening of Extension Service. A unified T&V system for all crops (except tea and rubber) and animal husbandry (excluding veterinary services), will be established throughout the country. Extension officers in all districts would attend full time to extension education work, their training and visit schedules would not be interfered with, and they would not be transferred during the Project except for unsatisfactory performance of their scheduled duties or with the express approval of DA officials (Section 3.10 of DCA). The Ministries of Rural Industrial Development and Coconut Industry would designate their District level officers to serve as subject matter officers on animal husbandry and coconut cultivation for training the village and range level extension officers of the DA, who would pass on extension messages to farmers (Section 3.08 of DCA). Responsibility of carrying out all extension services under the Project would be entrusted to the DA (Section 3.06 (a) of DCA).

50. Under the project, the number of extension officers would be increased to a total of 3,545 from the present strength of 2,285. Most of the increase would be in the number of village level extension workers (KVS). No major problem is likely to be faced in recruiting these additional staff. They would be trained in the training institutions, whose capacity would be augmented under the proposed project. With additional extension workers, the ratio of farm families to extension workers would increase from the present 1,200 farm families per KVS to 750 farm families per KVS. The farm families covered by each KVS (750 on average) would be divided into about eight "clusters" containing, on average, 95 families in each cluster. Seven to eight farmers in each cluster would be selected by the KVS as "contact" farmer, each representing a close group of 12 to 13 follower farmers. KVSs would visit each contact farmer once a fortnight according to a fixed schedule and through them pass extension messages to other farmers.

51. A basic fortnightly training schedule for KVSs and Agricultural Instructors would be prepared twice a year according to local crop calendars. The schedule will be revised every year. Messages already accepted by farmers would be dropped while new messages would be added. The messages conveyed by KVSs to farmers would be simple and concentrate on practices producing quick and profitable response. Different technological packages would be recommended for each agro-ecological region.

52. Adaptive Research. Adaptive research will be conducted in farmers' fields to verify promising research findings on all aspects of paddy and other field crops and serve as a link between research and extension. The regional research centers will be responsible for planning and executing the adaptive research program. Annual plans for adaptive research would be prepared by the regional research centers in consultation with extension officers. Eight mobile teams, with an average of four research officers per team, would be organized for full time supervision of the adaptive research. Twenty-four adaptive research centers would be established in the field. These centers would be located so as to cover most of the agro-ecological regions of the country. The adaptive research centers would be operated by 69 resident field officers and supervised by the eight mobile teams based in and supported by the regional research centers.

53. Training Institutions. Under the project, the DA's training facilities at 15 existing pre-service training institutions would be improved. In addition, the number of Regional Centers for inservice pre-seasonal training of extension workers would be increased from three to eight. All Regional Training Centers would be located next to the Regional Research Centers. The number of training staff for all institutions would be increased from the present 123 to 323, and their quality upgraded. Qualified persons would be available to fill the new positions. The expanded capacity of training institutions would be sufficient for turning out the additional staff needed by the proposed project and upgrading the quality of the existing staff.

54. Strengthening of Civil Engineering Unit of the DA. There would be a significant increase in the building construction program of the DA under the project. The existing Civil Engineering Unit of the Department would, therefore, be strengthened by additional staff and vehicles. The entire field staff of the Unit would have to be mobilized to supervise construction by private local contractors. The implication of this is that the DA should stop carrying out construction by force account, except for routine maintenance and repairs. The DA would prepare and adopt a plan, including a timetable, by December 31, 1979, to strengthen its capability to supervise construction works of the project (Section 3.12 of DCA). The plan would include appointment of additional staff for the Civil Engineering Unit, design and cost estimates of buildings to be constructed during the first year of the project, and estimates of construction materials required for the first year of construction. The Government would ensure timely supply of building materials for the project according to the need and an agreed timetable (Section 3.13 of DCA).

55. Strengthening the Economic Unit of DA. The staff of the Economic Unit of the DA would be expanded from the present 24 to 58. The Unit would be responsible for conducting a benchmark survey of field crop production in cooperation with the Department of Census and Statistics, collecting farm record sheets from a sample of about 5,000 farmers for project monitoring and evaluation, and collecting and analyzing crop yields, farm prices, costs and incomes. The work is expected to help improve farm management in different agro-ecological regions. The Economic Unit would also help the Regional Research Centers in evaluating the economics of proposed changes in the cropping pattern and technology and incorporating farm management and simple production economics in the training of extension officers. The information on farm prices, costs and incomes collected by the Economic Unit would provide the basic data to the Government to analyse agricultural prices and adopt appropriate pricing policies.

56. Technical Assistance. Technical assistance provided under the project would assist Sri Lanka in building up capabilities and expertise in senior level officers of extension and research, and training field level officials in extension, through overseas studies and visits. In addition, to help implement the proposed project successfully and in particular to strengthen the linkage between research, training and extension, the credit would finance 138 man-months of consultants at an average estimated cost of US\$8,700 per man-month, including all allowances, travel and transport costs, as follows:

- (a) 24 man-months of a team leader (general extension agriculturist with administrative and management experience);
- (b) 18 man-months each of an animal husbandry specialist and a coconut/undercrop specialist;
- (c) 15 man-months each of an on-farm water management specialist and a plant protection specialist;
- (d) 12 man-months each of a coarse grain specialist, a grain legume specialist, a root/tuber crop specialist, and a vegetable specialist.

The Government agreed that consultants on terms and conditions satisfactory to IDA would be appointed by January 31, 1980 (Section 3.02 of DCA).

#### Organization and Implementation

57. The Department of Agriculture of the Ministry of Agricultural Development and Research (MADR) would be the implementing agency, and the Director of Agriculture would be the Project Director for the proposed project (Section 3.06 (b) of DCA). As a condition of effectiveness, the Government would establish a Project Coordination Committee to coordinate policy matters and ensure interministerial coordination and support of the unified T&V extension system (Sections 3.07 and 5.01 of DCA). The Committee would be headed by the Secretary, Ministry of Agricultural Development and Research and

include senior representatives from the Ministries of Rural Industrial Development, Coconut Industry, Mahaweli Development, Lands and Land Development, Plan Implementation, and Finance and Planning.

58. The project extension work from the District to farm levels would be under the charge of the District Agricultural Extension Officer (DAEO). The DAEOs would be responsible for formulating the extension program for each season in their respective Districts and would report to the Deputy Director (Extension). Close lateral administrative coordination among activities for extension, training, and research in Districts will be maintained by the DAEO. The DAEO would be responsible for coordinating with District level officers designated by other agencies concerned and would also be the contact point for liaison with Agricultural Development Authority and Agrarian Service Department field officers relating to the supply of inputs and credit in the District.

59. For coordination with the overall District development program, the DAEO would submit copies of the seasonal (Maha and Yala) plans of all project activities to the District Minister and Secretary for review, to be followed by periodical progress reports. He would present copies of the same to designated District level officers of other agencies participating in the project.

60. Overall project implementation would take five years. With the exception of (a) recruitment of additional civil engineering and economic staff of the DA, (b) procurement of four-wheel vehicles and equipment, and (c) employment of project consultants, which would be concentrated in the first 2-3 years, the implementation of most other components would be spread over 4-5 years.

61. Under the present financial management system, the DAEOs and officers in charge of research and training centers are given a petty cash advance of Rs 500, renewable on request. Within the same amount, any single expenditure item of more than Rs 100 requires prior approval of the DA. These limitations are deemed overly restrictive for expeditious implementation of the project. This system would be revised by December 31, 1979 to empower DAEOs and officers in charge of research and training centers to authorize necessary project expenditures in an expeditious manner (Section 3.11 of DCA).

62. Monitoring of the project's progress would be through quarterly reports and annual reports by all participating agencies and by field units of the DA. These periodical progress reports would be submitted by the Project Director to the Project Coordination Committee, other Government agencies concerned, and IDA.

63. The evaluation of the project impact would be conducted on a continuous basis through the seasonal collection and analysis of farm record sheets from about 5,000 farmers by the Economic Unit of the DA. The Unit would submit annual reports to the Project Director for transmittal to the Project Coordinating Committee, other concerned Government agencies and IDA. A plan of this work would be agreed between the DA and IDA.

### Operation and Maintenance

64. The operation of the T&V system of extension services as well as the adaptive research and other project activities would continue after project completion. The DA would continue to be the agency responsible for the work. Additional staff appointed under the project would continue to be employed to perform their respective work, and their salaries and allowances provided for in the project during the project implementation period would be financed by the Government through budget appropriation.

65. The operation and maintenance of project-constructed buildings would be carried out by the Civil Engineering Unit of the DA; project-procured four-wheel vehicles and farm machinery would be maintained by the Mechanical Engineering Unit of the DA; and laboratory and field equipment, and audio-visual aid equipment, by the Equipment Repair Workshop of the Central Rice Research Station. The motorcycles and bicycles sold to project field staff would be maintained by their owners and private workshops. After completion of the project, the Government would provide adequate funds for the satisfactory operation of the extension services, adaptive research and other project activities, and for the satisfactory operation and maintenance of all necessary equipment, vehicles and buildings (Section 4.03 of DCA).

### Costs and Financing

66. The total project cost is estimated to be US\$22.4 m equivalent. The foreign exchange component is estimated at US\$9.7 m, or about 43% of the total project cost. Cost estimates are based on unit prices adjusted to 1979 levels and include about US\$0.4 m as taxes and duties. Physical contingencies of 10% for all components have been included. Price contingencies have been estimated at 8% per annum for vehicles and equipment and 10% per annum for civil works and other items. Major elements in the base cost estimates (\$17.4 m) are: buildings (US\$5.4 m), vehicles (US\$2.8 m), equipment (US\$1.2 m), salaries and allowances (US\$4.2 m), training and technical assistance (US\$1.6 m) and operating and maintenance costs during the project period (US\$2.2 m). The proposed IDA credit of US\$15.5 m would finance the full foreign exchange cost and about 46% of the local cost, or about 70% of the total project cost (excluding taxes and duties). The Government would provide the remaining US\$6.9 m equivalent from its own resources.

### Procurement and Disbursement

67. Equipment, four-wheel vehicles and spares would be procured on the basis of international competitive bidding (ICB) procedures, in accordance with IDA's "Guidelines for Procurement". A preference limited to 15% of cif prices of imported goods or the import duty, whichever is lower, would be extended to local manufacturers in the evaluation of bids. Bicycles and motorcycles costing \$0.6 million in total would be purchased by the Government staff in accordance with local procedures satisfactory to the Association, which would allow for individual preferences of the Government staff. Small off-the-shelf items which cannot be bulked into packages suitable for ICB and costing less than US\$10,000 equivalent for each contract, items



urgently needed for project implementation, and items requiring standardization, may be procured in accordance with local procedures satisfactory to IDA. Non-ICB purchases would be limited to a total of US\$1.2 m.

68. Because most buildings (US\$5.4 m) would be relatively small and scattered over a wide area, and could not be grouped into large contracts, they would be unsuitable for ICB. Therefore, construction of buildings would be awarded to local contractors through local competitive bidding, following procedures satisfactory to IDA. The Civil Engineering Unit of the Department of Agriculture would supervise the building construction work. The Government would ensure timely supply of construction materials for the project, according to an agreed schedule.

69. Disbursements would be made for: (a) 100% of foreign expenditures or 100% of local expenditures ex-factory or 65% of local expenditures on equipment, vehicles and spares; (b) 100% of expenditures for technical assistance and overseas training; (c) 65% of expenditures for building construction, including construction materials; and (d) 65% of expenditures for salaries and allowances of project staff. Disbursement for item (d) would be made against Government statements of expenditures, the documentation for which would be audited and retained for review by IDA supervision missions. All other disbursements would be made against full documentation. It is proposed to retroactively finance expenditures for the training of Subject Matter Officers (who would in turn train extension workers), incurred after March 15, 1979. Such expenditures would amount to a maximum of US\$200,000. The Project Director would be responsible for submitting disbursement applications to IDA. It is expected that disbursement would be completed by June 30, 1985, about six months after the project completion.

#### Production and Marketing

70. Under the project, new knowledge and varieties resulting from recent research would be used to increase yields and reduce crop exposure to risk and failure. As stated earlier, most of the marketing of food production is done by the private trade. With a liberalized economic policy under the new Government, private marketing activities are expected to expand. Also, the larger domestic output would substitute imported food and would be marketed through some of the facilities currently used to distribute imported food. Almost all of the additional production would be consumed in the country and there should be no difficulty in marketing the additional output.

71. The recent increase in guaranteed purchase price for paddy and increase in the price for imported flour led to an increase in market prices for paddy by about 20%. The profitability of minor food crops, such as onions, chilies, potatoes and other vegetables has been quite good in recent years. Higher prices for inputs and the tightening of the supply of seasonal credit may cause some reluctance on the part of farmers to increase the use of inputs. However, at present, prices are high enough to provide incentives to farmers, especially those with small holdings who can increase output by the adoption

of labor intensive packages, which would be promoted under the proposed project. In the long run, a rational comprehensive agricultural pricing policy would be essential. The proposed work of the DA's Economic Unit would provide the Government with information required to initiate and implement such a policy.

#### Benefits and Justification

72. Attributing a precise level of benefits to an extension project is difficult, since it is impossible to determine what proportion of benefits expected from improved agricultural practices is due to extension alone and what proportion is due to past research and extension efforts, improved irrigation, or additional inputs. In practice, it is often the combination of all these, with extension playing a catalytic role, that produces the desired benefit. Even small production increases generate a high rate of return, since incremental cost of such a project is low. For example, this project would generate a rate of return of more than 50% if yields are, on average, 1.5% higher by 1985 than they would have been without the project. Such an average increase would imply larger yields per acre of 45 lbs. for paddy, 8.6 lbs. for corn, 58 lbs. for sweet potatoes and 6.3 lbs. for cowpeas. Average yield increases in similarly situated areas of Asia where the T&V system has been introduced have far exceeded these levels.

73. The extension service under the project would focus first on improved cultural practices and farm management, combined with low cost input, mainly labor. Given Sri Lanka's land ownership and holding structure, the project would benefit a large number of small farmers.

#### Project Risk

74. The establishment of a single, unified, professional extension service marks a major departure from the existing system in Sri Lanka. The proposed project reflects a strong commitment by the Government to developing a unified extension service, capable of serving all farmers. Nevertheless, with the turnover of senior administrative staff and possible pressures from other Government departments and politicians, it may be difficult to maintain a single line of command from extension headquarters to full-time KVSs who would work exclusively on agricultural extension. To reduce the risk, substantial efforts were made during project preparation and appraisal to ensure full understanding of the importance of this commitment. The Government has agreed that extension officers would spend full time on extension work and that DA officials would control the transfer of extension staff (para 49). Experience in other countries shows other risks to be minimal. In other Asian countries with similarly developed research institutions, farmer responsiveness to extension messages has generally been excellent, wherever training and visits are managed systematically. Initially, technology would not be a constraint, as there is a backlog of research findings not yet widely adapted. To reduce the risk of technological constraints, which could lower project momentum in the future, the project supports a program of adaptive research and improved training.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

75. 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.

76. Special conditions of the credit are listed in Section III of Annex III. An additional condition of effectiveness for the IDA Credit would be the establishment of the Project Coordination Committee (para 57).

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

PART VI - RECOMMENDATION

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

Robert S. McNamara  
President

Attachments

May 31, 1979

TABLE 3A  
SRI LANKA - SOCIAL INDICATORS DATA SHEET

LAND AREA (THOUSAND SQ. KM.)	SRI LANKA		REFERENCE GROUPS (ADJUSTED AVERAGES)			
			- MOST RECENT ESTIMATE			
	1960 /b	1970 /b	MOST RECENT ESTIMATE /b	SAME GEOGRAPHIC REGION /c	SAME INCOME GROUP /d	NEXT HIGHER INCOME GROUP /e
TOTAL	65.6					
AGRICULTURAL	24.2					
GNP PER CAPITA (US\$)	70.0	120.0	200.0	167.4	182.9	432.3
ENERGY CONSUMPTION PER CAPITA (KILOGRAMS OF COAL EQUIVALENT)	107.0	153.0	127.0	65.7	88.9	251.7
<b>POPULATION AND VITAL STATISTICS</b>						
TOTAL POPULATION, MID-YEAR (MILLIONS)	9.9	12.5	14.0	.	.	.
URBAN POPULATION (PERCENT OF TOTAL)	17.9	22.0	25.2	12.8	15.0	24.2
POPULATION DENSITY						
PER SQ. KM.	151.0	191.0	213.0	85.2	46.8	42.7
PER SQ. KM. AGRICULTURAL LAND	507.0	518.0	579.0	322.6	254.1	95.0
POPULATION AGE STRUCTURE (PERCENT)						
0-14 YRS.	41.5 /f	40.0	39.0	44.0	43.6	44.9
15-64 YRS.	54.3 /f	56.0	57.0	52.9	53.3	52.8
65 YRS. AND ABOVE	4.2 /f	4.0	4.1	2.9	2.9	3.0
POPULATION GROWTH RATE (PERCENT)						
TOTAL	2.6	2.4	1.7	2.2	2.4	2.7
URBAN	4.8	4.5	3.7	4.2	4.0	8.8
CRUDE BIRTH RATE (PER THOUSAND)	37.6	33.1	27.4	45.1	44.3	42.2
CRUDE DEATH RATE (PER THOUSAND)	10.7	8.0	7.9	17.3	19.7	12.4
GROSS REPRODUCTION RATE	2.5	2.3	2.0	3.2	2.9	3.2
FAMILY PLANNING						
ACCEPTORS, ANNUAL (THOUSANDS)	..	55.3	113.0	.	.	.
USERS (PERCENT OF MARRIED WOMEN)	..	8.0	9.9	13.7	14.6	14.2
<b>FOOD AND NUTRITION</b>						
INDEX OF FOOD PRODUCTION PER CAPITA (1970=100)	86.6	100.0	109.1	95.6	96.4	104.3
PER CAPITA SUPPLY OF CALORIES (PERCENT OF REQUIREMENTS)	92.0	101.0	97.0	91.1	92.3	99.5
PROTEINS (GRAMS PER DAY)	45.0	50.0	48.0	49.6	50.0	56.8
OF WHICH ANIMAL AND PULSE	15.0	16.0	15.0	12.6	13.9	17.5
CHILD (AGES 1-4) MORTALITY RATE	..	..	16.8	..	..	7.5
<b>HEALTH</b>						
LIFE EXPECTANCY AT BIRTH (YEARS)	60.5	65.8	67.8	43.1	45.8	53.3
INFANT MORTALITY RATE (PER THOUSAND)	52.0	50.0	51.0	99.5	102.7	82.5
ACCESS TO SAFE WATER (PERCENT OF POPULATION)						
TOTAL	..	21.0	19.0	30.0	26.4	31.1
URBAN	..	46.0	36.0	66.3	63.5	68.5
RURAL	..	14.0	13.0	17.2	14.1	18.2
ACCESS TO EXCRETA DISPOSAL (PERCENT OF POPULATION)						
TOTAL	..	64.0	59.0	15.7	16.1	37.5
URBAN	..	76.0	68.0	66.9	65.9	69.5
RURAL	..	61.0	55.0	2.5	3.4	25.4
POPULATION PER PHYSICIAN	4500.0	..	4010.0	8830.8	13432.7	9559.2
POPULATION PER NURSING PERSON	4170.0	2730.0	2280.0	8479.3	6983.3	2762.5
POPULATION PER HOSPITAL BED						
TOTAL	330.0	330.0	330.0	1624.5	1157.6	786.5
URBAN	..	130.0	140.0	..	183.3	278.4
RURAL	..	570.0	600.0	..	1348.8	1358.4
ADMISSIONS PER HOSPITAL BED	..	54.0	51.3	..	19.5	19.2
<b>HOUSING</b>						
AVERAGE SIZE OF HOUSEHOLD						
TOTAL	5.4 /f	5.8	..	..	5.2	..
URBAN	6.3 /f	6.3	..	..	4.8	..
RURAL	5.2 /f	5.5	..	..	5.3	..
AVERAGE NUMBER OF PERSONS PER ROOM						
TOTAL	2.0 /f	2.5	..	..	..	..
URBAN	2.1 /f	2.7	..	..	1.8	2.3
RURAL	2.0 /f	2.5	..	..	..	..
ACCESS TO ELECTRICITY (PERCENT OF DWELLINGS)						
TOTAL	7.5 /f	9.0	..	..	25.9	28.3
URBAN	35.9 /f	34.5	..	..	..	..
RURAL	2.3 /f	2.8	..	..	8.7	10.3

TABLE 3A  
SRI LANKA - SOCIAL INDICATORS DATA SHEET

	SRI LANKA		REFERENCE GROUPS (ADJUSTED AVERAGES)				
	1960 /b	1970 /b	MOST RECENT ESTIMATE /b	- MOST RECENT ESTIMATE) /a			
				SAME GEOGRAPHIC REGION /c	SAME INCOME GROUP /d	NEXT HIGHER INCOME GROUP /e	
<u>EDUCATION</u>							
ADJUSTED ENROLLMENT RATIOS							
PRIMARY: TOTAL	95.0	99.0	77.0	59.1	62.9	75.8	
FEMALE	90.0	94.0	77.0	38.4	45.9	67.9	
SECONDARY: TOTAL	27.0	51.0	54.0	19.9	14.4	17.7	
FEMALE	16.0	51.0	55.0	9.9	8.8	12.9	
VOCATIONAL (PERCENT OF SECONDARY)	..	1.0	1.0	1.5	6.6	7.4	
PUPIL-TEACHER RATIO							
PRIMARY	31.0	..	22.0	38.2	38.5	34.3	
SECONDARY	..	..	..	23.5	19.8	23.5	
ADULT LITERACY RATE (PERCENT)	61.0	77.6	78.1	35.6	36.7	63.7	
<u>CONSUMPTION</u>							
PASSENGER CARS PER THOUSAND POPULATION							
	8.0	7.0	6.7	2.2	3.1	7.2	
RADIO RECEIVERS PER THOUSAND POPULATION							
	36.0	..	37.0	14.9	31.1	71.1	
TV RECEIVERS PER THOUSAND POPULATION							
	..	..	..	..	2.8	14.1	
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION							
	36.0	49.0	..	6.4	6.0	16.3	
CINEMA ANNUAL ATTENDANCE PER CAPITA							
	3.0	..	3.9	..	1.4	1.6	
<u>EMPLOYMENT</u>							
TOTAL LABOR FORCE (THOUSANDS)	3500.0 /f	4100.0	4707.0	.	.	.	
FEMALE (PERCENT)	22.6	23.7	28.5	21.3	24.2	28.0	
AGRICULTURE (PERCENT)	56.3	52.0	55.0	62.8	60.7	54.1	
INDUSTRY (PERCENT)	13.5	14.4	..	..	..	..	
PARTICIPATION RATE (PERCENT)							
TOTAL	34.3	33.5	34.6	35.8	39.8	37.8	
MALE	50.8	49.2	48.2	52.4	53.3	50.3	
FEMALE	16.2	16.5	20.3	15.6	19.6	20.9	
ECONOMIC DEPENDENCY RATIO	1.5	1.4	1.2	1.3	1.3	1.3	
<u>INCOME DISTRIBUTION</u>							
PERCENT OF PRIVATE INCOME RECEIVED BY							
HIGHEST 5 PERCENT OF HOUSEHOLDS	26.4	18.8	18.6	18.6	20.3	19.5	
HIGHEST 20 PERCENT OF HOUSEHOLDS	52.1	45.6	42.8	42.8	45.1	48.9	
LOWEST 20 PERCENT OF HOUSEHOLDS	4.5	7.4	7.3	7.3	5.7	5.9	
LOWEST 40 PERCENT OF HOUSEHOLDS	13.7	17.9	19.3	19.3	16.8	15.7	
<u>POVERTY TARGET GROUPS</u>							
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US\$ PER CAPITA)							
URBAN	..	..	68.0	80.2	88.5	155.9	
RURAL	..	..	76.0	67.2	71.9	97.9	
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US\$ PER CAPITA)							
URBAN	..	..	..	..	100.8	143.7	
RURAL	..	..	59.0	39.8	42.0	87.3	
ESTIMATED POPULATION BELOW POVERTY INCOME LEVEL (PERCENT)							
URBAN	..	..	26.0	50.3	46.0	22.9	
RURAL	..	..	22.0	44.6	48.0	36.7	

.. Not available  
. Not applicable.

NOTES

/a The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Coverage of countries among the indicators depends on availability of data and is not uniform.

/b Unless otherwise noted, data for 1960 refer to any year between 1959 and 1961; for 1970, between 1969 and 1971; and for Most Recent Estimate, between 1973 and 1977.

/c South Asia; /d Low Income (\$280 or less per capita 1976); /e Lower Middle Income (\$281-550 per capita, 1976); /f 1963.

**Notes:** The adjusted group averages for each indicator are population-weighted geometric means, excluding the extreme values of the indicator and the most populated country in each group. Coverage of countries among the indicators depends on availability of data and is not uniform. Due to lack of data, group averages for Capital Surplus Oil Exporters and indicators of access to water and excreta disposal, housing, income distribution and poverty are simple population-weighted geometric means without the exclusion of extreme values.

**LAND AREA** (thousand sq. km)

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

**GNP PER CAPITA (US\$)** - GNP per capita estimates at current market prices, calculated by same conversion method as World Bank Atlas (1975-77 basis); 1960, 1970, and 1977 data.

**ENERGY CONSUMPTION PER CAPITA** - Annual consumption of commercial energy (coal and lignite, petroleum, natural gas and hydro-, nuclear and geo-thermal electricity) in kilograms of coal equivalent per capita.

**POPULATION AND VITAL STATISTICS**

**Total population, mid-year (millions)** - As of July 1; if not available, average of two end-year estimates; 1960, 1970, and 1977 data.

**Urban population (percent of total)** - Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries.

**Population density**

**Per sq. km.** - Mid-year population per square kilometer (100 hectares) of total area.

**Per sq. km. agriculture 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.

**Population growth rate (percent)** - total, and urban - Compound annual growth rates of total and urban mid-year populations for 1950-60, 1960-70, and 1970-75.

**Crude birth rate (per thousand)** - Annual live births per thousand of mid-year population; ten-year arithmetic averages ending in 1960 and 1970 and five-year average ending in 1975 for most recent estimate.

**Crude death rate (per thousand)** - Annual deaths per thousand of mid-year population; ten-year arithmetic averages ending in 1960 and 1970 and five-year average ending in 1975 for most recent estimate.

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

**Family planning - acceptors, annual (thousands)** - Annual number of acceptors of birth-control devices under auspices of national family planning program.

**Family planning - users (percent of married women)** - Percentage of married women of child-bearing age (15-44 years) who use birth-control devices to all married women in same age group.

**FOOD AND NUTRITION**

**Index of food production per capita (1970=100)** - Index number of per capita annual production of all food commodities.

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

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

**Per capita protein supply from animal and pulse** - Protein supply of food derived from animals and pulses in grams per day.

**Child (ages 1-4) mortality rate (per thousand)** - Annual deaths per thousand in age group 1-4 years, to children in this age group.

**HEALTH**

**Life expectancy at birth (years)** - Average number of years of life remaining at birth; usually five-year averages ending in 1960, 1970, and 1975.

**Infant mortality rate (per thousand)** - Annual deaths of infants under one year of age per thousand live births.

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

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

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

**Population per nursing person** - Population divided by number of practicing male and female graduate nurses, practical nurses, and assistant nurses.

**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 are establishments permanently staffed by at least one physician. Establishments providing principally custodial care are not included. Rural hospitals, however, include health and medical centers not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.) which offer in-patient accommodation and provide a limited range of medical facilities.

**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. Statistical definitions of household vary.

**Average number of persons per room** - total, urban, and rural - Average number of persons per room in all, urban, and rural occupied conventional dwellings, respectively. Dwellings exclude non-permanent structures and unoccupied 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, and female** - Total and female enrollment of all ages at the primary level as percentages of respectively 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, 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.

**Pupil-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.

**EMPLOYMENT**

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

**Female (percent)** - Female labor force as percentage of total labor force.

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

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

**Participation rate (percent)** - total, male, and female - Total, male, and female labor force as percentages of their respective populations.

These are ILO's adjusted participation rates reflecting age-sex structure of the population, and long time trend.

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

**INCOME DISTRIBUTION**

**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 - Relative poverty income level is that income level less than one-third per capita personal income of the country.

**Estimated population below poverty income level (percent)** - urban and rural - Percent of population (urban and rural) who are either "absolute poor" or "relative poor" whichever is greater.

SRI LANKA

E C O N O M I C   D E V E L O P M E N T   D A T A   S H E E T S

	A C T U A L				EST.
	1965	1970	1976	1977	1978
NATIONAL ACCOUNTS (1) (MILLIONS OF US\$ AT 1975 PRICES)					
GROSS DOMESTIC PRODUCT	1783.0	2354.0	2747.3	2811.4	3020.7
GAINS FROM TERMS OF TRADE	539.7	242.2	185.1	413.4	362.6
GROSS DOMESTIC INCOME	2322.7	2596.2	2932.4	3224.8	3383.3
IMPORTS	1189.8	1017.3	913.5	999.3	1272.8
EXPORTS - VOLUME	-670.2	-662.9	-660.5	-694.5	-754.8
EXPORTS - TT. ADJUSTED	-1209.9	-905.1	-845.6	-1107.9	-1117.4
RESOURCE GAP - TT. ADJUSTED	-20.1	112.1	67.9	-108.6	155.4
TOTAL CONSUMPTION	2055.9	2239.0	2563.6	2648.2	2891.1
INVESTMENT	246.8	469.4	436.8	468.0	647.6
NATIONAL SAVINGS	244.3	297.9	350.7	570.6	511.1
DOMESTIC SAVINGS	266.9	357.3	368.9	576.6	492.3
GDP AT CURRENT US\$	1686.6	1870.6	2424.2	2821.3	2546.3
SECTOR OUTPUT (SHARE OF GDP AT 1975 PRICES)					
AGRICULTURE	0.444	0.422	0.376	0.387	0.384
INDUSTRY	0.171	0.211	0.217	0.201	0.202
SERVICES	0.385	0.367	0.407	0.412	0.415
PRICES ( 1975 = 100)					
EXPORT PRICE INDEX	65.65	56.86	95.16	119.13	125.63
IMPORT PRICE INDEX	36.37	41.64	74.33	74.67	84.86
TERMS OF TRADE INDEX	180.52	136.55	128.02	159.53	148.05
GDP DEFLATOR (US\$)	94.59	79.47	88.24	100.35	84.30
ANNUAL AVERAGE EXCHANGE RATE	4.76	6.85	10.88	11.06	

Growth Rates		1976
1965	1977	SHARE OF GDP

NATIONAL ACCOUNTS (1)  
(MILLIONS OF US\$ AT 1975 PRICES)

GROSS DOMESTIC PRODUCT	3.9	100.0
GAINS FROM TERMS OF TRADE		6.7
GROSS DOMESTIC INCOME	2.8	106.7
IMPORTS	-1.4	33.3
EXPORTS - VOLUME	0.3	24.0
EXPORTS - TT. ADJUSTED	-0.7	30.8
RESOURCE GAP - TT. ADJUSTED		2.5
TOTAL CONSUMPTION	2.1	93.3
INVESTMENT	5.5	15.9
NATIONAL SAVINGS	7.3	12.8
DOMESTIC SAVINGS	6.6	13.4
GDP AT CURRENT US\$	4.4	

PRICES ( 1975 = 100)

EXPORT PRICE INDEX	5.1
IMPORT PRICE INDEX	6.2
TERMS OF TRADE INDEX	-1.0
GDP DEFLATOR (US\$)	0.5

SELECTED INDICATORS 1965-77

ICOR	4.37
IMPORT ELASTICITY	-0.39
AVERAGE NATIONAL SAVINGS RATE	0.11
MARGINAL NATIONAL SAVINGS RATE	0.32
IMPORTS/GDP	0.44
INVESTMENT/GDP	0.16
RESOURCE GAP/GDP	0.04

(1) COMPONENTS MAY NOT ADD UP BECAUSE OF ROUNDING

SRI LANKA

BALANCE OF PAYMENTS AND EXTERNAL ASSISTANCE

	1973	1974	1975	1976	1977	1978
	A C T U A L					E S T.
<b>SUMMARY OF BALANCE OF PAYMENTS (US\$ Million)</b>						
1. EXPORTS (INCLUDING NFS)	424.3	570.4	628.2	628.5	827.3	948.2
2. IMPORTS (INCLUDING NFS)	445.3	731.7	798.8	679.0	746.2	1080.1
3. RESOURCE BALANCE	-21.0	-161.3	-170.6	-50.5	81.1	-131.9
4. NET FACTOR SERVICE INCOME	-17.3	-16.6	-18.4	-20.1	-15.0	-11.0
.1 NET INTEREST PAYMENTS	-14.7	-14.7	-15.9	-18.6	-14.0	-10.0
OF WHICH ON PUB M&LT LOANS	-15.5	-16.5	-20.6	-23.1	-22.1	-22.8
.2 DIRECT INVESTMENT INCOME	-2.7	-2.0	-2.4	-1.5	-1.1	-1.2
.3 WORKERS REMITTANCES (NET)	.0	.0	.0	.0	.0	.0
5. CURRENT TRANSFERS (NET)	.2	-.2	2.8	6.6	10.5	27.1
6. BALANCE ON CURRENT ACCOUNT	-38.1	-178.1	-186.2	-64.0	76.6	-115.8
7. PRIVATE DIRECT INVESTMENT	.5	1.3	-.2	.0	-.3	2.0
8. GRANTS & GRANT-LIKE FLOWS	13.0	42.0	77.0	58.0	60.8	57.9
<b>PUBLIC M&amp;LT LOANS</b>						
9. DISBURSEMENTS	83.8	146.3	157.4	210.4	150.1	260.7
10. AMORTIZATION	-39.1	-52.4	-117.7	-103.8	-101.9	-72.1
11. NET DISBURSEMENTS	44.7	93.8	39.7	106.7	48.2	188.6
<b>OTHER M&amp;LT LOANS</b>						
12. DISBURSEMENTS	.0	.0	.0	.0	.0	.0
13. AMORTIZATION	.0	.0	.0	.0	.0	.0
14. NET DISBURSEMENTS	.0	.0	.0	.0	.0	.0
15. USE OF IMF RESOURCES	-1.4	33.3	27.9	11.1	46.9	.0
16. SHORT-TERM CAPITAL TRANSACTIONS	-9.8	13.2	-2.8	-22.6	6.5	-3.0
17. CAPITAL TRANSACTIONS NET	28.2	62.3	-12.0	-31.8	-56.9	-35.8
18. CHANGE IN RESERVES (- = INCREASE)	-37.1	56.8	56.6	-57.4	-183.0	-94.0
19. NET FOREIGN EXCHANGE (1) RESERVES (END OF PERIOD)	-11.0	-67.8	-124.4	-67.0	116.0	210.0

**GRANT AND LOANS COMMITMENTS (US\$ Million)**

1. OFFICIAL GRANTS	21.1	37.0	76.0	53.1	104.3	123.7
2. TOTAL PUBLIC M&LT LOANS	92.1	233.1	285.8	221.8	167.6	324.9
.1 IBRD	.0	.0	.0	.0	.0	.0
.2 IDA	6.0	24.0	29.5	.0	41.2	25.5
.3 OTHER MULTILATERAL	2.8	2.5	30.0	8.1	49.7	83.2
.4 GOVERNMENTS	58.4	72.9	196.6	140.9	69.7	192.8
.5 OF WHICH CENTRALLY PLANNED ECONOMIES (2)	2.6	21.4	56.1	4.2	1.7	10.0
.6 SUPPLIERS	25.0	133.6	29.7	72.7	7.0	23.4
.7 FINANCIAL INSTITUTIONS	.0	.0	.0	.0	.0	.0
.8 BONDS	.0	.0	.0	.0	.0	.0
.9 PUBLIC LOANS NET	.0	.0	.0	.0	.0	.0
3. OTHER M&LT LOANS (WHERE AVAILABLE)	.0	.0	.0	.0	.0	.0

**MEMORANDUM ITEMS**

1. GRANT ELEMENT OF TOTAL COMMITMENTS	45.000	27.100	55.700	39.800	64.400	62.686
2. AVERAGE INTEREST RATE	.037	.051	.029	.040	.021	.024
3. AVERAGE MATURITY (YEARS)	23.700	13.600	28.800	20.500	35.400	29.529

1/ NET FOREIGN ASSETS: US\$ EQUIVALENT OF LINE 31, IFS.

2/ INCLUDES CMEA COUNTRIES, PEOPLES REPUBLIC OF CHINA, NORTH KOREA, NORTH VIETNAM.

DATE OF LATEST UPDATE 05/04/79



SRI LANKA

DEBT AND CREDIT WORTHINESS

	1973	1974	1975	1976	1977	1978
			ACTUAL			EST.
<b>MEDIUM AND LONG TERM DEBT (DISBURSED ONLY)</b>						
TOTAL DEBT OUTSTANDING (DOD END OF PERIOD)	484.8	587.3	598.0	702.3	787.0	974.5
INCLUDING UNDISBURSED	680.1	875.7	997.0	1103.8	1217.9	1428.1
PUBLIC DEBT SERVICE	-54.6	-68.9	-138.4	-126.8	-124.0	-94.9
INTEREST	-15.5	-16.5	-20.6	-23.1	-22.1	-22.8
OTHER M&LT DEBT SERVICE	.0	.0	.0	.0	.0	.0
TOTAL DEBT SERVICE	-54.6	-68.9	-138.4	-126.8	-124.0	-94.9
<b>DEBT BURDEN</b>						
DEBT SERVICE RATIO	12.9	12.1	22.0	20.2	15.0	10.0
DEBT SERVICE RATIO (1)	13.5	12.4	22.4	20.4	15.1	10.1
DEBT SERVICE/GDP	2.7	2.7	5.2	5.2	4.4	3.7
PUB. DEBT SERVICE/GOV. REVENUE	15.7	10.0	19.0	20.0	23.5	14.7
<b>TERMS</b>						
INT. ON TOTAL DOD/TOTAL DOD	3.2	2.8	3.4	3.3	2.8	2.3
TOTAL DEBT SERVICE/TOTAL DOD	11.3	11.7	23.1	18.1	15.8	9.7
<b>DEPENDENCY RATIOS FOR M&amp;LT DEBT</b>						
GROSS DISB./IMPORTS (INCL.NFS)	18.8	20.0	19.7	31.0	20.1	24.1
NET TRANSFER/IMPORTS(INCL.NFS)	6.6	10.6	2.4	12.3	3.5	15.4
NET TRANSFER/GROSS DISB.	34.9	52.9	12.1	39.7	17.4	63.6
<b>EXPOSURE</b>						
IBRD DISB./GROSS TOTAL DISB.	6.5	3.4	3.6	1.6	1.3	.7
BANK GROUP DISB./GROSS TOTAL DISBURSEMENTS	12.4	10.9	12.2	4.0	8.7	5.6
IBRD DOD/TOTAL DOD	6.6	5.8	6.1	5.1	4.4	3.3
BANK GROUP DOD/TOTAL DOD	9.5	10.0	12.5	11.3	11.3	10.3
IBRD DEBT SERVICE/TOTAL DEBT SERVICE	8.0	7.4	4.0	4.7	4.9	6.1
BANK GROUP DEBT SERVICE/TOTAL DEBT SERVICE	8.1	7.5	4.2	5.0	5.2	6.5

OUTSTANDING DEC. 31. 1977

EXTERNAL DEBT (DISBURSED ONLY)	AMOUNT	PERCENT
IBRD	34.3	4.4
BANK GROUP	89.0	11.3
OTHER MULTILATERAL GOVERNMENTS	43.8	5.6
OF WHICH CENTRALLY PLANNED ECONOMIES (2)	574.9	73.0
SUPPLIERS	52.8	6.7
FINANCIAL INSTITUTIONS	79.2	10.1
BONDS	.1	.0
PUBLIC DEBT NEI	.0	.0
TOTAL PUBLIC M&LT DEBT	.0	.0
OTHER PUBLIC M&LT DEBT	787.0	100.0
OTHER M&LT DEBT	.0	.0
TOTAL PUBLIC DEBT (INCLUDING UNDISBURSED)	1217.9	154.8
TOTAL M & LT DEBT (INCLUDING UNDISBURSED)	1217.9	154.8
<b>DEBT PROFILE</b>		
TOTAL DEBT SERVICE 1978-82/TOTAL DOD END OF 1977	63.5	

1/INCLUDING NET DIRECT INVESTMENT INCOME  
2/INCLUDES CMEA COUNTRIES, PEOPLES REPUBLIC OF CHINA,  
NORTH KOREA, NORTH VIETNAM.

THE STATUS OF BANK GROUP OPERATIONS IN SRI LANKA

A. STATEMENT OF BANK LOANS AND IDA CREDITS (as of April 30, 1979)

Loan or Credit No.	Year	Borrower	Purpose	US\$ Million		
				Bank	IDA	Undisbursed
Seven loans and six credits fully disbursed				58.9	42.0	
653	1970	Sri Lanka	Mahaweli Ganga Development I	14.5		2.4
504	1974	Sri Lanka	Dairy Development		9.0	7.5
566	1975	Sri Lanka	DFC - Industrial III		4.5	0.8
595	1975	Sri Lanka	Agricultural Devel- opment		25.0	6.6
666	1976	Sri Lanka	Tank Irrigation		5.0	4.6
701	1977	Sri Lanka	Mahaweli Ganga Development II		19.0	18.9
709	1977	Sri Lanka	Water Supply		9.2	9.0
742	1977	Sri Lanka	DFC - Industrial IV		8.0	6.0
818	1978	Sri Lanka	Tree Crop Reha- bilitation (Tea)		21.0	21.0
819	1978	Sri Lanka	Tree Crop Diver- sification (Tea)		4.5	4.5
891	1979	Sri Lanka	Kurunegala Rural Development /a		20.0	20.0
Total,				73.4	167.2	101.3
of which has been repaid				37.6	-	
Total now outstanding				35.8	167.2	
Amount sold,						
of which has been repaid						
Total now held by Bank and IDA /b				35.8	167.2	
Total undisbursed				2.4	98.9	101.3

/a Not yet effective.

/b Prior to exchange adjustments.

B. STATEMENT OF IFC INVESTMENT (as of April 30, 1979)

Year	Obligor	Type of Business	Amount of US\$ Million		
			Loan	Equity	Total
1970	Pearl Textile Mills	Textile	2.5	0.8	3.3
1977	The Development Finance Corporation of Ceylon	Development Banking	-	0.1	0.1
1978	Bank of Ceylon	Development Banking	2.0	-	2.0
Total Commitments			4.5	0.9	5.4
Less: Cancellations, repayments and sales			2.5	0.8	3.3
Total Commitments now held by IFC			2.0	0.1	2.1

C. PROJECTS IN EXECUTION 1/

Ln. No. 653 - Mahaweli Ganga Development (Irrigation/Power) Project;  
US\$14.5 million of January 30, 1970; Effective Date:  
April 30, 1971; Original Closing Date: June 30, 1976;  
Revised Closing Date: July 31, 1979

The project, now complete, is about two years behind appraisal target. Delays were due mainly to foundation problems at Polgolla power house and a slow start at Bowatenna diversion dam. After overcoming these problems, the construction progressed satisfactorily. Good progress has been recorded to date on agricultural extension and research in the project area. The Credit (174-CE) associated with this project has been fully disbursed. An unallocated amount of US\$2.0 million is being utilized for the procurement of badly needed vehicles and equipment. This procurement is underway. The closing date of the loan has accordingly been extended to July 31, 1979.

Cr. No. 504 - Dairy Development Project; US\$9.0 million of August 9, 1974;  
Effective Date: February 10, 1975; Closing Date:  
December 31, 1980

The original project, as appraised in 1973, was designed to increase milk production on about 2,400 dairy farms covering 42,000 acres in the Coconut Triangle and Mid Country of Sri Lanka by providing credit, technical assistance and a strengthened milk collection, transport and marketing system. Complementary objectives were to establish pilot units for commercial calf rearing and pasture management systems; and provide processing equipment to the National Milk Board. However, progress was severely constrained by the poor supply of cattle available for onlending to project borrowers. The poor supply of cattle was due to import problems and an over-estimation of the national herd at appraisal stemming from unreliable Government statistics. Moreover, unrestricted slaughter of cattle was stimulated by a rapid increase in concentrate feed prices which made milk production unattractive plus the relatively high consumer price of fish and poultry meat. It, therefore, became necessary to reformulate the project. The revised project, still under discussion with the Government, would focus on what was a small component of the original project-support to dairy cooperatives. Under this component, dairy farmers would be organized in a manner similar to the successful Anand pattern of Dairy Cooperatives in India. The Government has requested the National Dairy Development Board of India (NDDB) to help evaluate the potential of such an approach and the Chairman of NDDB visited Sri Lanka in

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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.

December 1978 to evaluate Sri Lanka's technical assistance needs for the proposed approach. Consequently, the supply of inputs and services would become key activities of the revised project, which would include provision of technical assistance and credit to farmers and support for milk collection, transport and marketing. Preliminary proposals have already been received and accepted by IDA to expand the successful ongoing calf/heifer rearing and pilot pasture programs. The number of beneficiary farm families would be substantially increased (current estimate approximately 10,000 vs. 2,400 in the original project) and the project would contribute to a considerable increase in income of existing landless and small farmer dairy producers. Government's commitment to the proposed revised project approach is evidenced by the recent Cabinet approval to provide adequate incentives to dairy production in Sri Lanka.

Cr. No. 566 - Third Development Finance Corporation of Ceylon Project;  
US\$4.5 million of June 27, 1975; Effective Date:  
August 22, 1975; Closing Date: September 30, 1979

The credit was designed to meet the estimated foreign exchange requirements of the Development Finance Corporation of Ceylon (DFCC) for lending mainly to export industries and tourism. The credit has been fully committed and is likely to be fully disbursed by the closing date.

Cr. No. 595 - Agricultural Development Project; US\$25.0 million of  
December 24, 1975; Effective Date: March 1, 1976;  
Original Closing Date: June 30, 1978; Revised Closing Date:  
June 30, 1979

The original closing date of June 30, 1978 has been extended to June 30, 1979 to allow full utilization of credit funds. Disbursements continue to be slow and only if the Project Coordinating Committee and the participating agencies take quick actions as agreed with IDA will it be possible to commit and disburse the remaining US\$4.9 m out of a total of US\$6.6 m undisbursed before the new closing date. Funds still available are for import of spare parts for machinery rehabilitation programs of the Department of Agriculture and the Department of Machinery and Equipment, and the importation of about 300 tractors for farmers and 75 4-wheel drive vehicles for the two estate corporations' field supervisory work.

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

Implementation of the first two tanks is now about one year behind schedule but construction equipment has arrived and construction progress has begun to pick up significantly. Unfortunately, quality control has been neglected and some of the completed works are poorly constructed. Some of these works will have to be reconstructed or water losses and O&M costs will be un-

acceptably high. The Government has agreed to take action to improve quality control and closely monitor future work and will reconstruct those facilities which do not function properly after operation commences. In this regard, a quality control training program was provided by the U.S. Bureau of Reclamation in the USA for three Irrigation Department engineers during November-December 1978 and it is hoped that construction quality will improve to the levels required. A well-qualified Water Management Specialist has arrived (part-time) to set up a water management training program for Irrigation Department staff and farmers and much improvement is expected in this area. A full-time resident Project Manager has been appointed and coordination and construction progress are expected to improve. Project completion is expected to be delayed about one year.

Cr. No. 701 - Mahaweli Ganga Development II Project; US\$19.0 million of April 21, 1977; Effective Date: December 29, 1977; Closing Date: June 30, 1983

The Government has undertaken development of the project on an accelerated basis and had planned to complete the project within one year. This proved to be an overly optimistic target and the Government now is striving to complete the project by end 1979. Unfortunately, in its haste to meet set target dates, Mahaweli Development Board (MDB) initiated work in all areas of the project on an ad hoc basis, by-passed certain work required in preparing lands for settlement, sacrificed construction quality standards and practices requisite to works of good quality, changed portions of the main canal alignment where difficulties were encountered and embarked upon settlement actions without ensuring that necessary support programs and infrastructure development would be in place when settlement of the lands was done. The Government has agreed to take action to improve quality control and closely monitor all work in the future. In this regard, a quality control training course was provided by the US Bureau of Reclamation in the USA for four MDB engineers during November/December 1978 and it is hoped that construction quality will improve to the levels required. A Resident Project Manager has recently been appointed, filling a vacancy that has existed for more than a year, and project implementation and coordination activities are expected to improve considerably. Project completion may be advanced by about 1-1/2 years earlier than estimated at appraisal.

Cr. No. 709 - Water Supply Project; US\$9.2 million of May 10, 1977; Effective Date: February 9, 1978; Closing Date: March 31, 1982

Good progress has been made in implementing institutional changes, introducing a new bulk water tariff, establishing new accounting procedures both in the National Water Supply and Drainage Board (WDB) and in local authorities. Despite initial delays, the WDB has made excellent progress during the past year, particularly in procurement. Thirty three contracts have been awarded, resulting in a commitment of about US\$13 million out of the credit. At present, the disbursement level is low but is expected to rise rapidly by the end of calendar year 1979.

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

This credit will meet a substantial portion of DFCC's estimated foreign exchange requirements for lending to private sector industrial projects and tourism. Subprojects for US\$4.1 million have been authorized. DFCC remains a competent institution, with a rapidly increasing level of activity, which could increase further provided that DFCC's staffing problems are overcome as well as the constraint caused by the low equity base.

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 satisfactory. Procurement is getting under way; all tender documents have been issued. In the case of housing, awards have been made and construction is starting. In the case of tractors and vehicles, award proposals were cleared by IDA this month and vehicles and tractors should be delivered by July 1979. In the case of factory equipment, tenders should be awarded by August 1979 and delivery is expected in December this year. Field works, replanting and infilling, are on schedule. All other project components, namely health component, training component and tea area measurement, are progressing satisfactorily.

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 which is operating efficiently under capable management. Despite some delay in procurement of equipment, progress in field work is impressive. Cluster selection and homestead and farm demarcation are nearly complete and soil conservation work (bench terraces, lock and spill drains, graded stone terraces) well under way and accelerating. Foundations for about 500 houses have been laid. These houses are at various stages of construction and should be completed by April 1979. The project has now reached a stage where the more difficult social part of the project, namely transfer of non-citizen labor to other estates, settler selection, and land allocation will have to be tackled.

Cr. No. 891 - Kurunegala Rural Development Project; US\$20 million of April 26, 1979; Effective Date (Expected): July 26, 1979; Closing Date: June 30, 1984.

The project aims to assist the development of the District of Kurunegala in an integrated manner for purposes of raising productivity, employment, incomes and living standards and to develop a replicable model for rural development for other districts in Sri Lanka. The project will

provide for rehabilitation of existing irrigation schemes accompanied by improved water management practices to fully exploit the irrigation potential, and for programs for replanting/underplanting, intercropping and fertilizing of smallholder coconut plantations. The project will strengthen agricultural extension services, improve the supply of input services such as fertilizer distribution and seeds supplies, and lay the foundation for a viable agriculture credit system. These directly productive investments will be complemented by investments in transportation, health, education, water supply and rural electrification.

Cr. No. - Road Maintenance Project; US\$16.5 million

The project was approved by the Executive Directors on May 1, 1979.

SRI LANKA

AGRICULTURAL EXTENSION AND ADAPTIVE RESEARCH PROJECT

Supplementary Project Data Sheet

Section I: Timetable of Key Events

- (a) Time taken by the Country to prepare the project  
12 months
- (b) The agency which has prepared the project  
Department of Agriculture in the Ministry of  
Agricultural Development and Research with  
technical assistance under FAO/UNDP project  
SRL/75/058
- (c) Date of first presentation to the Bank and date of the  
first mission to consider the project  
August 1978 - October 1978
- (d) Date of departure of appraisal mission  
October 1978
- (e) Date of completion of negotiations  
May 11, 1979
- (f) Planned date of effectiveness  
September 1979

Section II: Special IDA Implementation Actions

None



Section III: Special Conditions

Condition of Effectiveness

- (a) Establishment of the Project Coordination Committee (para 57).

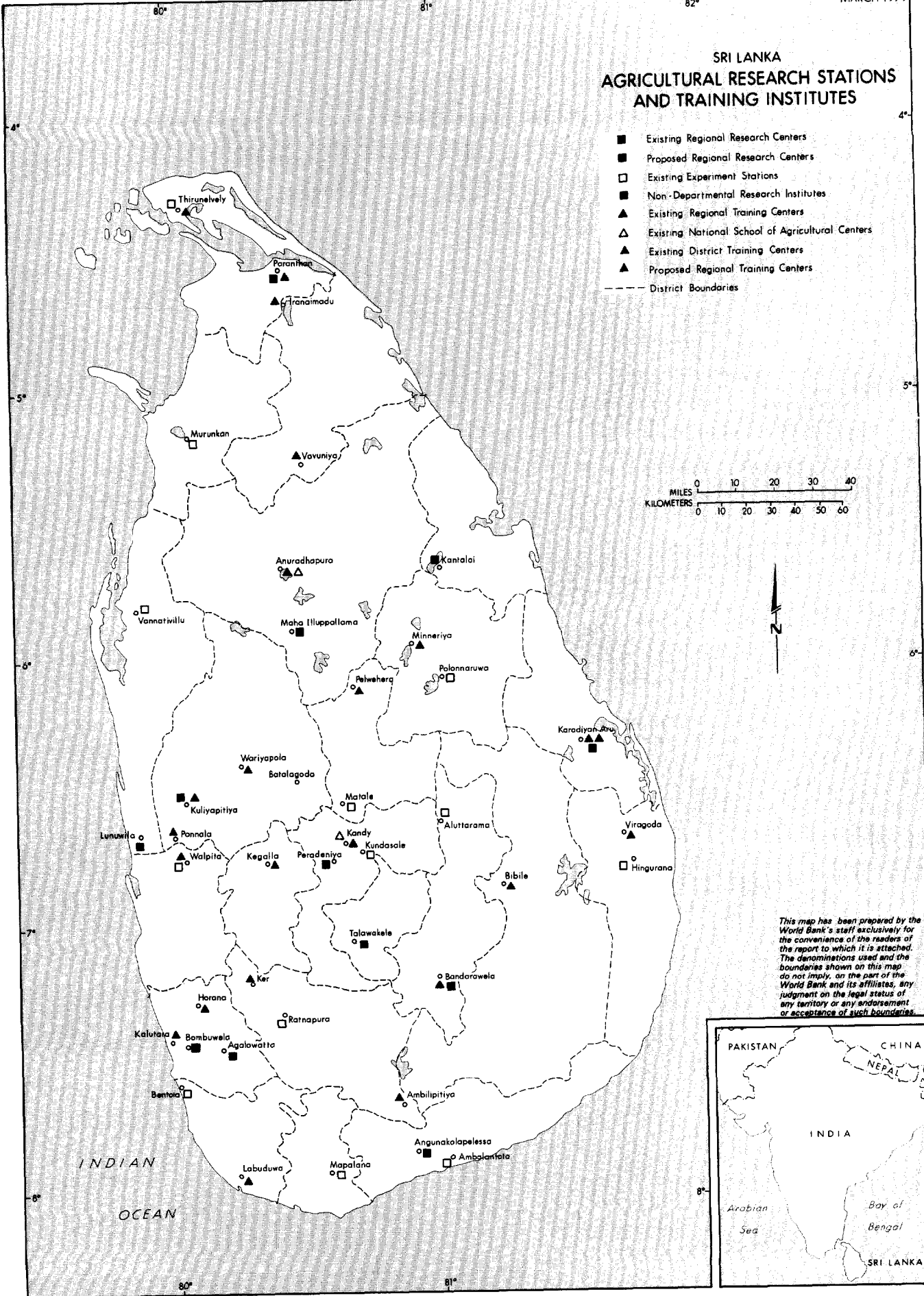
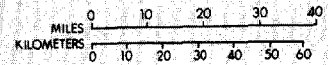
Other Special Conditions

- (b) Extension staff would attend fulltime to extension work and their training and visit schedules would not be interfered with, and they would not be transferred during the Project except for unsatisfactory performance of their scheduled duties or with the express approval of DA officials (para 49);
- (c) Ministries of Rural Industrial Development and Coconut Industry would designate their district-level officers to serve as subject matter officers on animal husbandry and coconut cultivation for training the extension officers of the Department of Agriculture (para 49);
- (d) Responsibility for carrying out all extension services under the Project will be entrusted to the Department of Agriculture (para 49);
- (e) The Department of Agriculture would prepare and adopt by December 31, 1979 a plan to strengthen its capability to supervise building construction and the Government would ensure timely supply of construction materials for the project (para 54);
- (f) The present financial management system of the Department of Agriculture would be revised by December 31, 1979 to authorise necessary project expenditure in an expeditious manner (para 61).



## SRI LANKA AGRICULTURAL RESEARCH STATIONS AND TRAINING INSTITUTES

- Existing Regional Research Centers
- Proposed Regional Research Centers
- Existing Experiment Stations
- Non-Departmental Research Institutes
- ▲ Existing Regional Training Centers
- △ Existing National School of Agricultural Centers
- ▲ Existing District Training Centers
- ▲ Proposed Regional Training Centers
- District Boundaries



*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 denominations 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.*

