

**Report No. 25387-CE**

# Sri Lanka Promoting Agricultural and Rural Non-farm Sector Growth

(In Two Volumes) Volume I: Main Report

**February 26, 2003**

Rural Development Unit  
South Asia Region



## CURRENCY EQUIVALENTS

Sri Lankan Rupee (Rs)

US\$1.00 = Rs. 95.80 (April 3, 2002)

## FISCAL YEAR (FY)

January 1- December 31

## ACRONYMS

CWE	Cooperative Wholesale Establishment
EPC	Effective protection coefficient
FAO	Food and Agriculture Organization
FBT	Food, beverage and tobacco
FOs	Farmer organizations
GCA	Gross cropped area
GDP	Gross domestic product
GIA	Gross irrigated area
GoSL	Government of Sri Lanka
MALF	Ministry of Agriculture, Livestock and Forestry
MASL	Mahaweli Authority of Sri Lanka
NPC	Nominal protection coefficient
NSP	National Seed Policy
O&M	Operations and maintenance
RNF	Rural non-farm
SLIS	Sri Lanka Integrated Survey

## Unit Measurements

ac	acre	km	kilometer
gm	grams	li	liter
ha	hectare	mt	metric tons
kg	kilogram	pc	pieces

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**Sri Lanka**  
**Promoting Agricultural and Rural Non-farm Sector Growth**  
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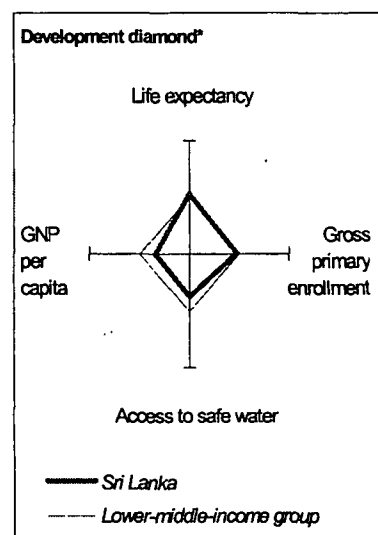
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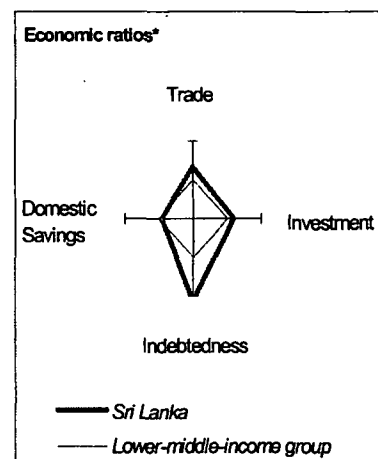
# Sri Lanka at a glance

POVERTY and SOCIAL	Sri Lanka	South Asia	Lower-middle-income
<b>1999</b>			
Population, mid-year (millions)	19.0	1,329	2,094
GNP per capita (Atlas method, US\$)	820	440	1,200
GNP (Atlas method, US\$ billions)	15.6	581	2,513
<b>Average annual growth, 1993-99</b>			
Population (%)	1.3	1.9	1.1
Labor force (%)	1.6	2.3	1.2
<b>Most recent estimate (latest year available, 1993-99)</b>			
Poverty (% of population below national poverty line)	25	..	..
Urban population (% of total population)	22	28	43
Life expectancy at birth (years)	73	62	69
Infant mortality (per 1,000 live births)	17	75	33
Child malnutrition (% of children under 5)	38	51	15
Access to improved water source (% of population)	64	77	86
Illiteracy (% of population age 15+)	11	46	16
Gross primary enrollment (% of school-age population)	109	100	114
Male	110	110	114
Female	108	90	116



## KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1979	1989	1998	1999	
GDP (US\$ billions)	3.4	7.0	15.4	16.0	
Gross domestic investment/GDP	25.8	21.7	25.1	27.1	
Exports of goods and services/GDP	33.7	27.3	36.2	35.3	
Gross domestic savings/GDP	13.8	12.2	19.1	19.8	
Gross national savings/GDP	..	14.6	23.8	23.9	
Current account balance/GDP	-6.7	-5.9	-1.5	-3.1	
Interest payments/GDP	0.8	1.6	0.8	1.0	
Total debt/GDP	46.2	74.1	55.4	54.7	
Total debt service/exports	12.9	18.6	6.5	10.0	
Present value of debt/GDP	..	..	..	..	
Present value of debt/exports	..	..	..	..	
	1979-89	1989-99	1998	1999	1999-03
(average annual growth)					
GDP	5.0	5.3	4.7	4.3	5.5
GNP per capita	3.4	4.0	3.4	2.4	3.6
Exports of goods and services	5.5	7.4	1.0	4.0	4.7





## Executive Summary

### Overview

Economic development has brought about the decline in contribution of the agricultural sector to the economy of Sri Lanka. As with many other lower middle-income countries, Sri Lanka has seen the agricultural sector's (including livestock and fisheries) share in gross domestic product (GDP) decline – from about 28% in the early 1980s to about 20% in 2000, when average per capita income reached \$860. The trend has gone so far that agriculture's proportional contribution to Sri Lanka's GDP is now the second lowest in South Asia, ahead only of the Maldives (16%). Even in rural households, moreover, 1999-2000 estimates show average income derived from non-farm activities to be more than twice as high (56%) as earnings from all farming activities and casual agricultural wage labor combined (23%).

Consistent with the economic transformation, the structure of employment in Sri Lanka also changed. The expected migration of agricultural labor towards the industrial and service sectors continues. An analysis of employment trends in Sri Lanka shows that employment outside agriculture – in industry, services, and other categories – grew at an average rate of 4.2% per year during 1990 to 2000. By contrast, employment in the agricultural sector grew negligibly, at an average rate of 0.3 % per year during the same period.

Formulating and implementing a rural development strategy that builds on synergies in the agricultural and non-farm sectors is a critical step toward enabling Sri Lanka to achieve rapid economic development and poverty reduction in the fastest possible time. Along with higher productivity and greater competitiveness in agriculture, there is a need to reevaluate government priorities so as to boost the growth of the agricultural and rural non-farm sectors, targeting the rural areas where about 80% of Sri Lanka's population continues to live. Higher incomes in those areas will strengthen the rural consumer demand that carries the potential to stimulate growth in other economic sectors. Realizing that potential, however, depends on a careful review and reformulation of government priorities, first of all to enable even more rapid growth of the industrial and services sectors, from which rural households are increasingly deriving their incomes. Simultaneously, existing policy and regulatory shackles on the agricultural sector need to be removed so that those who choose to remain in agriculture can raise their productivity and, as they maximize the returns from their endeavors, speed the pace of overall economic growth.

As labor migrates away from agriculture, the productivity of those who remain on the land needs to increase significantly. In actuality, as the percentage share of labor employed in agriculture decreased from 47% of total employment in 1990 to 36% in 1999, agricultural productivity per worker stagnated at around Rs 53,000 (in constant 1996 rupees) over the last decade. Such a low level of performance puts rural Sri Lanka on a collision course with demographic projections that foresee the need for agriculture to absorb over a quarter million new workers by 2010. The projections assume a stable 1.2% population growth rate over the current decade and non-agricultural economic growth steady at 4.2%. With 2.8 million new entrants expected to join the workforce by 2010, agricultural sector employment will have to grow by about 1.4% per year -- more than four times current rates – to produce the needed jobs and ease anticipated employment pressures in the whole economy. Any shortfall would have serious poverty and welfare implications.

Broad government interventions in agricultural commodity and factor markets, however, curb productivity growth in agriculture. Although trade, marketing, agricultural technology, land and water policies theoretically seek to protect the interest of the farming population, their unintended outcome has been to bind a large class of agricultural households into low productivity and low value activities (e.g. paddy production). More importantly, the policies have unintentionally

squeezed the returns from agricultural production, limited productivity- and income-enhancing investments, held back diversification to higher value activities, and “pushed” many out of agriculture, in many cases into low-paying, insecure, casual non-agricultural wage labor. Land policy interventions have also helped tie a large cadre of part-time farmers to their land. Due to decreasing returns from agricultural activities, about 50% of the poorest agricultural households are engaged in non-farm activities in order to adequately meet household consumption needs.

Increases in agricultural productivity would make an important contribution to rural poverty reduction. Gunewardena (2000) finds that over the decade 1985 to 1995/96, agricultural households accounted for about 40% of the poor in Sri Lanka. Recent estimates, using the Sri Lanka Integrated Survey (SLIS) 1999-2000, indicate that agricultural households (excluding the estate sector) comprise almost half of the poorest of rural households (bottom 40% of the rural expenditure quintile).<sup>1</sup> More importantly, rural poverty rates are highest in provinces with the highest proportions of agricultural households.

This policy note examines the constraints to promoting more rapid agricultural and rural non-farm sector growth in Sri Lanka. It aims to: (i) review the recent performance of the agricultural and rural non-farm sectors, with particular focus on the non-plantation agricultural sector;<sup>2</sup> (ii) scrutinize the major policy and regulatory impediments that hinder more rapid and sustained growth in rural areas; and (iii) propose options for improvement in the key areas. The next chapter describes the changing role that agriculture plays in the rural economy and briefly reviews the agro-industrial sector’s recent performance. Chapter 3 examines the changing policy environment in agriculture and existing constraints to more rapid growth in the sector. Chapter 4 examines the policy environment in the rural non-farm sector, access to infrastructure and services in rural areas, and identifies some key constraints to more rapid growth. Finally, Chapter 5 presents policy options for removing these key constraints. A second volume provides additional notes on selected issues and statistical tables on the agricultural and rural non-farm sectors in Sri Lanka. It contains short notes on recent developments in the plantation sector (Annex A); key features of draft water policy (Annex B); a comparison of deeds and title registrations systems (Annex C); lessons from international experience in implementing seed and phytosanitary policy reform (Annex D); land reform and land administration policy reform (Annex E); and household level analysis of rural activities and incomes (Annex F).

### **Changing Role of Agriculture in the Economy**

Along with the diminishing importance of agriculture, an internal change has made “other” commodities more important within the sector than its “traditional” mainstays -- paddy and plantation crops (tea, rubber and coconut). The paddy sector’s share in agricultural GDP, for instance, declined from 28% in 1982-85 to 22% in 1996-2000. Tea dwindled from 16% to 11%, and coconut and rubber, from 17% to 15% (Figure 2.1). The aggregation of “other commodities” now accounts for the largest share, having risen from 44 to 62 percent of agriculture GDP. Notably, this “other” category posted the highest growth rate in the 1990s, about 4% per year. Consequently, its contribution to GDP has more than doubled in real terms from Rs 40 billion in 1982 to Rs 87 billion in 2000 (1996 rupees).

As the structure of the economy has changed, the share of income that rural households derive from agriculture has declined. Although about eight Sri Lankans in ten continue to live in rural areas, less than a quarter of their earnings comes from agriculture. According to the findings of the 1999-2000 Sri Lanka Integrated Survey (SLIS), income from crop cultivation, livestock activities and casual agricultural wage labor accounted on average for only about 23% of total rural household

<sup>1</sup> Agricultural households are those who are involved in farm production, raising livestock or casual agricultural wage labor.

<sup>2</sup> Referred to only as agricultural sector hereafter.

income. At 56% of the total, rural non-farm income amounted to more than twice household income from agricultural activities.<sup>3</sup>

Although agriculture's economic importance has declined considerably, a large percentage of rural households – higher among the poorer -- remain heavily dependent on income from agricultural activities. An analysis of the SLIS 1999-2000 showed that, in the country as whole, about 45% of rural households – and about half of those in the bottom 40% of the expenditure quintiles – were agricultural households. Agricultural households are those who are engaged in crop cultivation, livestock raising and/or casual agricultural wage employment. Across all quintiles, agricultural activities accounted for about half of total agricultural household incomes. Income from agriculture was critical in some provinces, particularly in the North Eastern (67%), Sabaragamuwa (60%), Uva (59%), Southern (48%), and Central (47%) provinces. Agricultural households comprise 76% of rural households in Uva, 53% in North Eastern, 83% in North Central, and 50% in Sabaragamuwa. These provinces also have some of Sri Lanka's highest rural poverty rates. Given the large proportion of poorer households dependent on agriculture, and the large contribution farming activities make to their aggregate income, the removal of obstacles to raising agricultural productivity and incomes can also be an important contributor to poverty reduction, as a complement to increasing job opportunities in manufacturing and services.

### **Recent Performance of Major Agricultural Commodity Sectors**

**Rice.** Sri Lanka's staple food, rice is cultivated all over the country. Rice output has grown quite slowly -- at an average rate of 0.3% per year in the 1980s and 1.5% per year in the 1990s. Increasing yields primarily drove the output increases, which in turn was facilitated by the adoption of locally developed improved varieties and the expansion of irrigated rice area.

**Other Field Crops.** The production of other major field crops followed a volatile and declining trend in the 1990s. During the 1980s to early 1990s, potato, maize, and chilli production increased significantly. Post 1996, however, the domestic production of these commodities began to decline as restrictions on imports were liberalized. A dramatic shift in area out of these crops primarily contributed to the production decline.

**Fruits, Vegetable and Spices.** Diversification to higher value crops such as fruits, vegetables and spices is emerging. But on average, higher value crops still account for a minor share of household gross cropped area. Rice and cereals (including maize and lentils) generally account, on average for more than two thirds of household gross cropped area. The pace of diversification to higher value crops varied considerably across provinces. The average percentage share of area devoted to fruit, vegetable and condiment production was highest in Uva (34%) and Southern province (24%). In the North Eastern and North Central provinces, on the other hand, cropping patterns are highly dominated by cereals; cereal cropped area on average accounts for over 80% of gross cropped area. As cropped area in both these provinces is largely irrigated, there could be considerable potential for diversifying to higher value crops. The growth in fruit, vegetable, cut-flower and foliage production in recent years has been spurred by rising domestic and export demand. Rising domestic per capita incomes along with the needs of the expanding tourism industry are driving forces behind the diversification of local consumption. An increasing share of production is also going for exports. Two spice crops in particular--pepper and cinnamon--showed rapid expansion in response to high export demand.

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<sup>3</sup> *Non-farm income* includes income from casual wage employment, salary income, income from business/trade/manufacturing net of variable costs, and income from the sale of food/forest products/handicrafts etc. *Casual Ag wages* is income from casual wage employment in farm activities. *Casual Non-ag wages* is income from casual wage employment in non-farm activities. *Sale of farm products* is income earned from the sale of food/snacks prepared by the households as well as income from the sale of forest products and handicrafts.

For a large number of agricultural commodities, Sri Lankan yields are considerably lower than those of other South and East Asian countries. In the case of maize, for example, a commodity for which domestic demand is rapidly increasing due to a rapidly growing livestock industry, the average maize yield in Sri Lanka is about one-third that of neighboring Karnataka, India and of Thailand and one quarter that of China. While there appears to be considerable potential for further yield increases for various crops in Sri Lanka, highly restrictive phyto-sanitary regulations, unclear seed industry regulations, and lack of intellectual property rights legislation have deterred the entry of improved varieties into the country.

**Livestock.** Among the various livestock subsectors, the poultry industry grew fastest. During the 1990s, poultry meat output increased by about 10.5% per year, reaching 58,117 mt in 2000. While milk output grew by 2.1% per year to reach 26.8 million li in 2000, egg, pork and beef output showed very little change. The rapid growth in milk and poultry meat is largely due to rising per capita income and the inevitable shift in consumer demand towards higher value food products. This growth in local demand has also had an upstream impact on the agricultural sector: raising local demand for feed ingredients (e.g. maize) to meet the requirements of an expanding livestock population.

The proportion of rural and agricultural households owning livestock increases at higher expenditure quintiles and in Sri Lanka's north. Only about 6% of the poorest rural households own livestock in contrast to about 12% of households in the third to richest quintiles, a relationship basically duplicated in agricultural households. In the Northeastern and North Central province, a large share of households own cattle and poultry, whereas, in the Northwestern and Uva provinces, a larger proportion of households own cattle, but fewer than 5% of households owned other types of animals. In the other provinces, less than 10% of households owned livestock.

#### **Rural Non-Farm Sector and Rural Households**

The non-farm sector is increasing in importance to rural households as a source of income – on average about 56% of the total by 1999-2000. An analysis of the composition of rural non-farm incomes reveals, however, that the more income-vulnerable households (bottom 40% in rural expenditure quintiles) depend in the main on lower-paying and distinctly less secure, casual, non-agricultural wage labor. Given Sri Lanka's large reservoir of well-educated rural citizens, more rapid industrial and services sectors' growth is a critical means of enabling more rural workers to graduate to better paying salaried jobs and, in the process, to contribute importantly to rural poverty reduction.

The industrial sector has been an important engine for growth for Sri Lanka, especially in the 1990s, with food, beverage and tobacco responsible for almost a third of sector value added by the end of the decade. Private sector output in the food and beverage subsectors was one of the fastest growing during the second half of the 1990s. Private sector output in food and beverage grew by over 7% per year during this period, with firms operating at around 90% of capacity. The most recent estimates (1997) also indicate that the FBT subsector accounts for the largest number of enterprises and labor employed: 53% of total enterprises and 66% of employment among firms that employ 5 people or more

#### **Agricultural Sector: Policy Environment and Constraints to Growth**

Since 1996, the Government of Sri Lanka adopted several policy measures aimed at hastening agricultural growth (Table 1). Intended to assist the agricultural sector to shift from low-value to high-value production, the measures also aimed at improving productivity and international competitiveness so as to put the sector on a higher growth trajectory. A national water policy was drafted 2000, and the national seed policy was approved in 1996. Their implementation, however, has stalled. The government has taken several steps forward in liberalizing the functioning of land markets, which culminated in 2002 in granting farmers who received land from the government

under the Land Development Ordinance (1935) full ownership rights to land. Previously the sale, leasing, transfer and mortgaging of these lands were restricted. Between 1996 and January 2002, the government privatized some seed farms, introduced several subsidized credit programs, piloted forward contracts to promote investments in the agricultural sector. The anticipated large-scale supply and agricultural growth response, however, have been slow to materialize.

Table 1. Summary of Government Actions Taken, 1996-2002

Sector	Action Taken 1996-2002
Seed and planting material	<ul style="list-style-type: none"> <li>• National Seed Policy approved in 1996, National Seed Act and regulations pending</li> <li>• National Seed and Planting Materials Committee set up in 1996</li> <li>• Government seed farms-Hingurakgoda and Pelwehera—privatized.</li> <li>• Plant Protection Act (1924) amended in 2000, revised regulations pending</li> </ul>
Land	<ul style="list-style-type: none"> <li>• Registration of Title Act 1998 to provide unencumbered and clear title to every parcel of land</li> <li>• Budget speech 2002: Restrictions on the sale, lease and transfer of land to be removed</li> <li>• Agrarian Services Development Act No 46 2000: allows cultivation of paddy land with other crops subject to approval of Commissioner of Agrarian Services</li> </ul>
Irrigation	<ul style="list-style-type: none"> <li>• Draft National Water Policy formulated in 2000</li> <li>• Interim National Water Resources Authority created</li> <li>• Ongoing transformation of MASL into a river basin management authority</li> </ul>
Fertilizer	<ul style="list-style-type: none"> <li>• Fertilizer subsidy revised in 1997 to apply only to urea</li> <li>• Budget Speech 2002: Farm input support scheme provides farmers a cash coupon that could be used to purchase fertilizer, seeds, planting materials or farm implements at subsidized rates upto the value of the coupon (Rs 2 billion)</li> </ul>
Trade	<ul style="list-style-type: none"> <li>• Import licenses applied to rice in 1996 and 2000</li> <li>• Budget speech 2002: <ul style="list-style-type: none"> <li>o Specific duties and import licenses on agricultural goods (rice, chillies, onions, potatoes, and edible oil) removed and duty raised to 60%;</li> <li>o Surcharges on imports reduced from 40% to 20%; import duties on selected raw materials reduced to Indo-Sri-Lanka Free Trade Agreement Levels from April 15,2002.</li> <li>o Stamp duty on imports converted to Port and Airport Development Levy equal to 1% of declared cif value of imported cargo, from May 1, 2002.</li> </ul> </li> <li>• Reduction of customs duty on maize for feed to assist livestock sector</li> </ul>
Domestic marketing	<ul style="list-style-type: none"> <li>• Paddy Marketing Board closed in 1996, price support operations taken up by CWE and multi-purpose cooperative societies</li> <li>• CWE to be split into 5 companies in 2002, operations expanded to other products</li> <li>• Piloting of forward contracts</li> <li>• Budget Speech 2002: Wheat subsidy to be removed; development of marketing centers for handicrafts and other agricultural products</li> </ul>
Research and Extension	<ul style="list-style-type: none"> <li>• Fee based extension introduced by Department of Agriculture in 1999</li> </ul>
Credit	<ul style="list-style-type: none"> <li>• Concessionary credit schemes introduced</li> <li>• Budget speech 2002: <ul style="list-style-type: none"> <li>o Rural Economy Resuscitation Fund to develop small and medium scale economic and social infrastructure facilities in rural areas (Rs10 million);</li> <li>o Capital Goods Entitlement Credit Scheme to provide assets to marginalized persons (Rs80 million);</li> <li>o Seed capital for infrastructure and technical support (Rs30 million)</li> </ul> </li> </ul>
Incentives for commercial private sector	<ul style="list-style-type: none"> <li>• Agrarian Services Act changed to Agricultural and Agrarian Services Act in 1999, eliminates monopoly of Agricultural Insurance Board and allows private companies to offer crop insurance</li> <li>• Budget speech 2002: <ul style="list-style-type: none"> <li>o Industrial Disputes Act and Termination of Employment Act to be amended to establish enforceable time limits on hearing and decision of labor disputes and specification of schedule for compensation for terminated staff</li> <li>o Introduction of VAT in place of Goods and Services Tax and National Security Levy, Lower (10% )VAT applied to essential food stuffs, fertilizer, agricultural and fishing equipment.</li> <li>o Investments in agriculture, food processing and non-traditional exports in excess of Rs500 million are exempted from paying income tax for the first 3 yrs, 10% tax in 4th and 5th year, and 20% thereafter.</li> </ul> </li> </ul>

Source: National Development Council, 1996, "Agricultural Policy Recommendations," Report of the National Development Council Working Group, Volume 1, Colombo, Sri Lanka.; Weliwita and Epaarachchi 2002, Budget Speech 2002, Central Bank Annual Report, various issues.

A number of other existing government policies, however, undermined progress toward the government's goals. Among the hindrances are unpredictable trade policies; highly restrictive quarantine regulations; delays in passing key seed and phyto-sanitary regulations, which limit technology access; commodity price interventions; restrictive land policies; and poorly functioning

water delivery systems. The combined effect of these measures was the creation of a complex and multi-dimensional maze of obstacles, as illustrated in Figure 1, which ultimately dampened agricultural productivity growth, hindered diversification and reduced opportunities for raising agricultural and rural incomes. Further, they contributed to raising operating costs, reducing agricultural profitability, increasing price and market risks, diminishing competitiveness; and – overall -- discouraging productivity-enhancing investments and private-sector participation. A continuing emphasis on input subsidies with limited short-term impact (e.g. fertilizer, water, seeds) also diverted scarce public resources away from critical productivity- and efficiency-enhancing investments (rural roads, electricity, markets, research and extension) that could have had a more lasting impact on growth. Even where limited investments have been made in some sectors (e.g. irrigation, roads, research and extension), inadequate emphasis and funding for operations and maintenance has sapped their potential.

The absence of an explicit long-term strategy for agriculture, consistent with overall and rural development goals, also contributes to the multiplicity and relatively weak performance of various government programs. The changing character and composition of the agricultural sector and the overall economy and the multitude of challenges and opportunities arising from increased globalization and international competition will require new and innovative approaches to achieving sustainable and poverty-reducing agricultural growth and rural development. The Agriculture Ministry—the lead agency providing resources and guidance to the sector— however, lacks a well-articulated strategy and set of policies at the national level. While the Ministry has formulated an Agricultural Policy and National Agricultural Development Plans, the development approaches and the strategies underlying these plans reflected a “top-down,” supply-driven planning process.

A new National Agricultural Strategy and policy framework, consistent with the country’s rural development strategy, is therefore urgently needed to outline priorities and an action plan. The Ministry of Agriculture recognizes the need for such a policy and has committed to prepare one. A critical challenge in formulating an integrated, holistic strategy is the multiplicity of agencies involved in agriculture. Despite the reorganization of the government in early 2002, there are about 19 central government ministries<sup>4</sup> directly or indirectly involved in the agricultural sector in addition to provincial councils to whom many responsibilities have been devolved. For example, while the agriculture research system is the responsibility of the Central Government, the agricultural extension system falls under the purview of Provincial Councils, an arrangement that severely weakens the linkage between the research and extension systems, making both almost dysfunctional.

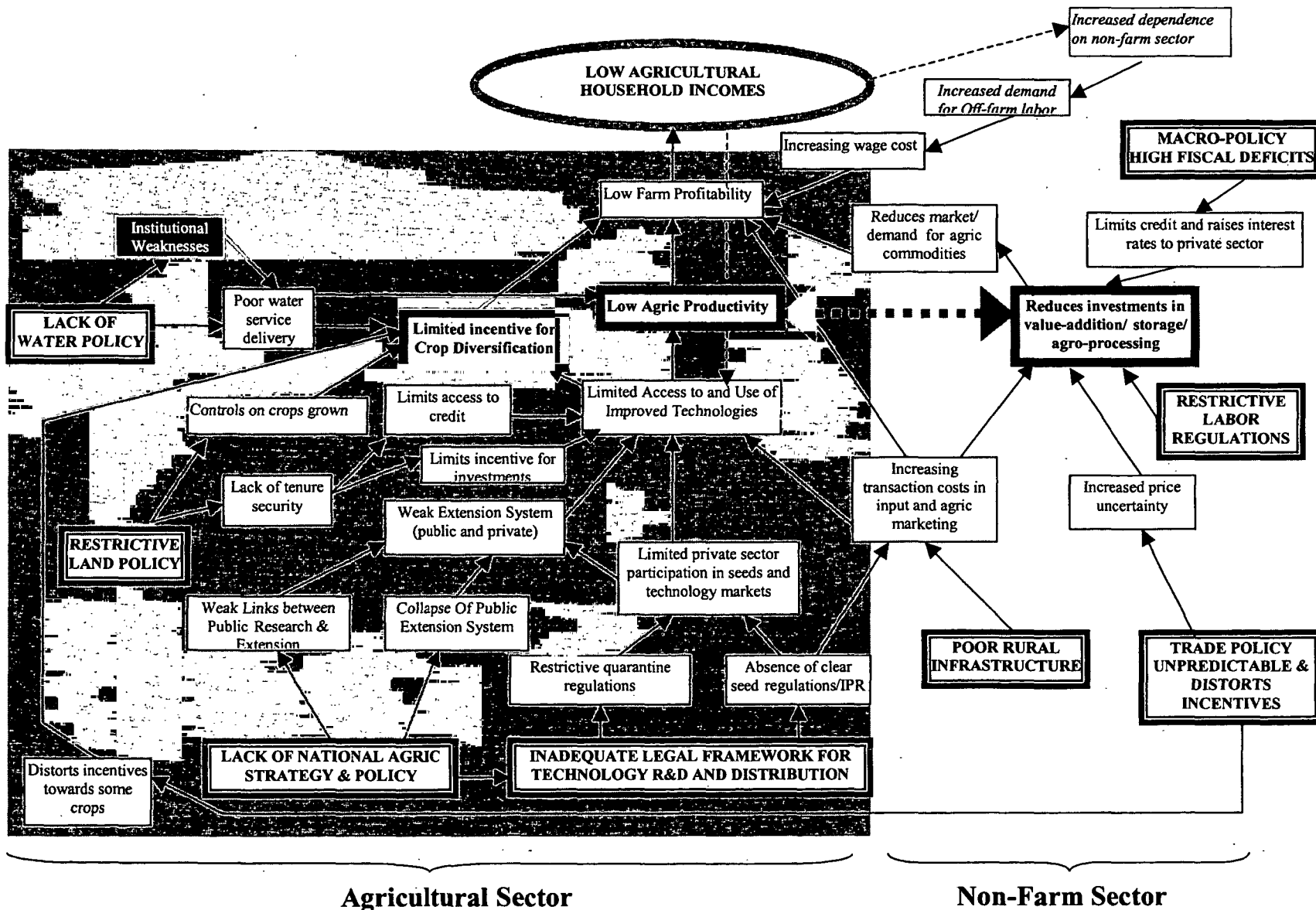
**Household Constraints to Agricultural Diversification.** Agricultural households identified several constraints to diversification. Analysis of the SLIS 1999-2000 data shows that more than two-thirds of households involved in crop production believe that diversifying their production and growing a second crop could increase their income. Among the poorest households (bottom 20%), in fact, about 74% see such potential to increase incomes, compared to 64% for the richest households (top 20%). The most frequently cited constraints, however, are access to credit, water, appropriate inputs and technical assistance and roads, and these problems are most acute for the poorest households. Some of the obstacles are closely linked. For example, the lack of working capital limits a household’s ability to obtain purchased inputs or to pay for technical advice.

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<sup>4</sup> These include the Ministry of Agriculture and Livestock; Policy Development and Implementation; Fisheries and Ocean Resources; Irrigation; Water Management; Irrigation and Water Management; Environment and Natural Resources; Rural Economy; Cooperatives; Smallholder Development; Land; Commerce and Consumer Affairs; Economic Reform, Science and Technology; Home Affairs, Local Government and Provincial Councils; Southern Region Development; Central Region Development; Western Region Development; North West Region Development; and Plantation Industries.



Figure 1: Constraints to Raising Agricultural Productivity and Farm Incomes in Sri Lanka



The prevalence of constraints faced by households varies across provinces. Uva had the largest share of households reporting multiple constraints, including access to credit, water, inputs, technical assistance, markets and roads, relative to the other provinces. More than two-thirds of households involved in crop cultivation in the Central, North Central, North Western and Sabaragamuwa provinces appreciate the potential of crop diversification in increasing income. Problems with access to credit, water, technical assistance and inputs are the most frequently cited.

### **Rural Non-Farm Sector: Policy Environment and Constraints to Growth**

Successive governments have attempted to promote agribusiness development and agricultural exports through a number of market-development and incentive schemes. These include investment incentive schemes, which provide special privileges (duty free imports, exemptions from income tax, customs duty and foreign exchange controls) offered by the Board of Investments and concessionary credit schemes provided the government for rural enterprise development. These, however, have distorted incentives in the sector (favoring some industries and investors over others), have resulted in considerable losses in government tax revenues, and its implementation created opportunities for rent-seeking and corruption.

Macro and trade policies, labor rules, government's role in marketing and other practices, however, hinder more rapid growth of the rural non-farm sector. Some of the more severe impediments include macro-policy that raises the cost of capital locally, unpredictable trade policies that increase price uncertainty and thus eventual return on investments, highly restrictive labor regulations, government parastatal involvement marketing and distribution (i.e. Cooperative Wholesale Establishment), disorganized production and marketing systems which make regular sourcing of local commodities of standard quantity and quality difficult, and inadequacies in rural infrastructure and services. By impeding more rapid agricultural sector growth, these factors also contribute to slowing rural non-farm sector growth (Figure 1).

### **Policy Options for Promoting Agricultural and Rural Non-Farm Sector Growth**

To meet the rapidly changing demands of both its rural and overall economy in the 21st-century, Sri Lanka needs a renewed rural development strategy. Experience in other East Asian countries (e.g. Taiwan and South Korea) with natural endowments similar to Sri Lanka's has shown that economic development and increasing industrialization eventually revise and diminish the role of the agricultural sector. For Sri Lanka, as a lower middle-income economy, the transition from an agricultural to an industrial economy is especially challenging and complex. Although rural households in general are already less dependent on agriculture for their livelihoods, households involved in cultivation or raising livestock still comprise a large share of rural households and of the rural poor. Many such agricultural households, moreover, remain tied to low-value and low-productivity activities. Fostering more rapid growth in the rural economy--both in the agricultural and non-farm sectors -- requires a policy framework and package of investments that balance the interests of both sectors rather than one at the expense of the other. At the same time, it would be critical to ensure that more broad-based development could be achieved, expanding beyond the Western Province to all regions.

Formulating and implementing a rural development strategy that builds on synergies in the agricultural and non-farm sectors is a critical step toward enabling Sri Lanka to achieve rapid economic development and poverty reduction in the fastest possible time. Such an integrated rural development framework is critical because measures to promote more rapid growth and increased productivity in the agricultural sector can complement those that would also sustain growth in the non-farm sector. Global experience shows that because of strong forward and backward linkages, the development of the agricultural and non-farm sectors are highly interdependent. Developing a rural development strategy and putting it into practice, however, would be a challenging task due to the large number of Central Ministries and provincial governments that would need to be involved.

The GoSL's program to formulate a Poverty Reduction Strategy would be a critical vehicle for completing such a task.

A redefinition of the appropriate roles for the public and private sectors must be an integral component of this new overall strategy. Clearly the role of the government is to provide the enabling policy and regulatory environment for private sector participation and to withdraw from activities that could be efficiently and effectively performed by the private sector. In the short to medium term, reforms would need to focus on two major areas: (i) fostering the appropriate policy and regulatory environment and moving institutional reform of public institutions to encourage increased private sector participation and investments and permit factor mobility, so as to maximize their contribution to the economy and (ii) strengthening rural infrastructure and services, with increased emphasis on operation and maintenance of physical assets to ensure their longer term performance.

### **Creating the Enabling Environment for Agricultural and Non-Farm Growth**

Improving the policy and regulatory environment in the agricultural sector would require the formulation of a new agricultural strategy, integral components of which would be the adoption of policies to ease access to improved technologies and create a more transparent and stable trade policy regime. It would also require allowing full and transferable ownership rights to land, and ensuring the sustainable use of water. These would be key to promoting increased productivity and incomes. Critical to promoting growth in the non-farm sector (and indirectly to the agricultural sector) would be adopting policies to speed up currently lagging private sector participation and investments in the sector. This includes rationalizing currently restrictive labor regulation and phasing out government involvement in activities that could be efficiently performed by the private sector (e.g. retail distribution, marketing).

#### **A. Enhancing Agricultural Productivity Growth**

##### **(1) National Agriculture Strategy and Policy**

###### Short Term

- Undertake a comprehensive assessment of the structure, funding, and performance of the public agricultural research and extension systems

###### Short to Medium Term

- Formulate and adopt an updated National Agricultural Strategy and Policy consistent with the National Rural Development Strategy that will outline priorities and programs in the agricultural sector and better define the relative roles of the public and private sector in the agricultural development. It will also serve as the basis for reorienting the roles, organizational structure, funding and staffing of public agricultural research and extension systems to be in line with new developments and priorities and meet the changing needs of an agricultural sector in a middle income economy.
- Strengthen the rural and agricultural database ( e.g. land use statistics; area, production, yield; agricultural prices, market infrastructure, rural enterprises, etc)

##### **(a) Technology Policy**

###### Short Term

- Streamline, modernize and update quarantine policies and regulations while protecting local diversity; conduct awareness programs to publicize new regulations
- Finalize and implement seed marketing procedures and regulations as per the National Seed Act, conduct awareness programs
- Privatize remaining government seed farms, enter into contracting arrangements with private sector for production of required seeds, if needed

###### Short to Medium Term

- Adopt Plant Variety Protection Legislation

- Strengthen technical capacity of National Plant Quarantine Service

### **(b) Agricultural Trade Policy**

#### Short Term

- Commit to stable tariff policy
- Remove licensing requirements for commodity imports

#### Short to Medium Term

- Announce and commit to phased reduction of tariffs on major commodities (paddy, potatoes, chillies, onions, etc). These reforms should be accompanied by complementary reforms to increase farmer access to improved technologies and the efficiency of commodity and input markets to minimize the adjustments costs for farmers.

### **(2) Land Reform and Land Administration Policies**

#### Short Term

- Undertake a nationwide awareness and communications campaign on the recently adopted land policy reform which will transfer full ownership rights to LDO beneficiaries to ensure broad-based understanding of its implications on farmer's property rights
- Eliminate requirement to obtain Commissioner of Agrarian Services's permission to plant other crops on designated paddy lands.
- Remove restrictions on farm sizes requiring amendments to the relevant legislation

#### Short to Medium Term

- Scale up program to strengthen land administration capacity to shift from deed to title registration systems to reduce transaction cost of land transfers
- Establish legal, regulatory, and procedural framework for efficient, effective and sustainable land titling and title registration
- Complete restructuring and streamlining of land administration agencies to promote efficiency, transparency, coordination and cost effectiveness
- Develop a common information technology strategy including data management for all of the agencies dealing with land in order to make information on land tenure, land use, and land capability transparent and accessible on a sustainable basis

### **(3) Water Policy**

#### Short Term

- Undertake extensive nationwide discussion on and build consensus for the National Water Policy, particularly issues relating to cost recovery and water entitlements, bringing into the debate international experience on water policy reform, particularly farmer participation in irrigation management, cost recovery of O&M linked to improved quality of service, river basin approach to water resource management, etc.
- Increase priority in budget allocation to operations and maintenance of current systems

#### Short to Medium Term

- Implement National Water Policy and reorient and restructure existing multiple water agencies to be consistent with the Water Policy

## **B. Strengthening Non-Farm Sector Growth**

### **(1) Labor Policy**

#### Short Term

- Finalize and adopt amendments to restrictive provisions of the labor laws as announced in the 2002 Budget speech (e.g. TEWA)
- Undertake a communications campaign to inform private sector (domestic and foreign) on reform of labor laws

Short to Medium Term

- Review labor laws to determine additional required amendments to eliminate disincentives to investments

**(2) Commodity Marketing Policy**Short Term

- Cease addition of new commodities/services to CWE retail and distribution activities
- Draw lessons from forward contracting programs and integrate into plans for expansion

Short to Medium Term

- Shift from subcontracting retail operations of CWE to full privatization.
- Eliminate PRIMA monopoly in wheat milling

**(3) Incentives for Commercial Private Sector**Short Term

- Refocus BOI towards attracting and supporting all investors
- Undertake a review of all incentive and subsidy schemes in agricultural and non-farm sector
- Cease debt forgiveness of farmer agricultural loans, examine options for alternative schemes for risk management (e.g. crop insurance, futures markets)

Short to Medium Term

- Phase out the tax holidays and concessionary credit schemes over the next 5 years
- Target fertilizer subsidies to poor households, phase out over the next 5 years
- Strengthen existing competition policy
- Introduce appropriate bankruptcy legislation that will allow firms to exit market quickly and at lower cost

**(4) Rural Education**Short to Medium Term

- Improve availability and quality of education in rural areas

**II. Strengthening Rural Infrastructure**

There is an urgent need to improve rural infrastructure beyond the Western Province. Improved access and quality of rural infrastructure would contribute not only to raising the quality of rural life, but also to the successful implementation of government development plans for the modernization of agriculture and improving the investment climate for rural industries and services. Participatory planning and implementation of rural infrastructure projects, which involves government and targetted users, would be valuable to ensure the appropriateness of investments undertaken.

Short Term

- Increase priority in budget allocation to operations and maintenance of existing infrastructure

Short to Medium Term

- Increase investments in rural roads, markets, electricity in provinces beyond the Western Province



# Promoting Agricultural and Rural Non-farm Sector Growth in Sri Lanka

## I. Introduction

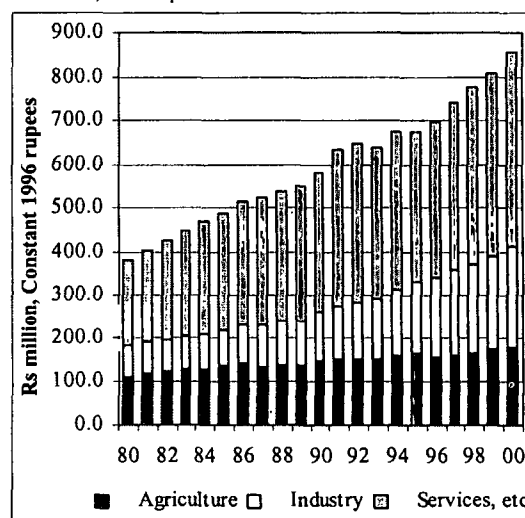
### A. Overview

As Sri Lanka's economy has grown, agriculture's part in it has shrunk. As with many other lower middle-income countries, Sri Lanka has seen the agricultural sector's (including livestock and fisheries) share in gross domestic product (GDP) decline – from about 28% in the early 1980s to about 20% in 2000, when average per capita income reached \$860. The trend has gone so far that agriculture's proportional contribution to Sri Lanka's GDP is now the second lowest in South Asia, ahead only of the Maldives (16%). Even in rural households, moreover, 1999-2000 estimates show average income derived from non-farm activities to be more than twice as high (56%) as earnings from all farming activities and casual agricultural wage labor combined (23%).

Rapid growth in industry and services is not only changing the structure of Sri Lanka's economy, but is also drawing rural labor away from agriculture. Industrial GDP grew in real terms at an average annual rate of 8.2% during 1991-95, and 6.2% per year during 1996-2000, and service sector GDP in real terms grew by 6.0% per year during the first half of the 1990s, and 5.5% per year in the second half of the decade. As Figure 1.1 illustrates, however, agricultural (including livestock and fisheries) GDP in real terms grew at an average rate of 2.8% and 3% per year, during the same periods respectively. Overall economic performance, though, could have been stronger. Both the 20-year-long civil conflict and continued extensive government involvement in many sectors, including agriculture, have hampered growth, limiting the scope for private sector involvement, while allowing public enterprises to remain a major burden on the budget and the economy. With private sector potential for generating employment and income growth below potential, particularly in rural areas, where poverty is a major concern, the dynamism of industry and services created a significant "demand pull" for rural labor. An analysis of employment trends in Sri Lanka shows that employment outside agriculture – in industry, services, and other categories – grew at an average rate of 4.2% per year during 1990 to 2000. By contrast, employment in the agricultural sector grew negligibly, at an average rate of 0.3 % per year during the same period.

To reduce poverty through stronger overall economic growth, it is critical for Sri Lanka to accelerate rural development. Along with higher productivity and greater competitiveness in agriculture, there is a need to reevaluate government priorities so as to boost the growth of the agricultural and rural non-farm sectors, targeting the rural areas where about 80% of Sri Lanka's population continues to live. Higher incomes in those areas will strengthen the rural consumer

Figure 1.1 Sectoral contributions to GDP, 1980-2000, Rs million, 1996 rupees



Source: Central Bank of Sri Lanka

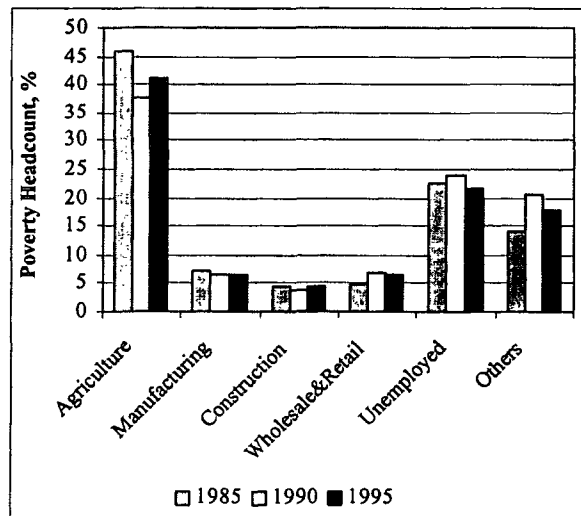
demand that carries the potential to stimulate growth in other economic sectors. Realizing that potential, however, depends on a careful review and reformulation of government priorities, first of all to enable even more rapid growth of the industrial and services sectors, from which rural households are increasingly deriving their incomes. Simultaneously, existing policy and regulatory shackles on the agricultural sector need to be removed so that those who choose to remain in agriculture can raise their productivity and, as they maximize the returns from their endeavors, speed the pace of overall economic growth.

As labor migrates away from agriculture, the productivity of those who remain on the land needs to increase significantly. In actuality, as the percentage share of labor employed in agriculture decreased from 47% of total employment in 1990 to 36% in 1999, agricultural productivity per worker stagnated. Agricultural value added per worker hovered around Rs 53,000 (in constant 1996 rupees) over the last decade. Such a low level of performance puts rural Sri Lanka on a collision course with demographic projections that foresee the need for agriculture to absorb over a quarter million new workers by 2010. The projections assume a stable 1.2% population growth rate over the current decade and non-agricultural economic growth steady at 4.2%. With 2.8 million new entrants expected to join the workforce by 2010, agricultural sector employment will have to grow by about 1.4% per year -- more than four times current rates -- to produce the needed jobs and ease anticipated employment pressures in the whole economy. Any shortfall would have serious poverty and welfare implications.

Broad government interventions in agricultural commodity and factor markets, however, curb productivity growth in agriculture. Although trade, marketing, agricultural technology, land and water policies theoretically seek to protect the interest of the farming population, their unintended outcome has been to bind a large class of agricultural households into low productivity and low value activities (e.g. paddy production). More importantly, the policies have unintentionally squeezed the returns from agricultural production, limited productivity- and income-enhancing investments, held back diversification to higher value activities, and "pushed" many out of agriculture, in many cases into low-paying, insecure, casual non-agricultural wage labor. Land policy interventions have also helped tie a large cadre of part-time farmers to their land. Due to decreasing returns from agricultural activities, about 50% of the poorest agricultural households are engaged in non-farm activities in order to adequately meet household consumption needs.

Increases in agricultural productivity would make an important contribution to rural poverty reduction. Although rural poverty rates, using the headcount index, have declined to 27% (4 million people) in 1995/96, the rural poor continue to account for the majority (about 90%) of the poor in the country (World Bank 2001). Among them are a large proportion who have consistently been dependent on agriculture for their livelihood. Gunewardena (2000) finds that over the decade 1985 to 1995/96, agricultural households accounted for about 40% of the poor in Sri Lanka (Figure 1.2). Recent estimates, using the

Figure 1.2: Contribution to Poverty by Industry of Household Head, 1985-1996



Note: Assumes poverty line of Rs791.67 per person per month. The relative shares do not significantly change, if a higher poverty line of Rs950 is adopted.

Source: Dileni Gunewardena, 2000.



Sri Lanka Integrated Survey (SLIS) 1999-2000, indicate that agricultural households (excluding the estate sector) comprise almost half of the poorest of rural households (bottom 40% of the rural expenditure quintile).<sup>1</sup> More importantly, rural poverty rates are highest in provinces with the highest proportions of agricultural households (Figure 1.3).

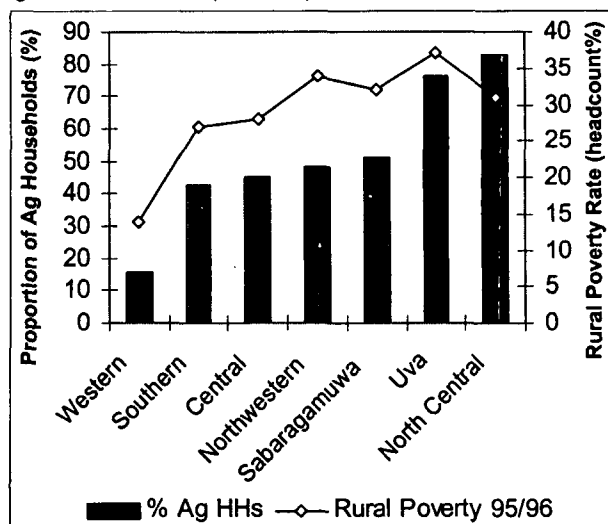
Since 1995/96, the GoSL has revised several policies and introduced new measures affecting the agricultural and rural non-farm sectors. It still has available a multitude of options to foster more rapid growth in both sectors and thereby boost employment and raise rural labor productivity in the short to medium term. An important gap, however, marks the knowledge and understanding of: (i) the nature and overall breadth of policy changes adopted, (ii) their impact on the government's rural development agenda and overall performance of the agricultural sector, and (iii) the remaining policy challenges. This policy note aims to help fill this gap.

### B. Objectives of the Study

This policy note examines the constraints to promoting more rapid agricultural and rural non-farm sector growth in Sri Lanka. It aims to: (i) review the recent performance of the agricultural and rural non-farm sectors, with particular focus on the non-plantation agricultural sector (hereafter referred to as the agricultural sector); (ii) scrutinize the major policy and regulatory impediments that hinder more rapid and sustained growth in rural areas; and (iii) propose options for improvement in the key areas. The next chapter describes the changing role that agriculture plays in the rural economy and briefly reviews the agro-industrial sector's recent performance. Chapter 3 examines the changing policy environment in agriculture and existing constraints to more rapid growth in the sector. Chapter 4 examines the policy environment in the rural non-farm sector, access to infrastructure and services in rural areas, and identifies some key constraints to more rapid growth. Finally, Chapter 5 presents policy options for removing these key constraints.

A second volume provides additional notes on selected issues and statistical tables on the agricultural and rural non-farm sectors in Sri Lanka. It contains short notes on recent developments in the plantation sector (Annex A); key features of the draft water policy (Annex B); a comparison of deeds and title registrations systems (Annex C); lessons from international experience in implementing seed and phytosanitary policy reform (Annex D); land reform and land administration policy reform (Annex E); and household level analysis of rural activities and incomes (Annex F).

Figure 1.3: Rural Poverty is Highest in Areas with Largest Proportion of Agricultural Households (1999-2000)



Source: SLIS 1999-2000 and Gunewardena 2000 for rural poverty rate estimates.

<sup>1</sup> Agricultural households are those who are involved in farm production, raising livestock or casual agricultural wage labor.



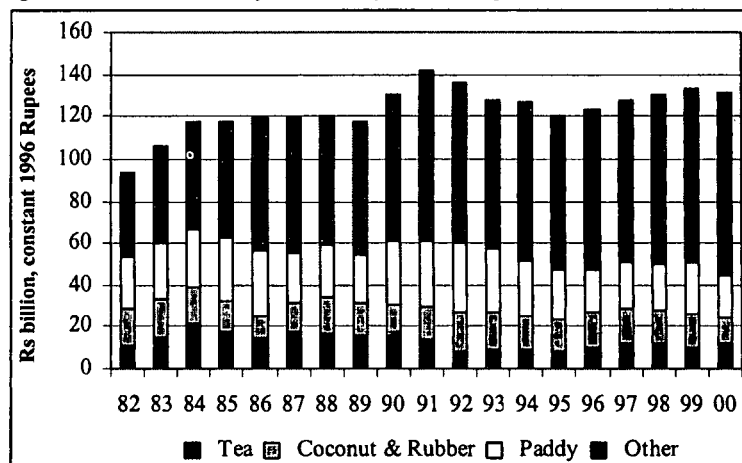
## II. Agriculture's Changing Role

### A. Agriculture and the Economy

#### Declining Contribution of Agriculture to GDP

As industrial and service sectors – growing at average yearly rates of 7.0% and 5.9%, respectively during the 1990s -- became the engines of Sri Lanka's economy, the combined share of agriculture, livestock and fisheries in total GDP declined to about 20% by 2000. (Figure 1.1). Their weak yearly growth rate of 1.9% for the decade translated into a post-1991 decline in the contribution agriculture alone made to GDP: Rs 142 billion in 1991 (in constant 1996 Rupees). Although the sector recovered from the harm done by the severe 1995/96 drought, agricultural GDP reached only Rs 131 billion in 2000 (1996 rupees). An average growth rate in agricultural GDP (excluding livestock and fisheries) that stood at about 3% per year in the 1980s shrank to about 0.4% per year in the 1990s. In the allied sectors of forestry and fisheries, only the latter gained ground over the last two decades, performance mostly due to having started from a very low base.

Figure 2.1: Contribution of Major Commodity Sectors to Agriculture GDP



Source: *Central Bank Annual Report*, various issues.

Along with the diminishing importance of agriculture, an internal change has made “other” commodities more important within the sector than its “traditional” mainstays -- paddy and plantation crops (tea, rubber and coconut). The paddy sector's share in agricultural GDP, for instance, declined from 28% in 1982-85 to 22% in 1996-2000. Tea dwindled from 16% to 11%, and coconut and rubber, from 17% to 15% (Figure 2.1). The aggregation of “other commodities” now accounts for the largest share, having risen from 44 to 62 percent of agriculture GDP. Notably, this “other” category posted the highest growth rate in the 1990s, about 4% per year. Consequently, its contribution to GDP has more than doubled in real terms from Rs 40 billion in 1982 to Rs 87 billion in 2000 (1996 rupees). This changing structure of agriculture has important implications in shaping the government's future development priorities as discussed in the next chapter.

#### Stagnation in Productivity of Agricultural Labor

Agriculture's share in employment has declined significantly, but increased labor productivity has not made up the gap. As rapidly growing industry and services drew rural labor out of agriculture, the share of labor employed directly in agriculture dropped from about 47% in 1990 to about 36% in 1999, when about 2.4 million people were directly employed in agriculture. (Figure 2.2). Agricultural labor productivity, measured by the agricultural value added per worker, stagnated during the last decade at around Rs 53,000 per worker (constant 1996 rupees). Among the households which count on agriculture for significant income, raising agricultural productivity could make an important contribution to reducing poverty in rural areas.

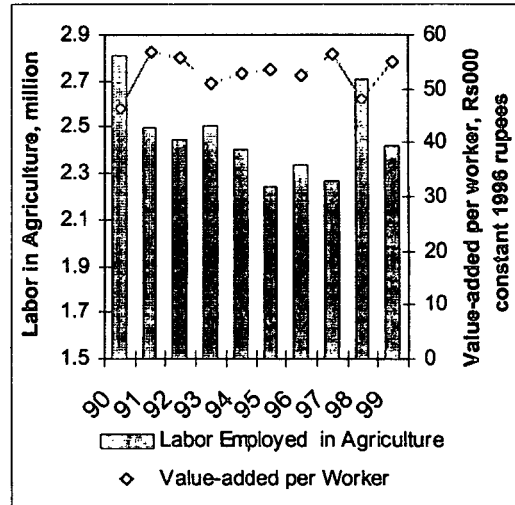
## B. Changing Structure of Rural Incomes

As the structure of the economy has changed, the share of income that rural households derive from agriculture has declined. Although about eight Sri Lankans in ten continue to live in rural areas, less than a quarter of their earnings comes from agriculture. According to the findings of the 1999-2000 Sri Lanka Integrated Survey (SLIS), income from crop cultivation, livestock activities and casual agricultural wage labor accounted on average for only about 23% of total rural household income (Figure 2.3).<sup>2</sup> At 56% of the total, rural non-farm income amounted to more than twice household income from agricultural activities.<sup>3</sup> Government transfers, which include the Samruddhi benefits and farm subsidies, on average accounted for 9% of rural household income.

Among non-farm income sources, government salaries, casual non-agricultural wages and private salaries were the three most important. Government salaries on average contributed 21% of rural household incomes, followed by casual non-agricultural wages (20%) – the largest source for poorer households (bottom 40%) -- and private salaries (17%). The government's continuing policy of providing employment for citizens explains the large share of public salaries in household incomes. The structure of rural incomes is also partly shaped by government interventions in the agricultural output and factor markets. As subsequent chapters explain, these practices have contributed to squeezing the returns to agriculture activities and to pushing out labor and investment.

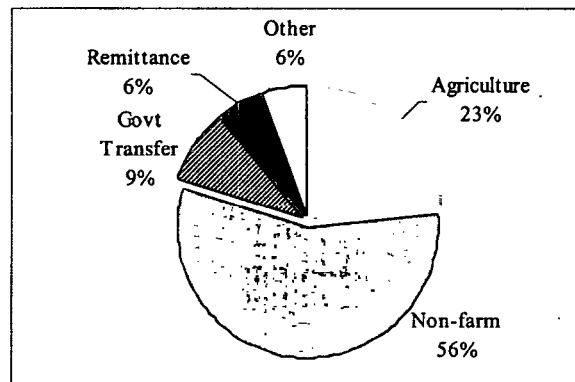
The relative dependence of rural households on agricultural and non-farm incomes varied significantly across expenditure quintiles. Rural households in the second and the third quintiles on average derived about one third of their income from agricultural activities (Table 2.1). The poorest households obtained about one-quarter of total income from agricultural activities, of which about 13% came from farm activities and 11% from casual agricultural labor. While poorer households (bottom 40%) depend heavily on casual non-

Figure 2.2: Trends in labor employed in agriculture and agricultural labor productivity.



Source: Department of Census and Statistics.

Figure 2.3 Sources of Rural Household Incomes, 1999-2000.



Note: Agricultural income includes own farm and casual agricultural wages. Rural households for this study exclude those in the estate sector.

Source: SLIS 1999/2000.

<sup>2</sup> *Farm income* includes income from the sales of crops and livestock plus the value of home consumption (this also includes the value of food gifts received by the household since these cannot be separated from the value of home consumption) minus all variable costs of production. Rural households in the analysis exclude households from the estate sector.

<sup>3</sup> *Non-farm income* includes income from casual wage employment, salary income, income from business/trade/manufacturing net of variable costs, and income from the sale of food/forest products/handicrafts etc. *Casual Ag wages* is income from casual wage employment in farm activities. *Casual Non-ag wages* is income from casual wage employment in non-farm activities. *Sale of farm products* is income earned from the sale of food/snacks prepared by the households as well as income from the sale of forest products and handicrafts.

agricultural labor, salaried government and private jobs play a more important role for richer households. Notably, government salaries, on average, accounted for the largest share (33%) of incomes of the richest households.

Table 2.1: Average percentage share of different sources of income in total rural household income by rural expenditure quintile, 1999-2000.

Source of income	Sources of rural household incomes by expenditure quintiles, Percent					
	Poorest	Second	Third	Fourth	Richest	Total
Agricultural	23.5	27.7	29.1	21.6	18.2	23.3
Farm	12.7	19.3	22.5	17.7	16.4	17.8
Casual Ag. wages	10.8	8.3	6.6	3.9	1.9	5.5
Non-farm	56.8	52.5	52.3	58.8	59.4	56.4
Casual Non-ag wages	33.6	28.0	20.6	19.3	9.6	20.2
Public Salaries	10.8	13.5	15.9	23.3	33.1	21.3
Private Salaries	13.6	14.7	16.9	17.2	18.8	16.7
Sale of farm products <sup>1/</sup>	0.8	1.1	0.8	0.9	1.1	0.9
Transfer	9.8	7.6	7.4	8.3	11.4	9.1
Samurahi	7.2	5.5	4.1	2.8	1.3	3.6
Farm subsidies	0.1	0.1	0.0	0.0	0.1	0.1
Remittances	4.8	7.1	5.9	6.2	4.5	5.6
Other	5.1	5.2	5.3	5.1	6.5	5.6
Fisheries	0.3	0.7	0.8	0.9	0.5	0.6
Estate	3.2	1.4	1.1	0.7	1.0	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: 1/ Consists of sale of forestproducts and processed food.

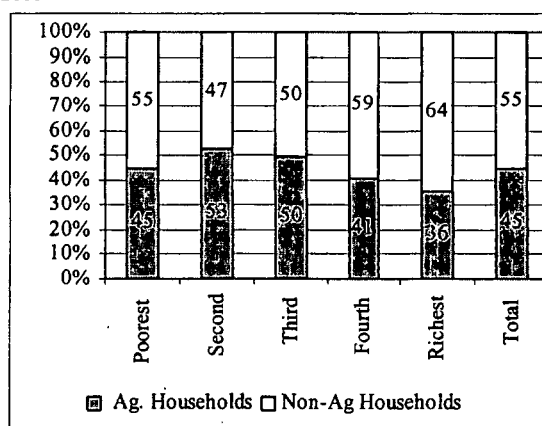
Source: SLIS 1999-2000

### Agricultural Households in Rural Areas

Agricultural households are heavily dependent on income from agricultural activities. Although agriculture's economic importance has declined considerably, a large percentage of rural households – higher among the poorer -- remain heavily dependent on income from these agricultural activities. An analysis of the SLIS 1999-2000 showed that, in the country as whole, about 45% of rural households – and about half of those in the bottom 40% of the expenditure quintiles – were agricultural households (Figure 2.4). Agricultural households are those who are engaged in crop cultivation, livestock raising and/or casual agricultural wage employment. Across all quintiles, agricultural activities accounted for about half of total agricultural household incomes (Table 2.2). By contrast, non-farm incomes on average contributed about one third of agricultural household incomes. Among the poorest agricultural households, however, work on own farm activities or casual wage labor on others' farms were about of equal importance, although the importance of casual agricultural wage income, as expected, decreased with increasing wealth. Given the large proportion of poorer households dependent on agriculture, and the large contribution farming activities make to their aggregate income, the removal of obstacles to raising agricultural productivity and incomes can also be an important contributor to poverty reduction, as a complement to increasing job opportunities in manufacturing and services.

While varying across states, relative

Figure 2.4: Percentage Distribution of Agricultural and Non-Agricultural Households by Rural Expenditure Quintiles, 1999-2000.



Note: Agricultural households are those households who cultivate crops or raise livestock. Rural households for this study exclude those in the estate sector  
Source: SLIS 1999/2000

dependence on agricultural income was higher where agricultural households predominated. Income from agriculture accounted on average for about half to two-thirds of total agricultural household incomes (Table 2.4), but was critical in the North Eastern (67%), Sabaragamuwa (60%), Uva (59%), Southern (48%), and Central (47%) provinces. Agricultural households comprise 76% of rural households in Uva, 53% in North Eastern, 83% in North Central, and 50% in Sabaragamuwa. These provinces also have some of Sri Lanka's highest rural poverty rates. While concurrently promoting the growth of non-farm activities overall, raising agricultural productivity in these provinces could potentially have an important contribution to raising incomes and reducing poverty in these areas.

Table 2.2: Average percentage share of different sources of income in total agricultural household income by rural expenditure quintile, 1999-2000.

Source of income	Sources of agricultural household incomes by expenditure quintiles, Percent					
	Poorest	Second	Third	Fourth	Richest	Total
Agricultural	47.6	53.1	53.3	46.7	48.5	49.9
Farm	23.4	35.4	40.1	37.0	42.5	36.6
Casual Ag. wages	24.3	17.6	13.2	9.7	6.0	13.4
Non-farm	36.9	32.0	29.6	39.5	32.2	33.9
Casual Non-ag wages	15.2	14.0	9.4	8.0	4.6	9.8
Public Salaries	6.5	8.9	12.2	19.9	26.2	15.4
Private Salaries	13.9	12.1	7.7	11.3	7.1	10.1
Sale of farm products <sup>1/</sup>	1.0	0.7	0.9	1.2	1.4	1.0
Transfer	8.7	7.6	7.5	6.6	9.2	7.9
Samurdhi	7.3	6.4	4.3	3.1	1.8	4.4
Farm subsidies	0.2	0.2	0.1	0.1	0.2	0.2
Remittances	3.5	4.7	5.3	4.2	4.5	4.5
Other	3.4	2.7	4.2	3.1	5.5	3.8
Fisheries	0.1	0.1	0.2	0.0	0.9	0.3
Estate	1.0	0.8	0.5	0.3	0.1	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: 1/ Consists of sale of forest products and processed food.

Source: SLIS 1999-2000

Table 2.3: Average percentage share of different sources of income in total rural household income by province, 1999-2000.

Sector	Average Percentage Share of Rural Household Incomes by Source and Province								
	Western	Central	Southern	North Eastern	North Western	North Central	Uva	Sabaragamuwa	All
Agriculture	7.6	21.8	26.0	38.7	17.9	33.9	49.9	34.2	23.3
Farm	6.5	13.8	20.8	29.0	10.5	26.4	41.4	29.4	17.8
Casual Ag. wages	1.1	8.0	5.2	9.6	7.3	7.5	8.5	4.9	5.5
Non-farm	73.8	53.7	54.9	41.6	60.7	41.8	32.9	45.8	56.4
Casual Non-ag wages	21.6	21.6	25.4	11.8	24.3	11.6	10.8	21.7	20.2
Public Salaries	21.9	26.9	13.8	23.6	22.8	23.4	23.3	17.9	21.3
Private Salaries	29.0	13.3	13.8	8.7	13.9	5.5	10.5	14.7	16.7
Sale of farm products <sup>1/</sup>	1.2	1.1	0.9	0.6	1.2	0.2	0.4	0.8	0.9
Transfer	9.1	14.2	9.0	5.9	8.5	9.6	8.8	9.7	9.1
Samurdhi	1.9	5.3	3.7	2.3	4.7	6.9	6.8	4.3	3.6
Farm subsidies	0.0	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.1
Remittances	4.3	6.5	4.2	9.4	6.8	6.5	2.5	3.9	5.6
Other	5.2	3.9	6.0	4.4	6.3	8.3	6.0	6.4	5.6
Fisheries	1.2	0.0	0.2	1.4	0.3	0.9	0.0	0.0	0.6
Estate	0.5	1.6	2.1	0.0	2.0	0.0	2.8	3.5	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: 1/ Consists of sale of forest products and processed food.

Source: SLIS 1999-2000.

Table 2.4: Average percentage share of different sources of income in total agricultural household income by province, 1999-2000.

Sector	Average Percentage Share of agricultural household incomes by source and province								
	Western	Central	Southern	North Eastern	North Western	North Central	Uva	Sabaragamuwa	All
<b>Agriculture</b>	<b>33.5</b>	<b>46.9</b>	<b>47.8</b>	<b>67.0</b>	<b>35.6</b>	<b>43.8</b>	<b>59.3</b>	<b>59.6</b>	<b>49.9</b>
Farm	26.2	27.9	36.2	48.8	18.9	33.9	48.9	50.4	36.6
Casual Ag. wages	7.3	19.0	11.6	18.2	16.7	9.9	10.4	9.2	13.4
<b>Non-farm</b>	<b>48.5</b>	<b>33.1</b>	<b>40.5</b>	<b>19.5</b>	<b>46.5</b>	<b>32.2</b>	<b>26.5</b>	<b>26.6</b>	<b>33.9</b>
Casual Non-ag wages	9.3	10.1	14.7	6.4	13.1	5.0	5.6	11.0	9.8
Public Salaries	23.2	15.2	11.6	11.1	18.6	21.4	13.9	12.8	15.4
Private Salaries	17.4	11.0	12.3	4.6	12.3	4.4	9.1	11.5	10.1
Sale of farm products <sup>1/</sup>	3.1	2.2	0.3	0.5	1.1	0.3	0.4	1.2	1.0
Transfer	7.6	15.4	6.3	3.5	8.5	10.4	8.9	7.1	7.9
Samurdhi	1.9	6.9	3.5	2.0	5.3	7.4	7.1	3.9	4.4
Farm subsidies	0.2	0.4	0.0	0.1	0.3	0.0	0.1	0.2	0.2
Remittances	3.0	3.4	2.7	7.6	5.4	5.5	2.3	3.6	4.5
Other	7.4	1.2	2.8	2.4	4.1	8.2	3.0	3.2	3.8
Fisheries	1.8	0.0	0.1	0.1	0.0	0.5	0.0	0.0	0.3
Estate	1.2	0.4	0.3	0.0	0.1	0.0	1.0	1.6	0.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Poverty Rate 1995/96 (headcount)	13.6	27.9	26.5	n.a.	33.9	31.2	37.0	31.6	27
Agric. Households as % of Rural Households	15.6	45.3	42.4	52.6	48.0	82.6	75.9	51.1	44.8

Note: 1/ Consists of sale of forest products and processed food.

Source: SLIS 1999-2000.

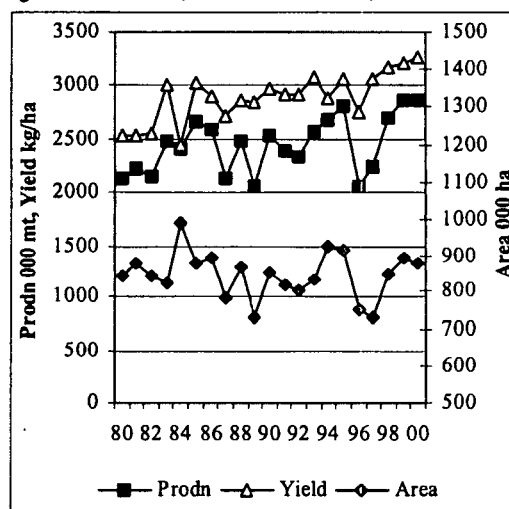
### C. Recent Performance of Major Agricultural Commodities

#### Rice

Sri Lanka's staple food, rice is cultivated all over the country. Rice output has grown quite slowly -- at an average rate of 0.3% per year in the 1980s and 1.5% per year in the 1990s. Overall, total output over the two decades increased by only about 800,000 mt (Figure 2.5). Similarly, yields increased from an average of about 2.5 mt/ha in the early 1980s to about 3.2 mt/ha in 2000, largely due to the adoption of locally developed improved varieties and the expansion of irrigation from about 572,000 hectares in triennium ending (TE) 1982/83 to about 659,000 in TE 1999/2000. By 1999, about 98% of rice sown area was planted with improved rice varieties.<sup>4</sup> Rainfed rice area declined slightly by about 101 ha. Total area planted to rice, however, has hovered around 850,000 ha during the last two decades. Notably, irrigated rice yields were on average about 23% (Yala season) to 36% (Maha season) higher than rainfed yields by 1998-2000.

The sharp 1996-7 drop in rice output was due to a severe drought that hit hardest at irrigated cultivation. As a result of the drought, total rice area declined by 185,000 ha, of which 160,000 ha were in irrigated areas. Notably, while the rice yield and area declined drastically in 1996, the

Figure 2.5: Rice Area, Production and Yield, 1980 to 2000.



Source: Department of Census and Statistics.

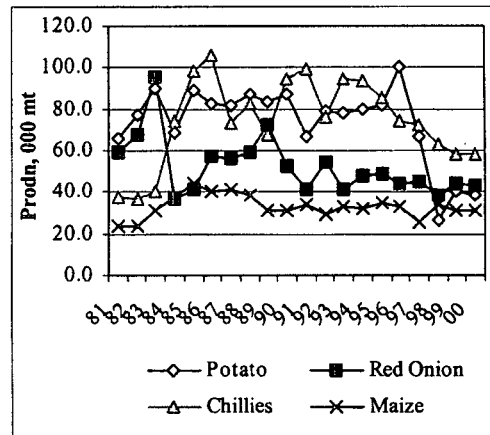
<sup>4</sup> About 1.8% of rice-sown area is planted to older improved varieties, 0.7% is planted to traditional varieties.

following year, rice yields rebounded quickly to almost pre-drought levels, even though the area planted did not expand.

### Other Field Crops

While declining through the 1990s as imports rose, production of other major field crops also exhibited notable volatility. During the 1980s to early 1990s, potato, maize, and chilli production increased significantly (Figure 2.6), growing at average yearly rates of 2%, 4%, and 10%, respectively. Red onions, after a sharp drop in output in 1984, grew by 8% per year during the rest of the decade. After 1996, however, domestic production of all these commodities began to decline as restrictions on their importation were liberalized. The drop in output was sharpest for potatoes, the production of which plummeted from 100,700 mt in 1996 to 36,000 mt in 2000. During the 1990s, while yields of the four crops remained pretty much stagnant, farmers dramatically reduced the area planted in all four from about 80,000 ha in the late 1980s to about 58,000 in 2000.

Figure 2.6: Potato, Red Onion, Chillies and Maize Production, 1981 to 2000.



Source: Department of Census and Statistics.

Several factors have contributed to the weak and volatile performance of these traditionally major crops. In addition to the significant but transitory shock created by the drought in 1996/97, other factors, have had a direct and protracted adverse impact on the performance of the sector. Among them are price declines due to import liberalization, unpredictable changes in trade policy -- both with respect to tariffs and licensing of imports -- restrictions on access to improved agricultural technologies, restrictions on land use and difficulties in marketing. The operation of these policies and their impact are discussed in greater depth in the next chapter.

### Diversification to Higher Value Crops

Diversification to higher-value crops such as fruits, vegetables and spices is occurring. Production of non-traditional crops -- particularly fruits and vegetables -- is rapidly expanding, albeit from a very low base. While data are limited, the Department of Census and Statistics reports a 35% increase in vegetable output from about 428,000 mt in 1996 to 580,000 mt in 2000. Currently, vegetable production is undertaken under three agronomic conditions. Low-country vegetables are generally cultivated under rainfed conditions, in small plots or home gardens, with limited inputs. Up-country (temperate) vegetables, by contrast, are grown under more intensive irrigated conditions in Nuwara Eliya, Bandarawela and Welimada areas, with staggered year-round harvesting. More recently, commercial-scale green-house cultivation has become popular, in some cases under buy-back arrangements, and similar production of a few fruits, such as pineapple and bananas, has also recently appeared.

On average, nonetheless, higher value crops still account for a minor share of household gross cropped area. Rice and cereals (including maize and lentils) generally occupy more than two thirds of cropped area (Table 2.5). Among cereals, the poorer households (bottom 40% of the expenditure quintile), however, devoted roughly twice as much (about 40%) area to lower value coarse cereals, such as kurakkan and sorghum as to rice (about 20%). By contrast, richer households tended to grow the same proportion of rice and other cereals. The area devoted to fruits also rose with increasing household wealth, with the richest households planting almost triple the area of the poorest households. Constraints on access to capital, larger landholdings and the long gestation



periods required for fruit orchards are likely major factors working against poorer households in this area.

Table 2.5: Percentage of gross cultivated area devoted to different categories of crops by expenditure quintile

Crop	Share of gross cultivated area %					
	Poorest	Second	Third	Fourth	Richest	Average
Rice	24.2	22.0	29.7	37.6	32.2	28.7
Other cereals	36.4	43.0	36.5	29.0	26.1	35.0
Maize	3.3	4.2	1.8	0.8	0.2	2.2
Lentils	2.4	2.5	4.1	3.1	0.7	2.7
Subtotal foodgrains	66.3	71.7	72.1	70.5	59.3	68.5
Vegetables	5.9	6.8	8.3	7.7	6.5	7.1
Condiments	6.9	3.7	2.5	2.0	2.4	3.4
Fruits	3.3	3.0	3.7	4.9	10.4	4.8
Oilseeds	0.0	0.3	0.0	0.5	0.1	0.2
Other Crops	17.7	14.6	13.4	14.4	21.4	15.9
Ave. GCA, ha	0.84	0.86	0.99	0.98	1.19	0.96

Note: Rice includes maha and yala paddy; other cereals include kurakkan, sorghum, and other cereals; vegetables include all vegetables, leafy vegetables and yams; lentils include dhal, cowpea and other pulses; fruits include coconuts, plantains, pineapple, mangoes, oranges and other fruit; oilseeds include soybean and sesame. Other crops are as defined in the survey. GCA-Gross cropped area is the sum of area cropped across seasons.

Source: SLIS 1999-2000.

The pace of diversification to higher value crops varied considerably across provinces (Table 2.6). The average percentage share of area devoted to fruit, vegetable and condiment production was highest in Uva (34%) and Southern province (24%). The on-going United Nations Development Program project to promote fruit and vegetable production is presumably contributing significantly to the expanded cultivation of fruit and vegetables in Uva. In the North Eastern and North Central provinces, on the other hand, cropping patterns are heavily dominated by cereals; cereal cropped area on average accounts for over 80% of gross cropped area. As cropped area in both these provinces is largely irrigated, there could be considerable potential for diversifying to higher value crops. Why this is not happening more rapidly is explained in the next chapter. It is reported, however, that about 40% of vegetables and fruits produced in Sri Lanka go to waste before reaching the consumer. Such high post-harvest losses are attributed to poor post-harvest handling, storage and transportation.

Table 2.6: Percentage of gross cultivated area devoted to different categories of crops by province

Province	Share of gross cultivated area, %								
	Western	Central	Southern	Northeastern	Northwestern	North Central	Uva	Sabaragamuwa	Total
Rice	41.0	31.0	33.5	44.0	22.4	22.3	18.6	25.3	28.7
Other Cereals	18.8	41.4	8.8	39.9	38.4	68.8	13.7	28.4	35.0
Maize	0.0	0.0	0.2	0.0	0.9	1.9	16.3	0.1	2.2
Lentils	0.0	0.1	2.9	0.2	6.2	0.4	7.6	3.7	2.7
Subtotal foodgrain	59.8	72.5	45.3	84.1	67.8	93.3	56.2	57.5	68.5
Vegetables	4.3	12.1	5.8	5.5	6.4	0.8	18.9	8.2	7.1
Condiments	0.9	3.9	12.0	6.4	0.1	0.1	2.0	1.1	3.4
Fruits	13.6	0.0	6.0	1.5	6.8	0.0	12.9	3.8	4.8
Subtotal	18.9	16.0	23.8	13.4	13.3	1.0	33.9	13.1	15.3
Oilseeds	0.5	0.2	0.3	0.1	0.0	0.0	0.3	0.4	0.2
Other Crops	20.9	11.3	30.6	2.4	18.9	5.7	9.7	29.0	15.9
Ave. GCA, ha	0.75	0.88	0.87	1.48	0.8	1.23	0.75	0.77	0.96

Note: Rice includes maha and yala paddy; other cereals include kurakkan, sorghum, and other cereals; vegetables include all vegetables, leafy vegetables and yams; lentils include dhal, cowpea and other pulses; fruits include coconuts, plantains, pineapple, mangoes, oranges and other fruit; oilseeds include soybean and sesame. Other crops are as defined in the survey. GCA-Gross cropped area is the sum of area cropped across seasons.

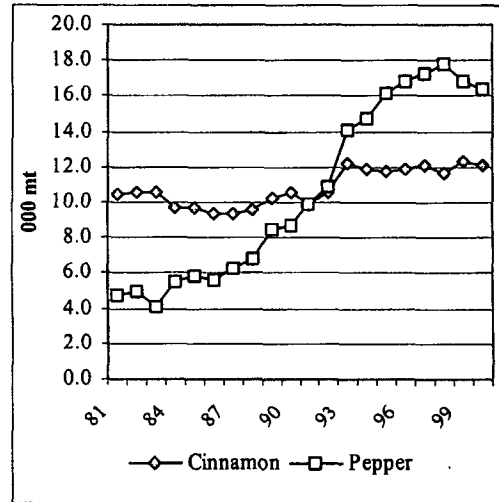
Source: SLIS 1999-2000.

The growth in fruit, vegetable, cut-flower and foliage production in recent years has been spurred by rising domestic and export demand. Rising domestic per capita incomes along with the needs of the expanding tourism industry are driving forces behind the diversification of local consumption. However, an increasing share of production is going for exports. Most vegetable

exports go to Maldives and the Middle East, while most fruit exports go to Maldives, East Asia and Europe. The total export value of fruit and vegetable products increased from \$14 million in 1991 to \$21 million in 2000, equivalent to about 2% of the total value agricultural exports (Sri Lanka Export Development Board 2001). Processed products such as fruit juices, jellies, jams, marmalade and canned fruits are also being exported to these countries.

Spices also showed rapid growth in output during the last decade. Two crops in particular—pepper and cinnamon—expanded rapidly, assisted in part by government production subsidies (planting and replanting). Pepper production, although starting from a low base, more than quadrupled between 1981 and 2000 (Figure 2.7). Cinnamon production also expanded considerably in the 1990s largely in response to rising export demand. The value of spice exports of which pepper and cinnamon account for the largest share has almost doubled from \$40 to \$76 million between 1991 to 2000. The value of pepper exports increased from \$3.4 million to \$21.4 million, while cinnamon exports rose from \$35 million to \$45 million during the same period (Sri Lanka Export Development Board 2001). In total, the export value of fruit, vegetables, cut flowers, foliage, and spices jumped almost \$100 million from 1991 to 2000, an amount equal to about two thirds of non-plantation exports and about 10% of the value of plantation-crop exports (tea, coconut and rubber).

Figure 2.7: Pepper and Cinnamon Production, 1981 to 2000.



Source: Department of Census and Statistics.

### Sri Lanka's Productivity Relative to the Other Countries

For a large number of agricultural commodities, Sri Lankan yields are considerably lower than those of other South and East Asian countries. In the case of maize, for example, a commodity for which domestic demand is rapidly increasing due to a rapidly growing livestock industry, the average maize yield in Sri Lanka is about one-third that of neighboring Karnataka, India and of Thailand and one quarter that of China (Table 2.7). Similarly for potatoes, Sri Lankan yields are one to two mt lower per ha than neighboring Tamil Nadu and Karnataka in India, where agro-climatic conditions are similar to those of Sri Lanka. While there appears to be considerable potential for further yield increases for various crops in Sri Lanka, highly restrictive phyto-sanitary regulations, unclear seed industry regulations, and lack of intellectual property rights legislation have deterred the entry of improved varieties into the country. This issue is discussed in more depth in the next chapter.

### D. Livestock

Among the various livestock categories, the poultry industry has been growing the fastest. In 2000, Sri Lanka had an estimated 2.3 million cattle and buffaloes, 10.6 million chickens, and 580,000 goats, sheep and pigs. During the 1990s, poultry meat output increased by about 10.5% per year, reaching 58,117 mt in 2000 (Figure 2.9). While milk output grew by 2.1% per year to reach 26.8 million li in 2000, egg, pork and beef output showed very little change.

Table 2.7: Yields of Selected Crops in South and East Asian Countries, 1997 to 1999 average, Kg per ha

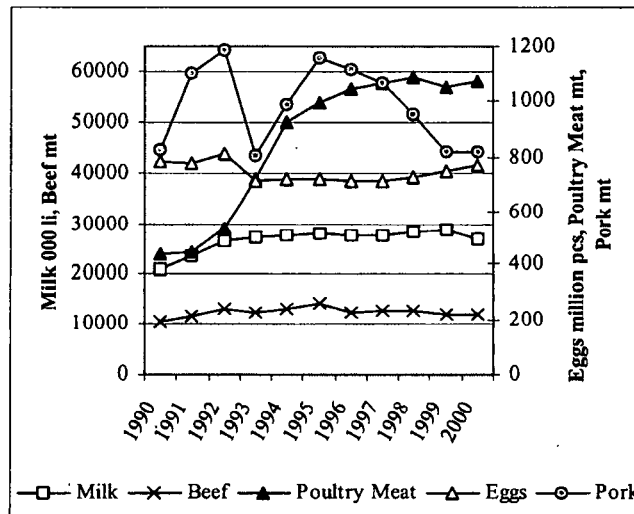
	Sri Lanka	Karnataka	Tamil Nadu	Bangladesh	Pakistan	Thailand	Vietnam	Indonesia	China
Rice (paddy)	3,148	2,438	3,033	2,965	2,924	2,374	3,980	4,294	6,333
Maize	1,072	3,114	1,622	964	1,691	3,365	2,508	2,643	4,868
Potato	11,513	13,262	12,905	11,311	13,797	9,128	10,452	15,423	14,523
Manioc	8,596	8,074	34,464			15,039	8,305	2,568	17,986
Sweet potato	6,069	7,560	18,825	9,402	10,849	15,808	6,278	9,503	19,275
Gram	902	487	737						
Groundnut	615	877	1,675	1,172	1,060	1,566	1,367	1,790	2,829
Soybeans	918	724			1,255	1,416	1,112	9,503	1,779
Onion	6,956	5,740	8,356						
Chillies	2,875	800	567			14,074		2,568	17,986
Tomatoes	6,834	17,267	19,590	7,169	10,917	9,191		6,963	24,815
Pepper	675	240				2,945	1,443	631	1,371
Coffee	653	945	585			1,094	1,899	516	1,100
Coconut	4,425	3,721	8,330	2,808	4,294	4,182	7,092	5,960	9,453
Tea	1,501		2,523	1,099		295	866	1,461	750

Source: Sri Lanka Department of Agriculture; India: CMIE, *Agriculture 2000*; Other countries: FAO Statistical database.

The rapid growth in milk and poultry meat is largely due to rising per capita income and the inevitable shift in consumer demand towards higher value food products. Indeed, according to the Department of Census and Statistics survey estimates, average monthly household consumption of poultry meat more than doubled from 334 to 870 grams between 1990/91 and 1995/96. Average monthly household milk (powder) consumption increased from 840 to 1113 gms during the same period. This growth in local demand has also had an upstream impact on the agricultural sector: raising local demand for feed ingredients (e.g. maize) to meet the requirements of an expanding livestock population.

The proportion of rural and agricultural households owning livestock increases at higher expenditure quintiles and in Sri Lanka's north. Only about 6% of the poorest rural households own livestock in contrast to about 12% of households in the third to richest quintiles, a relationship basically duplicated in agricultural households (Table 2.8). The Northeastern, Northwestern, North Central and Uva provinces have the largest percentage of rural households who raise livestock. The predominance of different livestock species varies considerably by province. In the Northeastern and North Central province, a large share of households own cattle and poultry (Table 2.9), whereas, in the Northwestern and Uva provinces, a larger proportion of households own cattle, but fewer than 5% of households owned other types of animals. In the other provinces, less than 10% of households owned livestock.

Figure 2.8: Production of milk, beef, poultry meat, eggs and pork, 1990-2000.



Source: Department of Census and Statistics, Poultry meat-FAO.

Table 2.8: Ownership livestock by rural expenditure quintile

Type of Household	Percentage Share by Rural expenditure quintile					
	Poorest	Second	Third	Fourth	Richest	All
Rural	6.1	12.1	12.3	13.0	10.1	10.7
Agricultural	13.3	22.9	24.7	32.0	28.4	23.9

Note: Agricultural households are those households that cultivate crops, raise livestock or participate in casual agricultural wage employment.

Source: SLIS 1999-2000.

Table 2.9 Rural household ownership livestock by province

Type of Animal	Percentage of Rural Households Owning Livestock								
	Western	Central	Southern	Northeastern	Northwestern	North Central	Uva	Sabaragamuwa	All
Livestock	7.2	7.0	7.2	33.7	29.4	26.9	17.2	5.8	17.9
Cattle	7.2	6.1	4.3	19.4	24.5	18.1	12.0	4.0	12.7
Buffaloes	2.8	0.8	2.5	3.3	3.9	2.5	0.6	1.8	2.4
Goats	1.6	0.0	0.8	11.0	4.8	1.5	1.1	0.0	2.6
Poultry	0.0	1.6	1.1	19.4	4.6	10.3	3.4	1.5	5.7

Source: SLIS 1999-2000.

### E. Overview of Agro-Industrial Sector

The industrial sector has been an important engine for growth for Sri Lanka, especially in the 1990s, with food, beverage and tobacco responsible for almost a third of sector value added by the end of the decade. Between 1991 and 2000, industry GDP grew at an average rate of 7.0% per year. The manufacturing sub-sector, which accounts for about 65% of industrial GDP, grew by 8.0% per year, while national GDP grew by 5.3% during the same period. In 2000, industry contributed about 27% of total GDP and employed 995,000 workers, of whom – in 1997 – 89,000 (18%) of the industry labor force worked in the food, beverage and tobacco (FBT) subsector, according to the 1997 Board of Investment survey of establishments with 5 or more persons engaged. The FBT subsector comes second after textiles, wearing apparel and leather products (39%). Its value added grew by at about 7% per year, almost doubling from about Rs 21 billion to Rs 39 billion (1996 rupees) between 1991 and 2000. The textiles, wearing apparel and leather products subsector was the largest employer (45% of the labor force).

Private sector output in the food and beverage subsectors was one of the fastest growing during the second half of the 1990s. Private sector output in food and beverage grew by over 7% per year during this period, with firms operating at around 90% of capacity (Table 2.10). The most recent estimates (1997) also indicate that the FBT subsector accounts for the largest number of enterprises and labor employed: 53% of total enterprises and 66% of

Table 2.10: Private sector industrial production index, 1995=100.

Categories	Index					Ave annual growth rate 1995-2000
	1996	1997	1998	1999	2000 (a)	
Food, beverages and tobacco products	1.07	1.10	1.21	1.25	1.32	5.7%
Food and other	1.07	1.14	1.26	1.34	1.41	7.3%
Liquor	1.14	1.11	1.29	1.24	1.29	5.0%
Beverages	1.03	1.18	1.29	1.26	1.43	7.4%
Tobacco	1.05	0.95	0.95	0.92	0.90	-2.6%
Textiles, wearing apparel and leather products	1.05	1.25	1.31	1.40	1.62	9.9%
Apparel	1.05	1.27	1.33	1.44	1.69	10.8%
Textiles	1.02	1.12	1.16	1.16	1.32	5.3%
Leather	1.06	1.19	1.21	1.25	1.36	6.1%
Wood and wood products	0.97	0.97	0.96	0.99	1.05	0.8%
Paper and paper products	1.05	1.08	1.09	1.08	1.18	2.6%
Chemical, petroleum, rubber and plastic products	1.14	1.31	1.46	1.53	1.66	10.6%
Non metallic mineral products	1.07	1.11	1.17	1.26	1.29	5.4%
Basic metal products	1.15	1.18	1.31	1.35	1.41	6.8%
Fabricated metal products	1.02	1.21	1.34	1.41	1.48	9.0%
Manufactured products not elsewhere specified	1.15	1.30	1.36	1.45	1.50	8.3%
<i>All categories</i>	1.07	1.20	1.28	1.35	1.49	8.2%

(a) Provisional

Source: Central Bank Annual Report 2000.

employment among firms that employ 5 people or more (Table 2.11). Its production is primarily geared for the domestic market which absorbs all but one percent of processed food products.

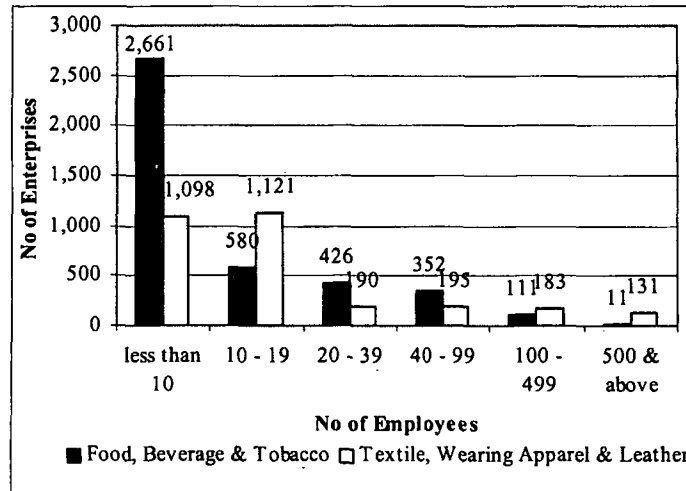
A 1995 survey of rural industries showed that 97% employed fewer than 15 workers. This is also in part reflected in the structure of the FBT industry. It remains dominated by small and medium-sized enterprises: about 80% of food manufacturing enterprises have 19 or fewer employees; about 64% employ under 10 workers (Figure 2.9). The textile, wearing apparel and leather industries also follow the same trend.

In the future, agribusiness enterprises, particularly food manufacturing, are likely to play an increasing role in Sri Lanka's economy. As evidenced by experience in Sri Lanka and world-wide, the combination of population growth, rising incomes, and increased urbanization will foster an increasing shift in demand from raw, unprocessed products to high value processed foods, with a growing share consumed outside the home. For example, the 1995/96 Household Income and Expenditure Survey found that consumption of milk and milk products by the richest decile is already double those of the poorest decile. The disparity in the consumption of bread is by a factor of four (Department of Census and Statistics).

## F. Conclusion

**Fostering broad-based rural growth will be critical for Sri Lanka.** Given that industry and services will continue as the main engines of long-term economic growth, a key challenge is to ensure that their growth spreads to the rural areas, where they already are growing in importance to rural household incomes. But at the same time, sustaining productivity growth in agriculture would help ensure that the sector does not become a burden slowing

Figure 2.9: Distribution of Enterprises by Number of Employees in the Food, Beverage and Tobacco and Textile, Apparel and Leather Industries, 1995.



Note: Includes all establishments with 5 or more persons engaged.  
Source: Annual Survey of Industries 1998, Final Report, Department of Census and Statistics.

Table 2.11: Agri-Enterprises: Indicators of Industrial Activity, 1997.

Sub-Sector	Number of Enterprises	Total Employed	Value Added Rs million
1. Food Manufacturing	2262	60,531	20,722
Slaughtering and Preserving Meat	5	407	343
Dairy Products	36	1,185	1,099
Canning Fruit and Vegetables	13	986	129
Canning and Processing Fish	36	337	16
Vegetable, Animal Oil & Fats	49	3,312	1,072
Grain Mill Products	526	5,888	2,403
Bakery Products	447	7,376	1,939
Sugar Factory & Refinery	238	1,848	232
Cocoa, Chocolate & Confectionery	64	1,173	216
Food products	837	37,474	12,432
Prepared animal foods	11	545	842
2. Beverage Industry	36	4,921	11,173
Distilling and Rectifying Spirits	7	2,195	7,494
Wine Industries	17	52	620
Malt liquor and Malt	3	287	1,326
Soft Drinks & Carbonated Water	9	2,387	1,733
3. Tobacco Industry	1843	22,371	15,317
4. Leather Products	15	860	466
5. Fertilizer & pesticides	44	1,017	6,208
6. Agricultural Machinery & equip.	44	1,017	6,208
Total	4268	92213	54,410

Note: Establishments with 5 or more persons engaged  
Source: Annual Survey of Industries 1998, Final Report, Department of Census and Statistics.

down overall economic growth. The migration of labor out of agriculture will continue, drawn by increasing demand from industry and services, even in rural areas. Still, a large number of workers are likely to remain in agriculture over the medium term, and raising productivity for those who remain in agriculture (by choice or by default) is important not only overall, but also to help reduce poverty in rural areas, especially in the provinces where agricultural activities remain a major source of income among poorer households (e.g. Uva, North Western, North Central and Sabaragamuwa). The next chapter provides a more detailed assessment of the performance of the agriculture and rural non-farm sectors in Sri Lanka and of the factors holding back their growth.

### **III. Agricultural Sector: Policy Environment and Constraints to Growth**

Since 1996, the Government of Sri Lanka adopted several policy measures aimed at hastening agricultural growth. Intended to assist the non-plantation agricultural sector<sup>5</sup> to shift from low-value to high-value production, the measures also aimed at improving productivity and international competitiveness so as to put the sector on a higher growth trajectory. The policy reforms included various private sector investment incentive schemes (e.g. concessionary credit, duty waivers and tax holidays on new investments), increasing trade, seed distribution and commodity market liberalization, including the closure of the Paddy Marketing Board. The anticipated supply and agricultural growth response, however, has been slow to materialize.

A number of other existing government policies, however, undermined progress toward the government's goals. Among the hindrances are unpredictable trade policies; highly restrictive quarantine regulations; delays in passing key seed and phyto-sanitary regulations, which limit technology access; commodity price interventions; restrictive land policies; and poorly functioning water delivery systems. The combined effect of these measures was the creation of a complex and multi-dimensional maze of obstacles, as illustrated in Figure 3.1, which ultimately dampened agricultural productivity growth, hindered diversification and reduced opportunities for raising agricultural incomes. Further, they contributed to raising operating costs, reducing agricultural profitability, increasing price and market risks, diminishing competitiveness; and – overall -- discouraging productivity-enhancing investments and private-sector participation. A continuing emphasis on input subsidies with limited short-term impact (e.g. fertilizer, water, seeds) also diverted scarce public resources away from critical productivity- and efficiency-enhancing investments (rural roads, electricity, markets, research and extension) that could have had a more lasting impact on growth. Even where limited investments have been made in some sectors (e.g. irrigation, roads, research and extension), inadequate emphasis and funding for operations and maintenance has sapped their potential. These issues are elaborated in the following sections.

#### **A. Agricultural Policy Recommendations 1996**

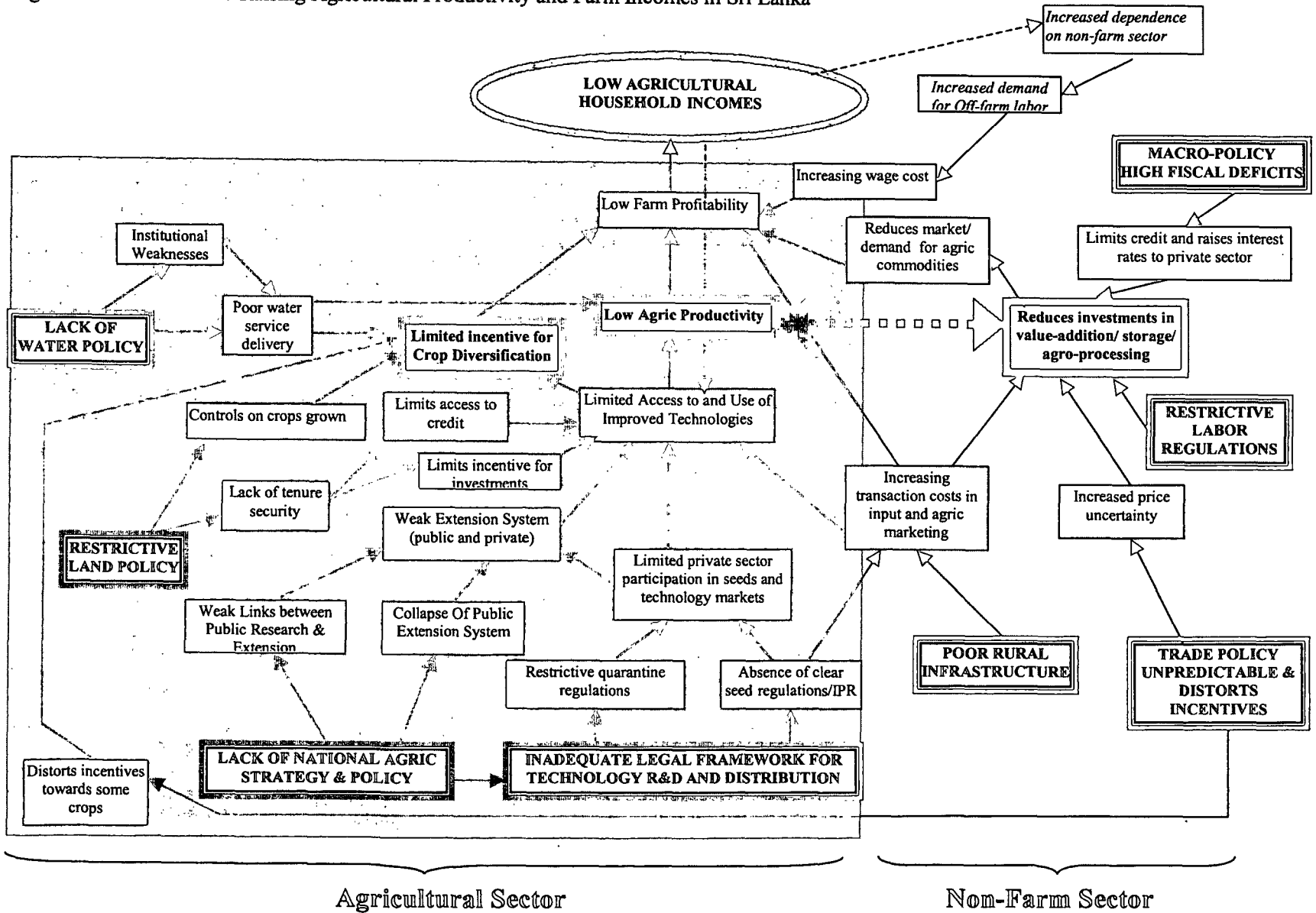
The 1996 Agricultural Policy Recommendations of the GoSL's National Development Council outlined priorities for promoting agricultural growth. The main thrusts of the policy were to: (i) improve the availability and minimize the cost of agricultural produce to consumers; (ii) improve farmers' income by improving farm productivity, streamlining distribution, and encouraging investments through eased access to credit; (iii) promote market-oriented agricultural systems, (iv) create internationally competitive exportable surpluses of quality agricultural products to increase employment, diversify agriculture and the rural economy, and increase export earnings; and (v) stimulate increased private investment while reducing fiscal burdens on the government. The recommendations included a list of actions relating to seeds and planting materials, land, irrigation, trade policy, domestic marketing, fertilizer, research and extension, credit and incentives for the commercial private sector (Table 3.1). An important milestone in the agricultural development strategy in Sri Lanka, this policy framework represents an initial shift in emphasis from a "paddy self-sufficiency" orientation toward a commercial, market-driven, and diversified agricultural economy. Moreover, it recognizes the private sector as a valuable partner in development. During the Prime Minister's speech to parliament (January 22, 2002), he reiterated the priority given to fostering an agriculture sector competitive with international markets.

Although follow-up actions brought change in some policies, the expected higher agricultural performance did not materialize. Among the policy actions summarized in Table 3.1,

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<sup>5</sup> Referred to only as agricultural sector in the rest of this report.

Figure 3.1: Constraints to Raising Agricultural Productivity and Farm Incomes in Sri Lanka





neither the national water policy drafted in 2000 nor the national seed policy approved in 1996 was actually implemented. The Water Policy remains hotly debated, while the formulation and adoption of accompanying acts and associated regulations associated with the Seed Policy (seed and plant quarantine) are still pending. The government has, however, taken several steps toward liberalizing land markets, adopting a number of critical amendments to various Land Acts and introducing new ones to provide landowners greater flexibility in optimizing the use of their land resource. It has allowed farmers to use land as collateral and has strengthened tenure security through the granting of freehold titles, that will also permit farmers finally to sell, lease or transfer land more easily. Between 1996 and the Budget Speech 2002, moreover, the government introduced several subsidized credit programs to promote investments in the agricultural sector. Nevertheless, during that period, agricultural GDP grew by only 3% per year, substantially lagging behind the industry and services sectors. The desired broad-based diversification to higher-value agriculture is happening only very slowly for reasons elaborated in the following sections.

The absence of an explicit long-term strategy for agriculture, consistent with overall and rural development goals, also contributes to the multiplicity and relatively weak performance of various government programs. The changing character and composition of the agricultural sector and the overall economy and the multitude of challenges and opportunities arising from increased globalization and international competition will require new and innovative approaches to achieving sustainable and poverty-reducing agricultural growth and rural development. The Agriculture Ministry—the lead agency providing resources and guidance to the sector— however, lacks a well-articulated strategy and set of policies at the national level. While the Ministry has formulated an Agricultural Policy and National Agricultural Development Plans, the development approaches and the strategies underlying these plans reflected a “top-down,” supply-driven planning process.

A new National Agricultural Strategy and policy framework, consistent with the country’s rural development strategy, is therefore urgently needed to outline priorities and an action plan. The Ministry of Agriculture recognizes the need for such a policy and has committed to prepare one. A critical challenge in formulating an integrated, holistic strategy is the multiplicity of agencies involved in agriculture. Despite the reorganization of the government in early 2002, there are about 19 central government ministries<sup>6</sup> directly or indirectly involved in the agricultural sector in addition to provincial councils to whom many responsibilities have been devolved. For example, while the agriculture research system is the responsibility of the Central Government, the agricultural extension system falls under the purview of Provincial Councils, an arrangement that severely weakens the linkage between the research and extension systems, making both almost dysfunctional.

#### **Constraints to Agricultural Diversification: A Household Perspective**

Farm households identified several constraints to diversification. Analysis of the SLIS 1999-2000 data shows that more than two-thirds of households involved in crop production believe that diversifying their production and growing a second crop could increase their income. Among the poorest households (bottom 20%), in fact, about 74% see such potential to increase incomes, compared to 64% for the richest households (top 20%). The most frequently cited constraints, however, are access to credit, water, appropriate inputs and technical assistance (Table 3.2). Notably, the percentage of households facing difficulty in getting access to credit, inputs, technical

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<sup>6</sup> These include the Ministry of Agriculture and Livestock; Policy Development and Implementation; Fisheries and Ocean Resources; Irrigation; Water Management; Irrigation and Water Management; Environment and Natural Resources; Rural Economy; Cooperatives; Smallholder Development; Land; Commerce and Consumer Affairs; Economic Reform, Science and Technology; Home Affairs, Local Government and Provincial Councils; Southern Region Development; Central Region Development; Western Region Development; North West Region Development; and Plantation Industries.

Table 3.1. Summary of Proposed Actions and Actions Taken, 1996-2002

Sector	Major Proposed Actions	Action Taken 1996-2002
Seed and planting material	Concentrate government role on breeding, adaptive research, varietal testing, registration, and certification of quality; transfer commercial production, sales and distribution of seeds and planting materials to private sector Liberalize imports of seed and planting materials subject to strict phytosanitary regulations, eliminate licensing	National Seed Policy approved in 1996, National Seed Act and regulations pending National Seed and Planting Materials Committee set up in 1996 Government seed farms-Hingurakgoda and Pelwehera—privatized. Plant Protection Act (1924) amended in 2000, revised regulations pending
Land	Rights or entitlements to land should be given to settlers in irrigation schemes on pilot basis Establish farmer organizations/companies Allow sub-leasing up to 10 years Paddy Land's Act reviewed to encourage crop diversification Review of Registration of Title Act to expedite land registration	Registration of Title Act 1998 to provide unencumbered and clear title to every parcel of land Budget speech 2002: Restrictions on the sale, lease and transfer of land to be removed Agrarian Services Development Act No 46 2000: allows cultivation of paddy land with other crops subject to approval of Commissioner General
Irrigation	Preparation of time-bound action plan to transfer management of irrigation systems to farmers Pilot transfer to water rights to farmer organizations/companies Collection of O&M fees by farmer companies to finance O&M	Draft National Water Policy formulated in 2000 Interim National Water Resources Authority created Ongoing transformation of MASL into a river basin management authority
Fertilizer	Strengthen quality control Import fertilizer in bulk	Fertilizer subsidy revised in 1997 to apply only to urea Budget Speech 2002: Farm input support scheme provides farmers a cash coupon that could be used to purchase fertilizer, seeds, planting materials or farm implements at subsidized rates upto the value of the coupon (Rs 2 billion)
Trade	Phase out wheat subsidy by timetable Convert non-tariff measures to tariffs Adopt a two band-tariff system, with different tariff rates for lean and harvest seasons Introduce air-freight subsidy to expand exports to Europe	Import licenses applied to rice in 1996 and 2000 Budget speech 2002: Specific duties and import licenses on agricultural goods (rice, chillies, onions, potatoes, and edible oil) removed and duty raised to 60%; surcharges on imports reduced from 40% to 20%; import duties on selected raw materials reduced to Indo-Sri-Lanka Free Trade Agreement Levels from April 15, 2002. Stamp duty on imports converted to Port and Airport Development Levy equal to 1% of declared cif value of imported cargo, from May 1, 2002. Reduction of customs duty on maize for feed to assist livestock sector
Domestic marketing	Phase out Paddy Marketing Board Allow private sector imports of agricultural commodities Wheat and flour distribution transferred to private sector Convert CWE into a farmer company Provide incentives for private sector investments in post harvest handling and processing Establish markets and market hubs outside Colombo	Paddy Marketing Board closed in 1996, price support operations taken up by CWE and multi-purpose cooperative societies CWE to be split into 5 companies in 2002, operations expanded to other products Piloting of forward contracts Budget Speech 2002: Wheat subsidy to be removed; development of marketing centers for handicrafts and other agricultural products
Research and Extension	Increase client orientation of national agricultural research system through introduction of contract research by farmer organizations Establish a Center of Excellence on biotechnology Unify extension service to cover all crops at the village level, and crop/livestock specialists at divisional level Pilot fee-based extension	Fee based extension introduced by Department of Agriculture in 1999
Credit	Establish medium to long-term credit fund for agriculture Government write-off of loans should cease Regional rural development banks should be restructured to facilitate mergers with State and private commercial banks Crop insurance scheme liberalized to allow private sector participation	Concessionary credit schemes introduced Budget speech 2002: Rural Economy Resuscitation Fund to develop small and medium scale economic and social infrastructure facilities in rural areas (Rs10 million); Capital Goods Entitlement Credit Scheme to provide assets to marginalized persons (Rs80 million); Seed capital for infrastructure and technical support (Rs30 million)

Table 3.1. Summary of Proposed Actions and Actions Taken, 1996-2002, cont'd.

Sector	Major Proposed Actions	Action Taken 1996-2002
Incentives for commercial private sector	Formulate incentive package to encourage private sector investments in value addition, cold storage, etc Establish provisions for enforcement of forward sales contract.	Agrarian Services Act changed to Agricultural and Agrarian Services Act in 1999, eliminates monopoly of Agricultural Insurance Board and allows private companies to offer crop insurance Budget speech 2002: Industrial Disputes Act and Termination of Employment Act to be amended to establish enforceable time limits on hearing and decision of labor disputes and specification of schedule for compensation for terminated staff Introduction of VAT in place of Goods and Services Tax and National Security Levy; lower (10%) VAT applied to essential food stuffs, fertilizer, agricultural and fishing equipment. Investments in agriculture, food processing and non-traditional exports in excess of Rs500 million are exempted from paying income tax for the first 3 yrs, 10% tax in 4 <sup>th</sup> and 5 <sup>th</sup> year, and 20% thereafter.

Source: National Development Council, 1996, "Agricultural Policy Recommendations," Report of the National Development Council Working Group, Volume 1, Colombo, Sri Lanka.; Weliwita and Epaarachchi 2002, Budget Speech 2002, Central Bank Annual Report, various issues.

assistance, and roads increases with decreasing wealth (proxied by expenditure quintiles), and these problems are most acute for the poorest households. Some of the obstacles are closely linked. For example, the lack of working capital limits a household's ability to obtain purchased inputs or to pay for technical advice.

Access to credit, water, technical assistance and rural infrastructure (markets and roads) are more frequently cited problems among the larger landowners. Difficulty in obtaining credit is in large part due to the current ban on mortgaging land, which applies to households that received land as part of the government's land distribution program. These restrictions are discussed in more detail in the subsequent section on land policy. The problem of inadequate rural infrastructure is more frequently cited by larger landowners, probably because as producers of greater quantities of marketable surplus, they have critical needs for access to roads and markets. Lack of water, however, is a pervasive problem among landowners, regardless of the size of their holdings.

The prevalence of constraints faced by households varies across provinces. Among the provinces, the percentage of households who see the potential for crop diversification to raise incomes is highest in Uva province, which also already has the largest share of area devoted to higher value crops (Table 3.3). It is also, however, the province where the largest share of households is subject to multiple constraints, including access to credit, water, inputs, technical assistance, markets and roads, relative to the other provinces. The fact that 86% of households in Uva report problems with lack of water reflects the local situation: 73% of cropped area is rainfed.

Table 3.2: Factors which constrain crop diversification by expenditure quintile/

Category	Rural Expenditure Quintile					
	Poorest	Second	Third	Fourth	Richest	Average
% Agricultural Households that foresee higher incomes by cultivating a second crop	73.8	65.5	63.0	66.1	64.3	66.2
<i>Factors discouraging diversification</i>						
<i>Percent of Agricultural Households Reporting</i>						
Financial constraints/credit	72.8	66.8	63.9	50.9	48.7	61.1
Lack of water	54.5	57.0	61.8	52.0	49.0	55.4
Quality of land	26.1	33.1	24.7	29.4	30.1	28.9
Lack of technical assistance	53.4	47.8	45.0	41.6	40.9	45.7
Lack of appropriate inputs	50.2	45.7	44.0	45.3	39.9	44.9
War disruption	6.2	12.4	8.5	8.1	11.6	9.6
Lack of market	29.7	30.6	26.6	26.0	29.4	28.5
Poor road access	35.0	24.7	18.9	15.3	20.1	22.5

Source: SLIS 1999/2000.

This situation is exacerbated by the large number of minor irrigation tanks that have fallen into disrepair in the province. Among the more than two-thirds of farm households in the Central,

North Central, North Western and Sabaragamuwa provinces that value the potential of crop diversification, problems with access to credit, water, technical assistance and inputs are the most frequently cited. Notably, although more than 80% of cropped area in the North Central and North Eastern provinces is irrigated, a large percentage of the households report problems with access to water. This view may also reflect problems with poor water service delivery, including poor timing and availability of water to meet the requirements of non-paddy crops. This issue is elaborated further in the subsequent discussion of the water sector in this chapter.

Table 3.3: Factors which constrain crop diversification by province

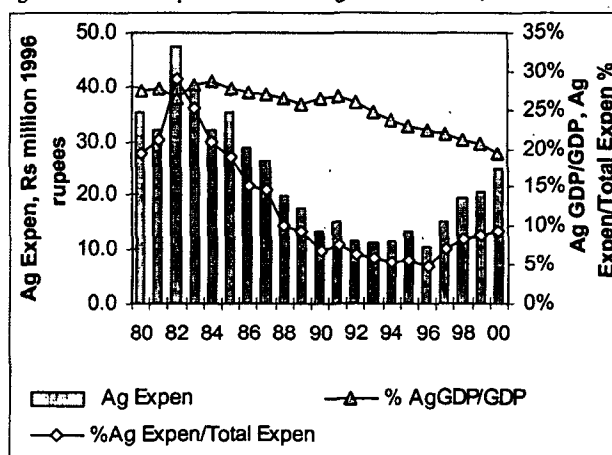
Category	Western	Central	Southern	North Eastern	North Western	North Central	Uva	Sabaragamuwa
% Agricultural Households that foresee higher incomes by cultivating a second crop	46.1	70.1	61.0	40.7	67.9	72.8	90.6	71.8
<i>Factors discouraging diversification</i>								
Financial constraints/credit	59.0	60.5	52.6	65.5	54.9	56.3	82.7	65.8
Lack of water	33.9	47.3	38.9	68.7	63.9	61.0	86.3	38.8
Quality of land	54.1	13.1	32.9	20.4	26.8	25.1	35.1	33.5
Lack of technical assistance	42.7	50.2	47.3	34.3	26.5	36.9	79.0	61.1
Lack of appropriate inputs	49.3	45.0	45.3	33.1	32.3	29.5	82.5	60.0
War disruption	1.0	0.0	0.9	40.7	0.1	25.5	0.0	0.0
Lack of market	18.2	41.6	8.8	35.9	13.2	41.6	47.7	22.6
Poor road access	12.0	50.4	10.1	22.4	5.9	25.0	41.4	20.1

Source: SLIS 1999/2000.

## B. Public Expenditures in Agriculture

Public expenditures in the agricultural sector declined in the 1990s. Accounting for almost one-fifth of total government expenditures in the 1980s, public expenditures in agriculture (including expenditures on plantation and non-plantation crops, livestock, fisheries and forestry) declined sharply in real terms in the 1990s. Outlays fell faster than agriculture's share in agricultural GDP (Figure 3.2). This drastic decline was primarily the result of the completion of the Accelerated Mahaweli Development project, a major pillar of the government's land resettlement program. Since the mid-1990s, however, agricultural expenditures have begun to rise, reaching about Rs 31 billion (current prices) in 2000, or 10% of total government expenditures.

Figure 3.2: Public Expenditures in the Agricultural Sector, 1980 to 2000.



Note: Includes expenditures in plantation, non-plantation, livestock, fisheries and forestry  
Source: Abeysekera, forthcoming.

Expenditures for irrigation, however, continue to dominate total agricultural spending. During the late 1990s, they still accounted for about half of total expenditures (Table 3.4). The share of expenditures in the crops and others subsectors have doubled relative to their 1980s' shares, albeit from a very low base. It is interesting to note that agricultural expenditures per worker employed in agriculture almost doubled in real terms from about Rs 4,700 in 1990 to Rs 8,500 in 1999 (constant 1996 rupees). Nonetheless, labor productivity in the agricultural sector stagnated during this time, a fact that brings into question the relative development effectiveness of government expenditures on agriculture.

Table 3.4: Percentage Share of Major Subsectors in Total Agricultural Expenditure, 1981 to 2000.

Subsector	Period Average Share			
	81-85	86-90	91-95	96-00
Plantation	4.2%	11.0%	15.3%	12.1%
Irrigation	79.6%	62.6%	49.9%	50.5%
Land Related	1.2%	2.0%	0.6%	0.6%
Crops	10.0%	14.3%	21.3%	21.7%
Others	5.0%	10.1%	12.9%	15.1%

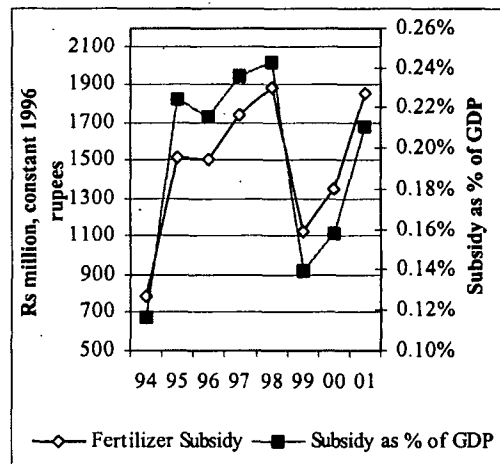
Source: Abeysekera, forthcoming.

### Fertilizer Subsidy

The fertilizer subsidy for crops -- Rs. 2.6 billion (\$29 million) in 2001, equivalent to about 0.2% of GDP -- is a major expenditure item (Figure 3.3). The fertilizer subsidy program is implemented by reimbursing fertilizer importers the difference between the fertilizer import price and the price paid by farmers. Largely because of lower world fertilizer prices, the size of the fertilizer subsidy dropped significantly in real terms in the late 1990s even though overall 1999-2001 consumption levels were higher than in 1998.

The major share of the subsidy goes to wealthier rice farmers. Fertilizer consumption in Sri Lanka overall increased by 40% during the last two decades, reaching 616,000 mt in 1999, where rice (about 52%) and tea (27%) accounted for the bulk of total consumption. After a sharp drop in fertilizer use for rice in 1989, when subsidies were scrapped, average application rates increased rapidly (6% per year) during the 1990s, reaching 342 kg/ha in 1999, five years after fertilizer subsidies were reinstated (Figure 3.4). The subsidy originally applied to four types of fertilizer—urea, sulphate of ammonia, muriate of potash and triple super phosphate and reduced the retail price of these fertilizers by about 30%. In 1997, the subsidy scheme was revised to apply only to urea.<sup>7</sup> Concentrating the subsidy on urea is primarily intended to support paddy farmers—they account for about 75% of urea consumption. An analysis of the composition of paddy farmers, however, shows that a larger proportion of the subsidy is captured by richer rice farmers. About 51% of total rice area is cultivated by households in the top 40% of the rural expenditure quintiles, compared to only about 25% in the care of households in the two lowest quintiles.

Figure 3.3: Fertilizer Subsidy, 1994 to 2000.

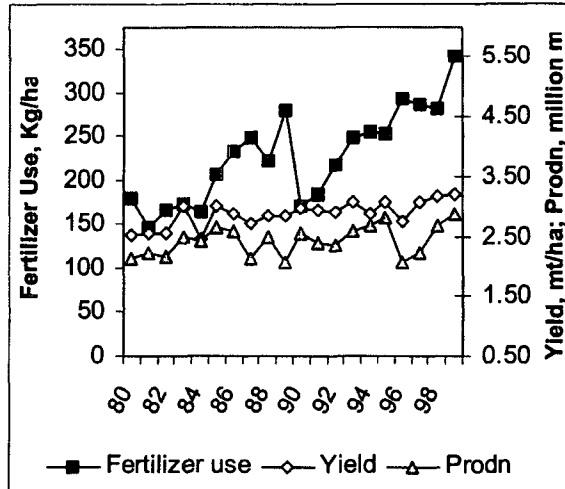


Source: National Fertilizer Secretariat.

<sup>7</sup> The maximum retail price of Urea through out the country in 2001 was Rs. 7,000 per metric ton (approximately \$78 per mt).

There are also signs that efficiency of use is declining. These subsidies are encouraging the overuse of fertilizers. Ironically, while fertilizer application rates among rice producers more than doubled in the 1990s, as is evident from Figure 3.4, average yields increased by only about 8%. The concentration of subsidies on urea, is also raising concerns among scientists regarding improper nutrient management, i.e. the over-application of N and under application of P and K. This would lead to nutrient mining and imbalances which would have a long-term adverse impact on soil fertility and productive capacity.

Figure 3.4: Rice production, yields and fertilizer use, 1980 to 1999



Source: National Fertilizer Secretariat and Department of Census and Statistics.

### Comprehensive Rural Credit Scheme

Under the Comprehensive Rural Credit Scheme, the government continues to subsidize interest rates for short-term and long-term cultivation loans. Channeled through two State Banks, approximately 70 percent of the total allocated credit went to paddy producers, with the balance going to OFC producers. The annual interest rate of 16 percent in 1996-97 carried an interest subsidy of 7.5 percent, and when the interest rate dropped to 12 percent in 1998, the subsidy rose to 10 percent. In the late 1990s, total disbursements declined considerably (Table 3.5) due to poor agricultural performance that led to defaults in loan repayments. An important factor reducing incentives for farmers to repay their loans is the expectation that the government will forgive loans in default. In 1995, at a reported cost of Rs 6 billion (Daily News September 29, 2001), the government wrote off all past-due loans to farmers who had repaid 25% of the total owed. Prior to the 2001 elections, the incumbent government once again waived repayment of loans totaling about Rs157 million (\$1.7 million). Such arbitrary loan write-offs jeopardize successful implementation of the new credit schemes that the government announced in the 2002 Budget speech.

Table 3.5: New Comprehensive Rural Credit Scheme, Loan Disbursements and Interest Subsidy, Rs. Million, 1994-2000

	1994	1995	1996	1997	1998	1999	2000
Total loans granted, Rs million	980	668	590	479	463	503	153
Interest Subsidy, Rs million	73	50	44	35.9	46.3	50.3	15.3
% Share of Interest subsidy in total government expenditure	0.04	0.02	0.02	0.01	0.01	0.02	0.003

Source: Annual Report, Central Bank of Sri Lanka, Various Issues.

### Other Incentive Programs for Agricultural Sector

An increasing multiplicity of government schemes seek to improve agricultural performance and foster increased diversification. In addition to the fertilizer subsidy and the new comprehensive rural credit scheme, some other programs are:

- a) *Irrigation subsidy*: irrigation for agricultural production, from government-managed systems, is generally provided for free (see section on water resources).
- b) *Seed subsidy*: government seed agencies sell seeds at subsidized prices (see section on access to technology).
- c) *Agro-Wells and Micro-irrigation Subsidy Programs*: provide subsidies to farmers to establish a well for irrigation (introduced in 1989) and to purchase the associated pipe systems (introduced in 2000). The Agricultural Development Authority (ADA) constructs

the well for farmers. To purchase the pipes under the micro-irrigation subsidy scheme, ADA contributes Rs 25,000, while the farmer contributes Rs 12,500; the total subsidy amounted to Rs. 10.9 million in 2000.

d) *Second perennial crops project*: provides loans at concessionary credit—with interest rates of about 13% relative to market rates of 18-20%— for the establishment of mostly export-oriented commercial farms for fruits, flowers, spices, and foliage. A large proportion of the projects financed ranges from Rs 1-5 million each, up to Rs 13 million. The overall project is financed through a loan from the Asian Development Bank. The first project was completed in 1997.

e) *Export Agriculture Crop Assistance Scheme*: consists of a subsidy for planting and replanting of export crops. Over 50% of subsidies were given to pepper and cinnamon producers. Total subsidies amounted to Rs 53 million in 1999.

f) *Farm input support scheme*: announced during the 2002 Budget speech, it will provide farmers a cash coupon useable to purchase fertilizer, seeds, planting material or farm implements at subsidized rates up to the value of the coupon. The total budget for this scheme is Rs 2 billion.

g) *Various agricultural investment incentives*: these are provided by the Board of Investments and include tax holidays, duty-free equipment imports, exemptions from foreign exchange controls (see Chapter 5 for details)

In addition, agricultural households also benefit from Samurdhi income-transfer programs.<sup>8</sup>

Despite the multiplicity of programs, the expenditures have produced poor results. Failing to generate the anticipated agricultural growth returns, they have also proved unsuccessful in easing the government's growing fiscal burden through increased tax revenues from the creation of greater value-added. All the on-going schemes in the sector deserve an urgent reappraisal, not only to assess the performance and relevance of each, but also to rationalize, reduce duplication, and build synergies among them.

### C. Access to Improved Technologies

#### National Seed Policy 1996

In 1996, the Ministry of Agriculture, Livestock and Forestry (MALF) approved the National Seed Policy, but the National Seed Act to define the rules and regulations governing seed markets is still pending. The purpose of the National Seed Policy is to establish a viable seed industry in Sri Lanka to ease farmers' access to high quality seed from domestic as well as foreign sources (Box

<sup>8</sup> Samurdhi is a national program which aims to improve the economic and social conditions of youth, women, and disadvantaged groups by; (i) broadening their opportunities for income enhancement and employment; (ii) integrating them into economic and social development activities; (iii) linking family level economic activities with community development projects at the village, district, divisional and provincial levels; (iv) mobilizing their participation in the planning and management of projects and schemes for their upliftment; (v) fostering cooperation and savings among them and assisting them to obtain credit; (vi) facilitating the delivery of inputs and services of government departments, public corporations, local authorities, private sector and non-governmental organizations to beneficiaries of the program; and (vii) to implement the program and other government programs for poverty alleviation (Samurdhi National Program for Poverty Alleviation 1999).

<sup>5</sup> These include the Ministry of Agriculture and Livestock; Policy Development and Implementation; Fisheries and Ocean Resources; Irrigation; Water Management; Irrigation and Water Management; Environment and Natural Resources; Rural Economy; Cooperatives; Smallholder Development; Land; Commerce and Consumer Affairs; Economic Reform, Science and Technology; Home Affairs, Local Government and Provincial Councils; Southern Region Development; Central Region Development; Western Region Development; North West Region Development; and Plantation Industries.

**Box 3.1: Key Provisions of National Seed Policy and Seed Act of Sri Lanka**

**National Seed Policy**

- Establish and sustain a viable seed industry to serve farmers, foster private enterprises to produce and market quality seed and planting material.
- Allow private sector to play a major role in seed production and sale, while the public sector (government) will reduce its involvement in commercial seed production.
- Involve private sector seed entrepreneurs in decision making and provide them representation in the National Seed Council under the Seeds Act.
- Provide services in seed certification, quality assurance, supply of technology, training and seed market information.
- Share manpower, seed facilities, resources with the private seed industry.
- Provide genetic material and advanced lines and Basic Seed to help private sector to produce quality seed.
- Encourage development of new varieties of crops, enact Breeders' Rights through Intellectual Property Rights Protection Legislation.
- Encourage and assist commercial seed production in the private sector farmer organizations, companies, Cooperatives & Trade Associations.
- Cease competing with private seed industry in seed pricing and supply.
- Remove taxes and duties on seed imports
- Enact at the earliest National Seeds Act with necessary Regulations to regulate movement of seed and also provide legality to institutional bodies such as the Seed Certification Service, etc

**National Seed Act**

- Administration of the Act by the Director General of Agriculture.
- A National Seed Council represented by both public and private sectors will be appointed to establish guidelines and principles, undertake periodic reviews, advise the Minister, review quality standards, establish minimum standards, determine labeling requirements for seed, determine quality, etc.
- The NSC will have power to recommend fees for services, identify the need for seeds and facilitate provision of technical assistance, coordinate management, funding, manpower, etc.
- Registration of seed handlers, seed certification service directions, offences and appeals, etc.

Source: Charles 2002.

3.1). The aim is to encourage the private sector to establish enterprises for seed and planting material production, processing and marketing as the Department of Agriculture reduces its role in commercial seed production and supply. One outcome of the seed policy is the establishment of the National Seed and Planting Materials Committee (NSPMC) under the MALF with the participation of the private sector. In 1998, the NSPMC completed and sent to Parliament the Seed Act that specifies the rules and regulations that will govern seed production and marketing in Sri Lanka. The legislation, however, is still pending. Another gap in the regulatory framework is the lack of an intellectual property rights law, a critical step toward attracting investments (both foreign and domestic) in research and development in agriculture and other sectors, as well as encouraging the transfer of technology suitable to Sri Lanka from overseas. In the meantime, this absence of a clear regulatory framework is reducing the incentives for investments in the seed industry.

**Plant Protection Act, No. 35, 1999**

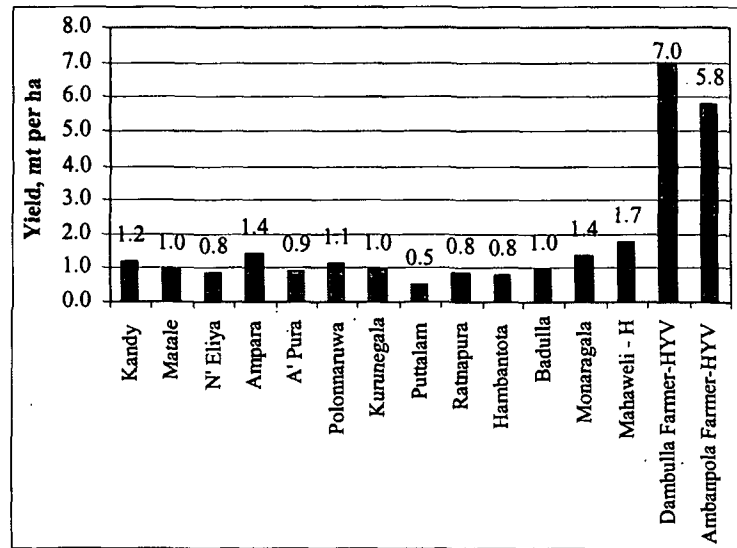
The Plant Protection Act, No. 35 was approved by Parliament in 1999, but the revised regulations governing seed and planting material imports are still pending. The Act, which builds on the Plant Protection Ordinance No. 10 from 1924, makes the National Plant Quarantine Service (NPQS), under the Director General of Agriculture responsible for implementation. Amendments to earlier regulations have been drafted, but not officially enacted. The delay in releasing the revised regulations and procedures not only increases the uncertainty regarding requirements for the importation of seeds and other planting materials, but also raises costs, as each entrepreneur has to discuss the feasibility of each import request with the NPQS to determine which regulations apply.

Current plant quarantine regulations are widely perceived as excessively restrictive, serving as a barrier to entry rather than an environmental filter for imported technologies. Under the Plant Quarantine Act, there are several categories of restrictions: (i) prohibited plants where imports can only be undertaken by the Department of Agriculture or Commodity Research Institute with NPQS consent; (ii) restricted plants and planting material which the private sector can import, if specific requirements in the regulations are met; and (iii) plant material that is completely banned from entry. Would-be importers, however, complain that the many requirements are outdated and inadequate to



meet the rapid advances in research and technology development occurring worldwide such as the updating of the host index of plant diseases. While screening for diseases, pests and other environmental threats are essential functions of plant quarantine regulation, excessive restrictions can impose significant opportunity costs on farmers and the economy. Although import restrictions on seeds and planting materials were lifted in the mid-1990s, restrictive quarantine laws and inspection practices limit domestic access to improved varieties. Moreover, private seed importation is subject to complex permit and inspection procedures that raise costs and discourage private initiative.

Figure 3.5: Comparison of current average district level maize and hybrid maize yields in Sri Lanka 1999.



Source: Department of Census and Statistics, S.H. Charles 2002.

One recent example of potential economic loss related to the ban on imports of hybrid maize from Thailand. For over a decade, the incorrect listing of a maize disease (*E. stewartii*) in Thailand prevented Sri Lanka from accessing high-yielding corn hybrid varieties produced there. Only a personal visit by the Director General of Agriculture to Thailand corrected this mistake and ended the ban. Notably, recent trials sponsored by the Agro-Enterprises Project of United States Agency for International Development (Agent) showed that the existing yields of 1.2 mt/ha in Sri Lanka could be trebled with the adoption of the hybrid maize from Thailand (Figure 3.5). A private company reportedly had to follow a similar process to enable the import of banana planting material from Israel. As an illustration of the possible gains to farmers of access to improved technologies, Gisselquist and Pray (forthcoming) estimated the impact of the seed reform in Turkey in 1982, which opened access to and fostered the adoption of hybrid maize. By the mid-1990s, about one-third of maize area was planted to hybrids. Comparing the "with" and "without" hybrids situation, they estimated that during the period 1990-92, the net annual financial benefits generated by use of hybrids by farmers amounted to about \$97 million (\$74 million, assuming international prices for maize and fertilizer).

### Agricultural Research

A large number of government institutes conduct agricultural research, an area with extremely limited private sector involvement. The official agencies include the Department of Agriculture, plantation (tea, coconut, rubber) research institutes, several national institutes reporting to the Council for Agricultural Research Policy and universities. The government's research effort has been relatively successful in raising the productivity of rice, but less so for other crops. Past reviews found the public agricultural research system too rice-focused, largely driven by the research interests of the scientists, highly fragmented, and largely inattentive to socio-economic or financial analysis. The government has established a number of priority-setting, planning and competitive grant research funding schemes, but complicated screening procedures deterred applicants. At the same time, private sector investments in research languished, because of the absence of intellectual property rights protection, uncertainties with regard to regulations and procedures in the seed market,

uncertainties with respect import policies of various agricultural commodities, and the subsidized sale of planting materials by government agencies.

### Agricultural Extension

Agricultural extension, devolved to Provincial Councils in the early 1990s under the 13<sup>th</sup> Amendment to the Constitution, has been severely weakened over the last decade. The field level agricultural extension workers were transformed into *Grama Niladharis* or village facilitators, effectively eliminating their role in disseminating agricultural information. Agricultural extension activities, if any, are now undertaken by higher level agricultural extension officers, such as agricultural instructors and district agricultural extension officers, whose contact with the farm communities is irregular (Tabor et al 2000). Additionally, extension work has suffered from the lack of suitable improved technologies to transfer due limited linkage with the Central government's research activities, funding and mobility constraints and a tendency to use extension to implement government subsidy schemes. Analysis of SLIS data confirm the limited access by farmers to extension services. By 1999-2000, only about 13% of agricultural households reported having received technical assistance from a government extension agent (Table 3.6), and landless and marginal farmers appeared even more handicapped in accessing extension services. Large disparities also mark the accessibility of such services across provinces, with the North Central province having the largest share of households (about one-third) receiving assistance. Of the other more agriculture-based provinces, the Southern, Northeastern and Uva provinces have the lowest access (Table 3.7).

Table 3.6: Access to technical assistance from extension agencies by source and farm size.

Source of Agricultural Extension Assistance	Percentage of Households With Access to Technical Assistance					
	Landless	Marginal	small	medium	large	Total
All agencies (government, NGOs etc)	11.8	9.2	12.2	23.1	16.8	15.0
Government	9.2	8.2	11.5	20.4	14.8	13.2

Note: Farm sizes are based on the amount of land owned exclusively by the household. Marginal- the household owns less than 1 acre of land (0.4 ha); Small-the household owns between 1 and 2 acres (0.4ha-0.8 ha); medium-the household owns between 2-4 acres (0.8ha-1.6ha); and large- the household owns greater than 4 acres (greater than 1.6 hectares).

Source: SLIS 1999-2000

Table 3.7: Access to technical assistance from extension agencies by source and province.

Source of Agric. Extension Assistance	Percentage of Households With Access to Technical Assistance								Total
	Western	Central	Southern	Northeastern	Northwestern	North Central	Uva	Sabaragamuwa	
All agencies (government, NGOs etc)	4.6	16.7	4.6	4.6	17.1	36.3	5.2	14.6	15.0
Government	3.7	15.7	4.6	3.8	13.3	32.9	4.8	12.7	13.2

Source: SLIS 1999-2000.

In 1999, the Department of Agriculture began piloting "fee-based" agricultural extension services as part of the Second Perennial Crops project. Two private firms were contracted to provide technical assistance in project planning, design and implementation of commercial agricultural activities funded under the project. The fee charged is set at 5% of the project loan. By design, this approach concentrates only on larger commercial farmers and enterprises, and its application to small holders may be more limited.

## D. Water Resources

### Water Resources Availability and Use

Rainfall patterns divide the country into wet and dry zones. The wet zone receives a mean annual rainfall over 2,400 mm, and the dry zone receives less than 1,500 mm.<sup>10</sup> The wet zone is

<sup>10</sup> Sri Lanka has distinct seasonal and regional variations in rainfall distribution due to the bi-monsoonal climatic pattern, consisting of a northeast monsoon from October to March and a southwest monsoon from

partly rural, and is characterized by limited land area, dense population per unit of land, growing population pressure, and a dual peasant and plantation agricultural economy except in and around its limited metropolitan centers. While water availability is higher, land resources limit development. By contrast, the dry zone, home to about two thirds of the population (13 million), also covers nearly two-thirds of the country and is predominantly rural. In it, land is potentially more available for further development, but water is limited.

Dry-zone land, predominantly used for agriculture, requires water to be productive. Since most of the dry zone's total annual rainfall comes during the short monsoon season from October to January--the wet (*maha*) season -- its year-round water requirements, mostly for irrigation and domestic use, are supplied by a large number of village-tank cascade systems, run-off-river systems, and major irrigation tanks, a few of which are augmented through inter-basin water transfers from the wet zone.

Surface water supplies the bulk of water demand. To meet drinking, agriculture, industrial, recreational and ecological needs, a large portion of the country's annual rainfall is captured and stored in and diverted by about 60 large multi-purpose dams, about 260 major irrigation tanks, and about 12,000 minor reservoirs called "village tanks" and run-off-river systems. Unlike surface water, ground water is a limited resource. Its regional availability is yet to be scientifically assessed, although it is likely that most high potential ground water aquifers have been identified and are already tapped. Ground water is traditionally used for drinking and other domestic uses by a large number of rural and semi-urban households in the entire country.

About 85% of developed water resources, mainly surface water, in Sri Lanka is used for irrigated agriculture. Sri Lanka has a total irrigated area of 560,000 ha, or 30% of the total agricultural area. More than 75% of irrigated land is in the dry zone, mainly for highly water-intensive paddy cultivation. The remainder of the water goes to domestic use (6%), industries (5%), and other purposes (4%). While the dry zone's water consumption for irrigation is very high, the wet zone's combined domestic and industrial water use is three times greater. About 70 % of the present population, most of them urban and semi-urban users, have access to safe drinking water supplied by means of piped systems, tube wells, and protected dug wells. The rest, mostly rural, rely on unprotected dug wells, rivers, streams, water bodies such as irrigation tanks and canals. However, only 32 % of the national population, mostly in urban and semi-urban areas, is served by pipe-borne water supplies. Hydro-power sector is the major non-consumptive water user.

### **Irrigation and Rural Development**

During the last five decades, irrigation development served as a major pillar of the rural development strategy. From 1980 to 1997, the GoSL spent about Rs 215 billion (constant 1996 rupees) on developing irrigation infrastructure alone. While still accounting for a major share, irrigation outlays have, however, declined proportionally from 80% of total agricultural sector expenditures in the early 1980s to about 40% in 2000.<sup>11</sup> Most investments focused on the construction of new dams for power generation and surface irrigation systems, which were also closely linked with the government's program to resettle landless people, mostly from the wet zone, to the newly opened irrigation-settlement schemes in the dry zone (see section on land policy). The most important program, and that which absorbed the largest share -- about Rs 72 billion (current prices) -- of government expenditures, was the Mahaweli Project, initiated in the late 1970s and managed by the Mahaweli Authority of Sri Lanka (MASL). In addition to irrigation, the MASL also

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April to September. They define the cropping seasons: maha (wet) season which coincides with the northeast monsoon and the yala (dry) season which coincides with the southwest monsoon (Amarasinghe, et al. 1999).

<sup>11</sup> A major staff reduction program was undertaken by the MASL that was completed in 1998. This contributed to the reduction in expenditures. As part of the scheme, "Voluntary Early Separation Package," 6,002 out of a total of 10,780 staff voluntarily left the MASL.

provided for housing, education, health and agricultural extension services for settlers and rural infrastructure such as roads, markets etc. By 2000, about 128,576 families had been resettled in the Mahaweli area (Presidential Secretariat 2000). The project added about 120,000 ha of net irrigated area to the existing 85,000 ha of irrigated lands in the dry zone. In line with the government's food self-sufficiency goal, paddy cultivation was promoted in these areas, contributing to the rapid growth in rice output in the 1980s.

Irrigation systems in Sri Lanka are divided into two categories, major and minor systems. Major systems cover a command area of more than 80 ha, and are managed by government. Minor systems cover a command area of less than 80 ha and include village tanks, weir systems or *anicuts*. The larger systems have been generally associated with such government land-settlement programs as the Mahaweli Project. With the exception of irrigated rice area, however, there are no readily available statistics on aggregate net or gross irrigated area in Sri Lanka. Between TE 1982/83 and 1999/2000, the gross area irrigated (sum of irrigated area in different seasons, GIA) planted to rice increased by 87,355 ha, due exclusively to the roughly 88,000-ha increase in GIA in major systems. That growth more than compensated for the minor contraction in rice-cropped area under minor and rainfed systems, which shrank by 1,433 ha and 101 ha respectively. The increased access to irrigation contributed to increasing rice output directly, through the increase in area planted, and indirectly through the impact of irrigation on yields. As noted earlier, irrigated rice yields are 20% to 30% higher than rainfed yields.

In the Mahaweli areas<sup>12</sup>, almost 90% of GIA is devoted to rice cultivation. Of the approximately 4,500 ha in new GIA created between 1994 and 1999, 83% went to additional rice cultivation. By 1999, the GIA devoted to rice in Mahaweli amounted to 140,000 ha, while those of field crops totaled about 23,000 ha only. While the Mahaweli Authority is encouraging farmers to diversify to other crops during the *yala* season, when water is in shorter supply, farmers have been slow to change. A number of factors hindered diversification. For example, farmers in System H of the Mahaweli reported problems with irrigation water schedules tailored to paddy production, lack of access to improved technologies, poor market infrastructure, and lack of market support services. Facing difficulties in finding potential buyers, they lacked incentives to grow crops other than paddy.

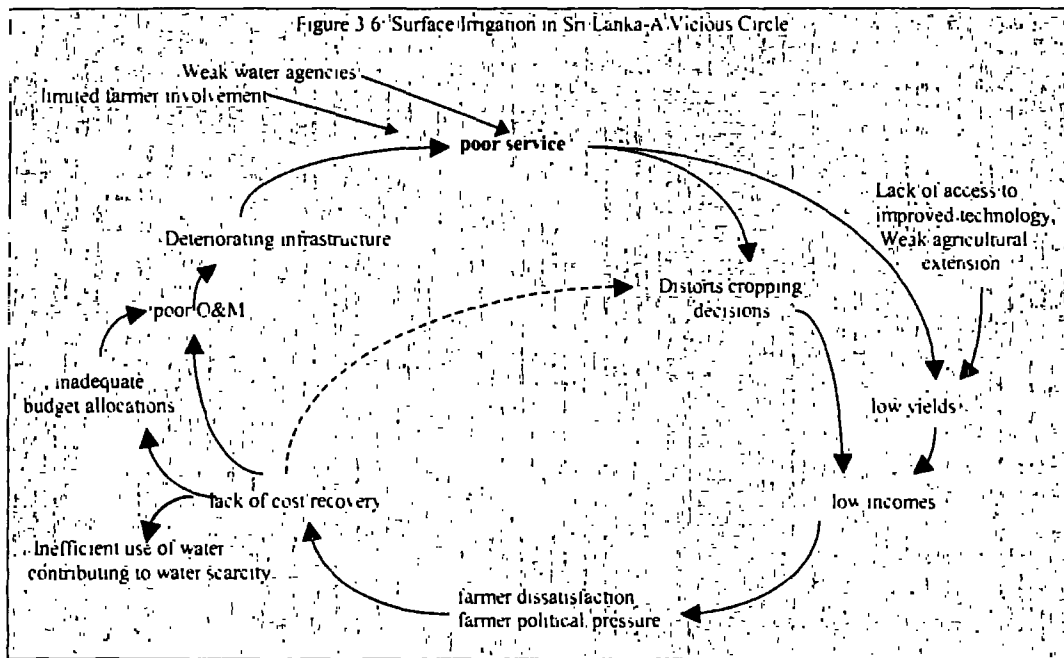
#### Projections of Regional Water Scarcity

Aggregated national statistics mask the threat of future water scarcity in several districts. Several studies projecting water demand and supply conditions have ranked Sri Lanka as a country with either little, no, or moderate water-scarcity (Engleman and Leroy 1993, Raskin et al. 1997, and Seckler et al 1999). A more detailed temporal and spatial analysis of water supply and demand conditions by Amarasinghe et al. (1999), however, forecast that at the current rate of water use, severe water scarcity will affect 12 of the country's 25 districts by 2025. The districts in the dry zone -- Ampara, Anuradhapura, Batticaloa, Hambatota, Jaffna, Killinocchi, Kurnegala, Mullaitiv, Polonnaruwa, Trincomalee and Vavunia -- currently account for about 75% of irrigation withdrawals and have the highest projected increase in consumption. The study, however, found that by doubling irrigation efficiency, the total demand for water in 2025 in the most water-scarce districts could be reduced by 50%, ensuring more-than-adequate supplies for future residential and industrial consumers.

Over-extraction of groundwater is another growing problem. Saline intrusion due to over-extraction of ground water and poor agricultural drainage is a concern in many coastal areas. In Jaffna for example, agricultural lands have become unproductive due to over-extraction and to saltwater intrusion. During the last ten years, the government encouraged the widespread adoption of shallow wells for small-scale agriculture nation-wide. Problems associated with groundwater

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<sup>12</sup> These include System B,C, G, H, UW and L.



extraction are emerging in many areas, including the drastic drop in water table, which in turn adversely affects drinking water availability in rural areas.

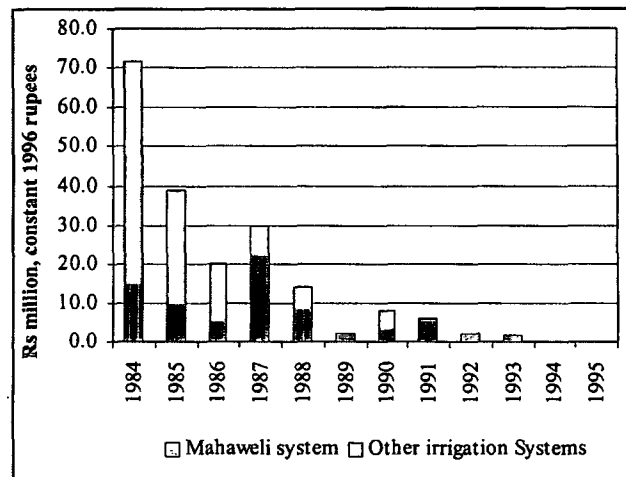
### Threats to Sustainability of Irrigation Systems

The huge investments in expanding surface irrigation infrastructure are threatened by multiple problems creating a vicious cycle that threatens long-term sustainability. Inadequate priority to and funding for operations and maintenance (O&M) lead to the rapid deterioration of canal systems resulting in poor quality of services (Figure 3.6). These shortcomings also explain the need for the repetitive and costly rehabilitation – sometimes every 5-6 years -- of systems to make up for inadequate maintenance. Institutional weaknesses in the water-agencies combined with minimal involvement of farmers impede greater quality improvements and “user-orientation” in service delivery. The poor quality of water service delivery hurts farmers in several ways. Poor reliability of water delivery and the frequent lack of access to water by tail-enders, combined with lack of access to agricultural extension and improved technologies, contribute to low crop yields. In many areas in the dry zone, inadequate user involvement in decision making regarding water delivery—both in terms of quantity and timing—impedes farmers’ ability to diversify out of paddy to higher value crops or alternative crops in general, because current water delivery schedules are designed for paddy cultivation. Lower agricultural productivity, due to lower yields or hard-to-break ties to low-value paddy production, in turn reduce farmers’ income generating potential. Under these conditions, the introduction of water charges becomes politically difficult and is thus opposed by many stakeholders. With no ability to raise funds directly, and exacerbated by the tightening fiscal situation, inadequate budgetary allocation is devoted to operation and maintenance, thus closing the vicious circle. Providing water for free, however, leads to other closely related negative effects. It reduces the incentive for farmers to save and use water efficiently. This is especially critical in view of projections of increasing water scarcity in some areas in the dry zone. Free water encourages the cultivation of water-intensive crops, such as paddy, that will not be sustainable under conditions of increasing water scarcity.

Past GoSL attempts at cost recovery of O&M were largely unsuccessful due to the disconnect between fee collection and service quality. Under increasing budgetary pressures, the GoSL embarked on a program to collect O&M fees from farmers in the early 1980s. During this period, the Irrigation Management Division of the Ministry of Irrigation and the MASL undertook aggressive campaigns to collect O&M fees. From a peak of Rs71 million in 1984 (constant 1996

rupees), revenues declined sharply, in large part due to political influence (Figure 3.7). The lack of connection between the O&M fees and service quality discouraged farmers from paying fees that went to the general treasury without necessarily being returned to the irrigation agencies for use in O&M activities. Finally strong political opposition led to the campaign's abandonment by 1995. Since then, the GoSL adopted a policy not to collect payment in cash, but rather through voluntary labor for canal maintenance and, in some cases, payment-in-kind to the *yaya palaka* or field supervisor (Samad and Vermillion 1999)

Figure 3.7. Annual Collection of O&M charges, 1984 to 1995, Rs million (constant 1996 rupees)



Source: Irrigation Management Division.

In 1988, the GoSL became one of the first South Asian countries to institute a policy of sharing the responsibility for O&M with farmer organizations (FOs). In medium and major schemes (greater than 80 ha), the FO and water agency personnel were made jointly responsible for system management. FOs took charge of O&M below the distributary head, while the water agency retained control of the headworks and main canal systems. For minor systems (less than 80 ha), full responsibility for O&M was transferred to the FO. This "Participatory Irrigation System Management" program was implemented in a number of major and medium schemes under three government sponsored programs: Integrated Management of Irrigation Schemes, Management of Irrigation Systems program, and in Mahaweli Project systems.<sup>13</sup> Box 3.2 describes the Participatory Irrigation System Management program. Both the National Irrigation Rehabilitation Project (NIRP) and the Mahaweli Restructuring and Rehabilitation Project, financed through World Bank loans, supported this program.

The impact of this policy, however, is mixed. A recent assessment of effectiveness of the system management transfer program to FOs by Samad and Vermillion (1999) found only partial devolution of decision-making authority to farmers. The government focused on setting up the farmer organizations, thus contributing to some improvement in communication between farmers and the agency personnel and in the participation of farmers in decision-making. But there remains a reluctance among water agency officials to fully develop FO capacity to manage the system or to redefine the agency's responsibilities so as to change its accountability relative to the FOs. Although one of the objectives of the program was to improve the maintenance of irrigation facilities and irrigation service, the study found that government expenditures on recurrent costs declined after the transfer. Hence it was not surprising that farmers interviewed as part of the study saw no follow-on change in service quality. Improvements were only observed in the rehabilitated schemes. Currently, there is no broadly accepted model for an organizationally and financially sustainable O&M arrangement in the irrigation sector.

<sup>13</sup> The Integrated Management of Irrigation Schemes covered five schemes, and includes most of the large irrigation schemes in the country. The Management of Irrigation Systems program serves medium sized schemes. It is estimated that about 85% of the 200 schemes included under these three programs are under participatory management (International Irrigation Management Institute and Hector Kobbekaduwa Agrarian Research and Training Institute 1997).

### Box 3.2: Sri Lanka Irrigation Management Transfer Policy

The Government of Sri Lanka formally adopted a policy of transferring full responsibility for the operation and maintenance (O&M) of minor irrigation schemes to farmer organizations (FOs) in 1988. Farmers and agency personnel in the medium and major schemes were made jointly responsible for managing the systems. FOs were to take charge of O&M of irrigation facilities below the distributary channel head, with the irrigation agency retaining control of the headworks and the main canal system. This "Participatory Irrigation System Management" program was implemented in a number of major and medium schemes under three government-sponsored programs: Integrated Management of Irrigation Schemes (INMAS), Management of Irrigation Systems (MANIS) program, and in the systems under the Mahaweli Development Project. The INMAS program was initiated in 1984. There were 35 schemes under this program, which includes most of the large irrigation schemes in the country. The MANIS program serves the medium-sized schemes. It has been estimated that about 85 percent of the 200 schemes included under these three programs are under participatory management. The objectives of the program are to: (i) relieve the government of the financial burden of funding recurrent expenditures for irrigation; (ii) improve the maintenance of irrigation facilities and the irrigation service; (iii) enhance the productivity of irrigated land and water; and, (iv) promote a spirit of self-reliance among farmers in irrigation schemes.

Farmer organizations primarily dealt with irrigation matters, but statutory provisions permit them to formulate and implement agricultural programs for their area, market farm produce, and distribute production inputs. Owner cultivators and occupiers of land in the designated area are eligible for membership in FOs, with membership open to only one person per plot of land. In most localities, cultivating a plot irrigated by a particular distributary channel, regardless of the tenure pattern, is a sufficient qualification for membership. FOs can become legal if they register with the Department of Agrarian Services and the Land Commissioner approves the registration. Once they are registered, FOs have authority under the Irrigation Ordinance to formulate rules on maintenance, conservation, and management of irrigation infrastructure under their jurisdiction, to devise procedures for distributing water within the area under their command, and to impose and levy fees to recover the costs of O&M.

The transfer of responsibilities from the government to the FOs can take place informally or formally. Informal transfer is a verbal agreement between the agency and the FOs. Once FOs are established and considered capable of handling responsibilities, the irrigation agency formally "hands over" the O&M of distributary channels to FOs. An agreement is signed between the FOs and the agency stipulating the responsibilities of each party. The table below summarizes management responsibilities assigned to various entities before and after the introduction of participatory management.

#### Assignment of responsibilities before and after participatory management.

Management Function	Before participatory management	Participatory management
Seasonal planning	Done by agencies and ratified at <i>kanna</i> (seasonal) meeting	Done by Project Management Committees
Operations planning	Done by agencies; basic plans ratified at <i>kanna</i> meetings	Done by agencies; basic plans ratified by PMCs
Operation of headworks and main and branch canals	Managed by the irrigation agency	Managed by the irrigation agency
Distributary channel operations	Managed by the irrigation agency	Managed by FOs
Field channel operations	Managed by the irrigation agency	Managed by field channel groups (FCGs)
Maintenance of headworks and main and branch canals	Planned and managed by the irrigation agency	Managed by the irrigation agency in priority order determined by the PMCs
Distributary channel maintenance	Planned and managed by the irrigation agency	Planned and managed by the Fos
Field channel maintenance	Done by farmers individually or collectively under the direction of Field Supervisors of the Department of Agrarian Services	Done by the FCGs

Source: Samad and Vermillion, 1999.

Many parts of other water-related infrastructure are deteriorating. A recent review of a sample of 32 major dams out of the total of 320 in the country (as part of Mahaweli Restructuring and Rehabilitation Project) revealed that major dams have serious safety and conservation weaknesses. In addition, of the approximately 18,000 village tanks, only about 12,000 are believed to be in operation. These tanks, which are hydrologically arrayed in cascades and capture substantial amounts of dry-zone rainfall, perform a critical function in supplying water for domestic and irrigation use, as well as meeting ecological needs in rural areas. Heavy silting has reduced the storage capacity of most of the small village tanks.

### **Multiplicity of Agencies in Water Sector**

The multiplicity of agencies in the water sector adds to the difficulty of sustainable water resource management. Completely lacking formal coordination mechanisms, several public agencies at several levels of government, with different geographical boundaries, follow different procedures for water planning and management. Some even work with substantial overlaps and duplication of responsibilities. For example, while at least 8 agencies are involved in water quality management, taken together, they cover neither the entire spectrum of water quality issues nor all water sub-sectors and geographical areas. At the same time, major gaps occur in the roles and functional responsibilities of existing institutions, (e.g. soil conservation, watershed management, storm drainage management, wastewater management, ground water management). There is a lack of standardization across departments on technical matters related to water planning and development. The mission and strategies of national-level water agencies (Mahaweli Authority and Irrigation Department) focusing on water resources development are now outdated and a new paradigm is required to focus on closer, integrated management of water resources. Not only are the role and functional responsibilities of sub-national government agencies (Provincial) not clearly defined and established; they often do not have the required staff skills and competencies to carry out their functions effectively. No public agency is responsible for developing rural drinking water facilities--private sector is prohibited. Provincial irrigation is the responsibility of provincial irrigation agencies, but they lack the direction, commitment and capacity to develop, support and work with farmer organizations (one of the key reasons for failure of the National Irrigation Rehabilitation Project).

### **Lack of a Comprehensive Framework for the Water Sector**

Sri Lanka has no comprehensive water-sector framework capable of addressing emerging resource management, institutional, economic and social issues. Up to about the mid-1980s the Government's basic water strategy was to: (i) restore all abandoned irrigation schemes of ancient origin (running back to about 500 AD) in the dry zone and resettle landless people from the thickly populated wet zone into the newly opened, state-owned, agricultural lands under those schemes and (ii) develop untapped surface-water sources for hydropower and agriculture development and again to resettle these new areas with landless people from the wet zone. Hence, traditionally the Government's water strategy has centered on development for power generation, new construction to open up new areas to irrigation and the rehabilitation of existing irrigation schemes. Recognizing that the development phase of water resources in Sri Lanka is at or near its end, the GoSL is turning its attention to addressing the other key issues. These include the tightening intersectoral competition for water and the daunting social and fiscal implications of ensuring adequate and equitable supplies for various users. To this end, the Government established the National Water Resource Council (NWRC) to manage water resources from the national perspective. However, the lack of a comprehensive framework for water resource management remains a major obstacle to dealing with various challenges. Policy and legislation for major water sub-sectors including irrigation and hydro-power are yet to be articulated. Water sector functional responsibilities are fragmented and overlapping among about 40 uncoordinated water agencies. The knowledge about available ground water resources and their potential is inadequate for long term planning, and water agencies lack conceptual orientation and prior experience in integrated water resources management. The country lacks capacity and skills required for the implementation of new policy instruments and approaches such as water entitlements, water pricing, river basin management etc.

Reforming water policy and practices will require overcoming strong socio-cultural and political sensitivities associated with water. With assistance from the Asian Development Bank (ADB), the Government is developing a national water policy for Sri Lanka (Box 3.3), approved in draft by the Cabinet of Ministers in March 2000, and a National Water Resources Management Authority is being established to implement the water policy. Although the policy is being revised in



view of the subsequent concerns expressed by NGOs, the media and politicians, its finalization has been retarded by a lack of political will and commitment to reform. In some respects, the pace reflects deeply rooted socio-cultural and political sensitivities associated with water. For example, "O&M fee recovery" and/or "water charge for irrigation" are considered politically and socially unacceptable, because many believe water is a "god-given gift." A lack of broad-based public and political awareness and understanding either of the emerging water scarcity challenges or the practical meaning of the provisions of the Water Policy clouds the debate and hampers progress in moving forward with a sensible policy. As policy revision proceeds, a serious risk arises from the proposal to drop key measures, including provisions for cost recovery and water pricing and the establishment of water entitlements and their tradability and transferability. These measures would have important implications for ensuring the longer term and sustainable use and management of the increasingly scarce water resources in the country.

### E. Land Policy and Administration

A critical feature of Sri Lanka's land ownership pattern is the Government's ownership of large tracts of land. Of Sri Lanka's total 6.6 million ha, about 86% is owned by the government. Of that, about 1.38 million ha is farmed by private farmers under varying tenure arrangements. Transferred to private farmers through various land settlement programs beginning in the 1930s, these lands are subject to various restrictions including leasing, sale, mortgaging, inheritance and minimum size, which in turn have adversely affected farmers and the agricultural sector in several ways.<sup>14</sup> They restricted the optimal use of the land, constrained farmer access to credit, and in limiting land transactions, have led to the creation of a large cadre of part-time farmers with limited incentives to maximize the land's productive potential. Successive reforms of land legislation have increasingly liberalized land markets, but only in 2002 did the Government decide to phase out some of the most restrictive features. These are elaborated below.

Several key laws have shaped land tenure in Sri Lanka. These include:

#### a) Land Policy

- **Crown Lands Encroachment Ordinance of 1840** transferred all lands without private title--forests, waste, unoccupied, or uncultivated land--to the state.
- **Land Development Ordinance (LDO) 1935** gave the government authority to distribute land to households under various schemes for cultivation and housing. These included the dry zone colonization schemes, village expansion schemes, highland resettlement schemes, youth settlement schemes, regularization of encroachments, middle class allotments, land grants (special provisions), and rainfed farming settlement schemes. The LDO also established the Land Commissioner's Department, which is responsible for administering, protecting, and developing all state land. Under the LDO, the beneficiary received a restricted title in two stages, first, as a permit to use and develop the land. After the land is developed, the beneficiary becomes eligible to receive a grant for a 99 year lease, for which the grantee and his/her successors are required to make annual payments to the State. Each grantee was allocated 1.01 ha (2.5 acres) of cultivable land and 0.2 ha (0.5 acres) of homestead.<sup>15</sup> The dry zone colonization scheme is the most prominent and is integrated with the implementation of the Accelerated Mahaweli Development Program for which a major component is irrigation development. LDO land, however, cannot not be sold, leased, mortgaged, seized or sold in execution of a court decree nor subdivided. It is subject to unitary use, access and succession.

<sup>14</sup> Another 0.88 million ha are privately-held agricultural land and largely located in the Wet Zone of the country.

<sup>15</sup> Originally, the unit of allocation was 2.02 ha (5 acres) of lowland or irrigated paddy land and 1.21 ha (3 acres) of highland.

### Box 3.3: Proposed Water Sector Policy

The objectives of water policy will be achieved through the application of an integrated water resource policy framework, implemented under revised legislation and through a coordinated institutional framework. The policy framework will be extended to cover all important aspects of water-resource management. Policies and plans will be developed in an open and consultative manner and will be updated from time to time. The policy will be coordinated with other national policies, and will be directed toward the achievement of broad social objectives. Water-resources policy will also be reflected, as appropriate, in the policies and strategies of water-related sectors.

- This policy applies to all surface and groundwater and to all river basins. The institutional arrangements for coordination within the water sector apply to all agencies involved in water-resource management. For the purpose of river basin planning, water allocation and other aspects of water resource management priority river basins will be identified through a phased approach.
- National and multi-basin water-resource plans will be prepared to address strategic water-resource issues such as national objectives (food security, industrial location, etc), coordinated management of water resources for hydropower generation, inter-basin water diversions and identification of priority river basins for more detailed planning.
- Water-resources planning and management will be carried out by a set of national, apex agencies independent from those responsible for specific water-using sectors. The apex agencies will consist of:
  - a National Water Resources Authority responsible for clearly defined policy, regulatory functions regarding water resources,
  - a Water Resources Council which will have coordination and advisory functions, and
  - a Water Resources Tribunal which will hear and resolve appeals regarding the allocation of water and will provide arbitration services for water-related disputes.
- Institutional arrangements will be made at the provincial and local levels as well so that stakeholders at these levels can participate effectively in water resource planning and implementation.
- Other national water-related agencies are expected to continue to carry out their present functions, while bringing their activities into line with this national policy and subsequent river basin plans, where applicable. The National Water Resources Authority will monitor and ensure compliance with national policy and river basin plans.
- The implementation of this policy will include co-operation, delegation of appropriate responsibilities to provincial and local authorities, and reliance on the private sector and on non-government, community and other local groups where possible. Delegation of water-resource management responsibilities will go along with capacity building and national oversight in order to ensure that these functions can be effectively carried out.
- Many water-resource management functions will be organized on the basis of river basins and groundwater aquifers. Basins and aquifers are natural units for information collection, planning, water allocation and other functions. Institutional arrangements will reflect this river basin orientation.
- A long-term perspective and phased approach will be used in implementing water-resource management. Some of the required functions, as well as institutional roles and relationships, are new to this country and must be tested and developed. Planning and implementation of water-resource management at the river basin level will be undertaken on a phased basis, addressing priority issues and needs first.
- This Policy applies to both water quality and water quantity. Since pollution control and other environmental protection functions are assigned under the National Environmental Act, a coordinated approach between the National Water Resources Authority and the Central Environmental Authority will be used in the monitoring, planning, administration and enforcement of both water quantity and quality.

The Policy does not encompass land and other natural resources although it is recognized that these are also closely connected with water resources and have a major impact on the achievement of water-resource objectives. Land-use information will be used in

- ***The Sale of State Lands (Special Provisions) Law 1973*** allowed eligible households to buy LDO alienated land. The allottee received the LDO grant on payment of the purchase price, which was calculated by taking the undeveloped value plus all other assistance paid to the settler for the development of the land.<sup>16</sup> This law was replaced by the Land Development (Amendment) Act of 1981.

- ***Land Development (Amendment) Act 1981*** gave the Commissioner of Lands authority to determine the purchase amount for the LDO, which could be paid in installments over 10 years or to waive payment altogether. The Act also replaced the 99-year lease with a perpetual grant called "Swarnabhoomi" and later called "Jayabhoomi." The amendment allowed LDO land to be

<sup>16</sup> From 1973 to 1981, when the Act was repealed, only about 509 grants had been issued.

mortgaged to obtain loans, but to be sold only to persons of similar standing and with Government permission. Because of the latter sales restriction, commercial banks still do not accept such holdings as collateral.

- ***Agrarian Services Act 1979***, as amended in 1990, 1991, and 1993 regulates tenancy in Sri Lanka.<sup>17</sup> It prescribed a ceiling of 2.20 ha (5 acres) on land that could be cultivated by a tenant, the rental payment and terms of succession. The 1991 amendment eliminated the restriction of cropping paddy lands only with paddy and provided for the establishment of Agrarian Services Committees to ensure efficient management of all agricultural lands and Farmer Organizations to promote development activities.
- ***Land Reform Law 1972 and 1975*** imposed ceilings on land ownership. The Land Reform Law 1972 imposed a land ownership ceiling of 20.2 ha (50 acres), of which no more than 10.1 ha (25 acres) could be held by a single family or an individual over 18 years of age. Any land in excess of the ceiling is taken over by the Land Reform Commission<sup>18</sup> and then redistributed to small-holder tenants. Public companies and temple lands were exempted from the land ceiling. As most holdings were below 2.02 ha (5 acres), the law brought only a small amount of land under state control. The Land Reform Law 1975 extended the ceiling to domestic and foreign companies, bringing a large proportion of the plantation sector under government control. As a result, about 63% of tea, 30% of rubber, and 10% of coconut area were expropriated by the Land Reform Commission and subsequently taken over by State Plantations Corporation, the Janatha Estate Development Board, and the Up-Country Cooperative Estates. These plantation corporations were eventually privatized in 1995.
- ***Land Reform (Special Provisions) Act 1981***, permitted leasing of lands to individuals or companies over and above the ceiling of 20.2 ha (50 acres) for purposes of agricultural development, and encouraged the return of foreign and domestic companies to agriculture.
- ***Agrarian Services Development Act, No. 46 2000*** (page 25) states that “(1) Paddy lands which have been identified by the Commissioner-General as paddy lands from which the maximum production can be obtained by the cultivation of paddy shall be cultivated with paddy during every season in which paddy can be cultivated thereon; (2) Where paddy cannot be cultivated during any season in an extent of paddy land, which has been identified above, due to a natural or other cause, an agricultural crop which is not a perennial crop may be cultivated on such paddy lands after obtaining the written permission of the Commissioner-General; and, (3) In the case of paddy lands from which satisfactory production can be obtained by the cultivation of any crop other than paddy, such paddy land may be cultivated with half yearly crops other than paddy after obtaining the written permission of the Commissioner-General. For the purpose of cultivating long-term crops in such paddy lands, the written permission of the Commissioner-General shall be obtained prior to the commencement of such cultivation.”

The multiplicity of inheritance and customary land laws reflecting the island’s multi-ethnic character adds further complications to land tenure. Kandyan law is followed in the Wet Zone,

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<sup>17</sup> The Agrarian Services Act 1979 supercedes earlier laws governing tenancy. The earliest is the Paddy Lands Act of 1958 which fixed the rent payable, made tenancy inheritable to improve tenure security and established Cultivation Committees. The Agricultural Productivity Law 1972 aimed at ensuring efficient operations of agricultural activities through the creation of Agricultural Productivity Committees. It provided for the dispossession of agricultural lands not used for productively. The Agricultural Lands Law 1973, replaced the Paddy Lands Act 1958, which provided the tenant cultivator the right to name a successor. The law also restricted the use of paddy lands for other purposes other than paddy cultivation. The Agrarian Services Act 1979 repealed the Agricultural Productivity Law and the Agricultural Lands Law.

<sup>18</sup> The Agricultural Productivity Law 1972 provided for dispossession of agricultural land also in case of sub-optimal use, and was considered part of the land reform laws.

Thesavalamai law is observed in Tamil areas, Moslem law in Moslem areas and Roman-Dutch Law elsewhere. Since these systems impose no restrictions on land subdivision through inheritance, land is subdivided into smaller and smaller pieces, particularly in intestacy (absence of a will). When extreme fragmentation of land due to the inheritance process reaches the point where further subdivision is economically unviable, owners often resort to rotational farming as in the Thattumaru (operator rotation) and Kattimaru (plot rotation) systems observed in the Wet zone.<sup>19</sup>

While the government's land policies succeeded in promoting greater equity in land ownership when first implemented, their current highly restrictive nature is increasingly hurting farmers in several ways. A major impact of the GoSL's land policy is the rapidly declining size of land holdings. Analysis of the SLIS 1999-2000 data show the average size of land owned is 0.6 ha; the average gross cultivated area is less than 1 ha (Tables 3.8 and 3.9). About 71% of agricultural households cultivate less than 1 ha of land, 90% cultivate less than 2 ha. The poorest households, as expected, own and cultivate the smallest holdings. With the exception of the North Eastern and North Central Provinces, the average land owned and cultivated is less than a hectare, an amount that limits income opportunities. Indeed, regression analysis using the SLIS 1999-2000 data show lack of land is an important determinant of a rural household's dependence on the non-farm sector. The probability of participation in the non-farm sector is negatively correlated with the amount of cultivable land—that is, an additional hectare of land reduces the probability of household participation in the non-farm sector by 18 percentage points. For LDO land, restrictions on mortgaging preclude its use as collateral to access the credit households could use to finance both income-enhancing farm and non-farm investments. For those wanting to remain in agriculture, the small landholdings, the lack of secure tenure rights, and the legal restrictions on acquiring or leasing-in land reduce incentives for productivity-enhancing investments. Those interested in shifting out of agriculture into non-farm activities, or merely moving to another location would have to leave without compensation for their land. In addition to fostering a large cadre of part-time farmers, these legislative provisions limit the ability of the land market to allocate land to its best use.

Table 3.8: Average Land Owned and Operated by Households Engaged in Farming by Rural Expenditure Quintiles

Land in hectares	Poorest	Second	Third	Fourth	Richest	Total
Land owned	0.46	0.47	0.53	0.55	0.86	0.56
Net cultivated area	0.58	0.62	0.75	0.84	1.09	0.77
Gross cultivated area	0.84	0.86	0.99	0.98	1.19	0.96
Cropping Intensity	1.45	1.39	1.32	1.17	1.09	1.25

Source: SLIS 1999-2000.

Table 3.9: Average net cultivated area and gross cultivated area by province

Province	Western	Central	Southern	Northeastern	Northwestern	North Central	Uva	Sabaragamuwa	Total
Net cultivated area	0.66	0.65	0.77	0.98	0.77	0.86	0.72	0.60	0.77
Gross cultivated area	0.75	0.88	0.87	1.48	0.80	1.23	0.75	0.77	0.96
Cropping intensity	1.14	1.34	1.13	1.50	1.04	1.43	1.04	1.28	1.26

Source: SLIS 1999-2000.

Although the government allowed the cultivation of other crops on paddy land in 2000, requiring every farmer to seek approval from the Commissioner of Agrarian Services prior to doing so remains a major impediment. The obligation raises the transaction costs of farmers who would like to shift to non-paddy cultivation, penalizing more small and marginal farmers who could least afford such additional costs. In view of the large number of farmers subject to this provision, government staff fully recognizes that enforcement would be impossible and extremely costly. Finally, this hurdle, which raises the difficulty and costs of diversifying, is inconsistent with the government's goal of encouraging farmers to shift to higher value production and develop a

<sup>19</sup> The operator rotation system provides all heirs access to a specific plot by rotation in cultivation, which in extreme cases could be every few years. Under the operator rotation system, several co-owners cultivate a number of land parcels, rotating them among themselves, so that each has equal access to all the plots.

diversified agricultural economy so as to raise farm incomes and reduce rural poverty. It also contradicts the large number of government schemes promoting crop diversification.

The current structure of agricultural land holdings handicaps the agricultural sector and the rural economy in several ways. The very small landholdings and concentration on low value production activities increase the need for households to depend on non-farm activities to meet consumption needs. A shift to higher value production could to some extent compensate for smaller farm sizes, but other constraints (e.g. lack of access to improved technologies and credit, trade policies, inadequate market support services and infrastructure limit opportunities for such change.

In January 2002, the Ministry of Land announced the granting of transferable titles to LDO beneficiaries. Farmers will be given freehold titles, which will transfer full ownership of the land, making them freely transferable (by sale and lease) and remove any earlier preconditions or bindings to the State. This measure is an important milestone in land policy reform as it will improve access to credit by farmers, by making it more attractive for banks to accept land as a loan collateral. The government's goal -- to be achieved in two phases -- is to provide 1.2 million freehold land titles, covering about 2 million acres (about 800,000 ha). The first phase is to convert the farmer-held permits given under the Land Development Ordinance into freehold titles. As a start, 405 ha (10,000 acres) of land is proposed to be covered by the end of 2002. The second phase involves converting the grants (also given under the LDO) that farmers already possess into titles. There are, however, several issues that will have to be addressed in implementing these new reforms. Among them are questions relating to consistency with existing inheritance law (which identifies a specific successor), informal credit sector loans backed by the land as "collateral", rights to land by women, etc. A communications campaign to inform farmers of the processes and procedures involved and their rights granted under the program will be critical.

#### b) Land Administration

For private land owners, the poorly functioning land administration system further hinders the functioning of land markets. Most private land records take the form of deed registrations that record transactions and serve as evidence in support or proving title to land. The insufficiency of deed registration in identifying an owner of a piece of land, combined with the pervasive co-ownership of land,<sup>20</sup> however, increases the transaction cost in the land and credit markets. Every time a parcel of land is sold, transferred or used as collateral, an extensive search -- as far back as 30 years -- of all past deeds associated with the land parcel has to be conducted to confirm ownership rights. These records are often with private surveyors and may not be readily accessible. Land transactions thus often involve significant cash and opportunity costs for clients. Furthermore, the deeds may not agree with the actual land specifications, hence disputes are common. In case of a dispute, settlement times for land cases in courts usually take more than ten years, and lack of affordability limits the access of poor landholders to dispute resolution.

Recently, and with support from the World Bank, the government has initiated a shift to a title registration system. A registration of title system is one where the parcel has been registered, with transactions thereafter registered against the parcel. A transaction is not legal until registered and priority is given to those who register first. Interest holders damaged by the operation of the system may be compensated for any loss incurred; a guarantee fund will be operated by the government for this purpose. A registration of title system facilitates boundary dispute resolution, transparency of records and efficient land administration (See Annex C for comparison of a deed and a title registration system).

Two key pieces of legislation govern land administration in Sri Lanka. These are:

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<sup>20</sup> The problem of co-ownership arises because of tradition involving dividing land among all children. This problem is pervasive in the Wet Zone.

- **Land Registration Ordinance 1863** introduced a system of title registration and registration of deeds. Problems associated with surveys and investigations made title registration ineffective. The registration of deed was implemented, currently under the Registration of Documents Ordinance 1927.
- **Registration of Title Act 1998**, provides for unencumbered and clear title to every parcel of land in the country, establishes a system of registration of land parcels and ownership rights, and creates a new system of land-transaction registration.<sup>21</sup> The Act, once revised to address remaining shortcomings, is expected to contribute to smoother transactions in the land and credit markets.

Sri Lanka has a very complex organizational arrangement for land administration, with key actors in five agencies in three ministries. In recent years collaboration between various agencies involved in the existing government initiatives in land titling has been problematic, even within the same ministry. The current legal and organizational framework contains a Registry of Title and a Registry of Land (which houses deed records). Without further changes in this arrangement, recipients of title would have to deal with both the Registry of Title and Registry of Deeds for all future transactions. Any long-term program would need to make a single organization responsible for registering the ongoing transactions to ensure the necessary coordination and cooperation between the staff operating the old and new systems of registration and a seamless hand-over between systems so that the public is not confused and does not lose confidence in the new system. An additional aspect of this issue concerns the prohibitive cost of establishing a series of new offices rather than adapting existing ones. The Registrar General's Department has the offices, staff, and facilities to undertake the ongoing transactions under the Registration of Title Act, after undergoing some retraining. If the Land Settlement Department (LSD) does this work on a large-scale, additional costs will be required for new buildings, furniture, archives, staff, and training. GoSL recognizes these risks and regards such costs as unacceptable. However, it is recognized that reorganization will take time. GOSL therefore proposes to develop the plan for future organizational arrangements based on an analysis of the operations and effectiveness of three pilot registries of title. As part of the reorganization, and to improve efficiency, the Registry of Land will also become the Registry of Titles and oversee implementation of the pilots.

Currently, the World Bank is assisting the GoSL through the Sri Lanka Land Titling and Related Services Project (a \$5.0 million Learning and Innovation credit) to develop the institutional framework and capacity for a new land titling system. The Project aims to help address land administration issues through operational testing of technologies, procedures, and processes in systematic titling (e.g. stakeholder communications, records search, survey, mapping, adjudication and title issuance) and related tasks (e.g., registration and records maintenance). The project's intended outcomes include reducing the per-parcel titling cost by two thirds, increasing the successful adjudication coverage from 50% to 95% of all parcels in a given area, and ensuring that the public is confident of the accuracy, functionality and fairness of the improved titling methods. The project will also strengthen the legal and regulatory framework, formulate policy (e.g. eliminate land market restrictions, establish affordable and transparent fee structures, etc.), develop a viable organization (including a cohesive structure, capable staffing, and sound information management strategy) and develop a plan for a long-term titling program.

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<sup>21</sup> This includes records containing information on parcel boundaries, name of owners and rights that third parties have over the land such as mortgages, leases and easements.

## F. Unpredictable Agricultural Trade Policies

Sri Lanka increasingly simplified and liberalized its trade policy during the 1990s. The government revised its import tariff structure several times, narrowing a thirteen-band structure in 1990 to four bands in 1991 and three in 1998 (5%, 20% and 35%). As per the recommendation of the Presidential Trade and Tariff Commission in 1997, the tariff bands were further reduced to 5%, 10% and 30% in 1998. The structure was modified to two bands -- 10% and 25% -- in 2000.

To provide some additional assistance to agriculture, imports of several agriculture inputs and equipment were liberalized in 1997. Imports of fertilizer and agro-chemicals; of cleaning, sorting and grading machines for seeds, grain, and dried leguminous vegetables; of seed-testing equipment; and of seed-packing machines were made duty free in 1997. Other items since made duty free include: greenhouses, poly tunnels, sprinklers, drip-irrigation systems, tea-bag-packing machinery and color separators, and some types of packing materials.<sup>22</sup> Duty free concessions also apply to imports of agricultural tractors, lorries, prime movers, refrigerated trucks and buses.

Agriculture, however, remains excluded from the two-band tariff structure. Import duties on agricultural products have been kept outside the bounds of the standard tariff structure, and as of 2000, were subject to a standard duty rate of 35% plus a 40% surcharge. This policy was meant to provide the sector more time to adjust in the medium term to lower tariff rates, after the liberalization of all non-tariff barriers in 1996.

Table 3.10: Statutory duty and effective import duties for selected commodities, 1996-2002.

Period	Statutory Duty	Duty Waiver	Effective Import Duty	Total Tax Incidence a/
<b>Rice</b>				
Pre-April 1996	35	0	35	7.6
Apr 15, 1996 - Jan 30, 1997	35	35	0	44.6
Jan 31, 1997 - Nov 20, 1997	35	0	35	44.6
Nov 21, 1997 - Jan 31, 1998	35	35	0	7.6
Feb 1, 1998 - Oct 23, 1999	35	0	35	44.6
Oct 24, 1999 - Dec 31, 1999	35	25	10	19.6
Jan 1, 2000 - May 10, 2000	35	0	35	46.3
May 11, 2000 - July 16, 2000	35	0	35	48.0
July 17, 2000 - January 2002	35	0	35	na
Jan 2002 to date	Rs 7 per kg			
<b>Potato</b>				
Pre-July 1996	35	0	35	54.7
July 1996 - Dec. 03, 1996	35	0	35	44.6
Dec 04, 1996 - Jan 31, 1997	35	15	20	28.8
Feb 01, 1997 - Nov 27, 1997	35	0	35	44.6
Nov 28, 1998 - Jan 31, 1998	35	15	20	27.8
Feb 1, 1998 - Nov 5, 1998	35	0	35	44.6
Nov 6, 2000 - May 10, 2000	35	0	35	46.3
May 11, 2000 - Aug 29, 2000	35	0	35	48.0
Aug 30, 2000 - Dec 7, 2000	35	0	35	60.2b/
Dec 8, 2000 - January 2002	35	0	35	na
Jan 2002 to date	Rs 20 per kg			
<b>Onion</b>				
Pre-July 1996	35	0	35	78.3
July 1996 - Dec. 3, 1996	35	0	35	44.6
Dec 4, 1996 - Jan 31, 1997	35	15	20	28.8
Feb 1, 1997 - Nov 27, 1997	35	0	35	44.6
Nov 28, 1997 - Jan 31, 1998	35	15	20	28.8
Feb 1, 1998 - Nov 5, 1998	35	0	35	44.6
Nov 6, 1998 - May 10, 2000	35	0	35	46.3
May 11, 2000 - Dec 31, 2000	35	0	35	48.0
Jan 1, 2001 - January 2002	35	0	35	na
Jan 2002 to date	Rs 6 per kg			
<b>Chillies</b>				
Pre-July 1996	35	0	35	78.3
July 1996 - Dec 3, 1996	35	0	35	44.6
Dec 04, 1996 - Nov 5, 1998	35	0	35	44.6
Nov 6, 1998 - May 10, 2000	35	0	35	46.3
May 11, 2000 - Dec 31, 2000	35	0	35	48.0
Jan 1, 2001 - Jan 2002	35	0	35	na
Jan 2002 to date	Rs 30 per kg			

Note: na - not available, a/ Includes the defense levy, stamp duty and other surcharges.  
b/ Includes 35% surcharge

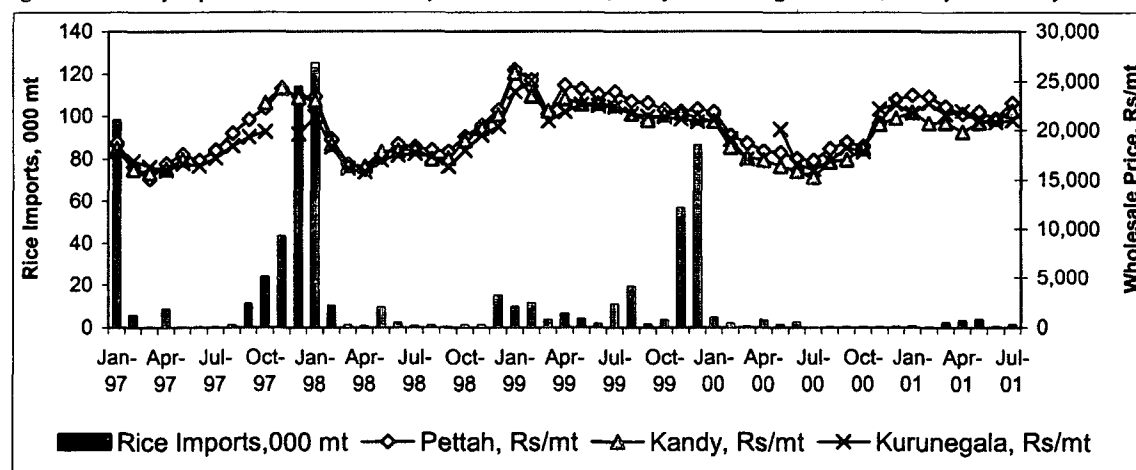
Source: Weliwita and Epaarachchi, 2002; Epaarachchi, et al. 2002.

<sup>22</sup> Packing materials exempt from duty include multi-layered packing materials, polythene film, and aluminum foil.

Agricultural tariffs in Sri Lanka are subject to unpredictable and frequent change (Table 3.10). In January 2002, the ad valorem tariffs for some key agricultural imports were converted to a specific duty. For example, instead of 35% ad valorem, the import duty for rice became Rs7/kg, a tariff equivalent to 36% of the unit import value in 2000. For other commodities, the specific duties translate to about 32% for chillies, 14% for red onions and 65% for potatoes.

Intermittent and unpredictable tariff changes adversely impact farmers, consumers and private traders. The government intermittently lowers the tariffs through duty waivers and permits imports through licensing for major agricultural imports during months when they are in short supply, and hence their domestic prices are high. These frequent, unpredictable changes create considerable uncertainty, heightening price risks for farmers, consumers and local entrepreneurs. They adversely affect producer returns and severely dampen incentives for investments in storage by the private sector. Farmers are worse off, because with fewer buyers willing to purchase their crop at harvest time, the farm-gate price drops during such months of excess supply. And the resulting under-investment in storage facilities and related services means that consumers face greater price fluctuations throughout the year. For instance, in October-December 1999, the government cut the import duty on rice from 35% to 10% to dampen the seasonal price rise (Figure 3.8). Many millers who had bought and stored large quantities of paddy during the previous harvest thus found it difficult to offload their stocks, because of competition from cheaper imports. The large storage losses they suffered reduced their incentive to purchase paddy during the 2000 maha harvest, leading in turn to a sharper fall in producer prices that prompted the government to ban rice imports from mid-July and to undertake procurement operations to prop up prices. However, with the drop in producer prices (which fell below the cost of production), farmers had neither incentive nor resources to increase cultivation for the next harvest. Inadequate rainfall also contributed to the dip in production. According to official projections, the area of land cultivated by farmers for the 2001 maha harvest fell by about 30% from the 2000 harvest.

Figure 3.8: Monthly imports of rice and wholesale price of rice in Pettah, Kandy and Kurunegala markets, January 1997 to July 2001.



Source: Department of Census and Statistics.

Trade agreements provide agricultural trade concessions to some countries. These agreements include the Bangkok Agreement, the Agreement on the Global System of Trade Preferences (GSTP) and the South Asian Preferential Trading Arrangement (SAPTA). Under the SAPTA, Sri Lanka provides tariff concessions to member countries on over 120 items of which the largest category of concessions is for imports of live animals and animal products. Sri Lanka also entered into a bi-lateral trade agreement with India, the Indo-Sri Lanka Free Trade Agreement, in December 1998. Under this agreement, Sri Lanka offers complete duty exemptions on approximately 300 items, and a 50 per cent preferential margin on a further 600 items.



These high agricultural tariffs, which keep domestic prices high, impose significant costs on consumers and the economy. They put a considerable burden on consumers, especially since rice, a basic staple, is the single largest item -- about 20% in 1995/96 -- in consumer food expenditures. This protectionist policy inefficiently ties up resources in these sectors, which could otherwise be used in activities where Sri Lanka has comparative advantage. In the case of potato, the artificially high domestic price is resulting in adverse environmental consequences by encouraging widespread production in environmentally fragile mountain areas, contributing to serious degradation and soil erosion problems. Some commentators suggest that without such import protection the agricultural sector would disappear. This belies that fact that even with all the current impediments on factor and input markets and the effect of the above tariffs in attracting resources from other activities, other industries have been able to expand without significant government assistance. Cases in point are the fruit, vegetable, chicken and tobacco industries. The Ceylon Tobacco Company, for instance, provides farmers with seeds and technical advice and is now producing an export surplus. If the government's goal is to encourage farmers to diversify to higher value crops, tariffs that were gradually lowered for crops for which Sri Lanka is not competitive would encourage such shifts.

A blanket import ban on tea, including tea for blending, has inadvertently pushed investments out of the country. The ban reduced the prospect of expanding the range of blends developed by the tea-packing industry. Although the imported tea used for blending is not grown in Sri Lanka, the general tea import ban ostensibly is there to protect smallholder tea producers. However, the result has been relocation of Sri Lankan firms' activities to other countries, reducing value-added exports from Sri Lanka. The irony is that such firms are using Sri Lankan labor to package what is primarily Sri Lankan tea, but in a Middle Eastern location such as Dubai. The main effect of the ban on tea for blending is now to protect the profits of tea processors offshore from export competition in blended teas from Sri Lanka. Allowing tea imports at least into free-trade zones would expand the production and exports of blended teas, without any likely adverse effect on smallholder tea producers.

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<sup>23</sup> Packing materials exempt from duty include multi-layered packing materials, polythene film, and aluminum foil.



## IV. Rural Non-Farm Sector: Policy Environment and Constraints to Growth

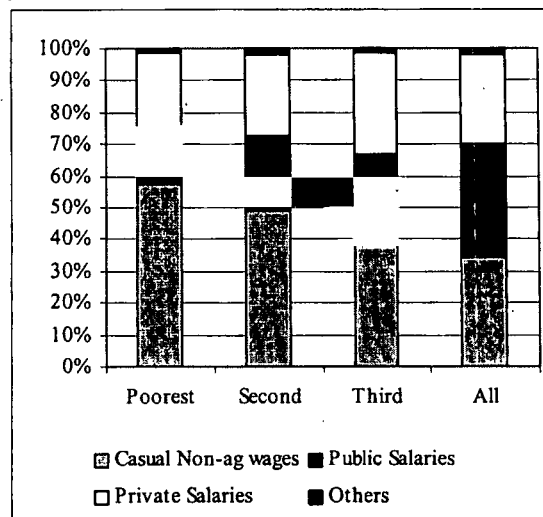
Although the more rapid development of the rural non-farm sector is critical to raising and sustaining agricultural and rural growth, a number of policy and structural impediments hinder necessary progress. The non-farm sector is increasing in importance to rural households as a source of income -- about 56% of the total by 1999-2000. An analysis of the composition of rural non-farm incomes reveals, however, that the more income-vulnerable households (bottom 40% in rural expenditure quintiles) depend in the main on lower-paying and distinctly less secure, casual, non-agricultural wage labor (Figure 4.1). Given Sri Lanka's large reservoir of well-educated rural citizens,<sup>24</sup> more rapid industrial and services sectors' growth is a critical means of enabling more rural workers to graduate to better paying salaried jobs and, in the process, to contribute importantly to rural poverty reduction.

Macro and trade policies, labor rules, government's role in marketing and other practices, however, hinder more rapid growth of the rural non-farm sector. Some of the more severe impediments include macro-policy that raises the cost of capital locally, unpredictable trade policies that increase price uncertainty and thus eventual return on investments (See chapter 3), highly restrictive labor regulations, government participation in marketing and distribution, disorganized production and marketing systems which make regular sourcing of local commodities of standard quantity and quality difficult, and inadequacies in rural infrastructure and services. By impeding more rapid agricultural sector growth, these factors also contribute to slowing rural non-farm sector growth (See Figure 3.1). These are elaborated in the following sections.

### A. Incentives for Private Sector Investments in Agribusiness Activities

Successive governments have attempted to promote agribusiness development and agricultural exports through a number of market-development and incentive schemes. These were implemented by the Board of Investment (BOI), the Export Development Board (EDB), and a number of ministries. The incentive packages, available to both foreign and domestic investors fall into two categories: (1) general incentives under the normal law of the country, and (2) BOI incentives under the section 17 of the BOI Law.

Figure 4.1: Composition of non-farm income (excluding business income) of rural households in the bottom three expenditure quintiles, 1999-2000.



Note: Business income is excluded in the figure, because on they are estimated to be negative on average. This may in part be due to underreporting of business revenues or overstatement of costs by households

<sup>24</sup> In 1999, Sri Lanka had an adult literacy rate of 91.4% (Human Development in South Asia 2001).

Table 4.1: Main Agro-Industry Incentive Schemes

Scheme/Requirements	Incentives Offered
1. Investments in agriculture, food processing and non-traditional exports in excess of Rs500 million	Exempted from paying income tax for the first 3 yrs, 10% tax in 4 <sup>th</sup> and 5th years, and 20% thereafter.
2. Inland Revenue: Use of advanced technology (employ 50 persons, invest at least Rs 4 million and have MOF approval)	5-year tax holiday, tax exemption on dividends, 1-year duty free import of machinery and equipment.
3. BOI agro-processing: new and existing companies must invest Rs. 2.5 million, add 20 workers and 5 Ha of land and must export at least 50% of total output.	10-year tax holiday, 10-year concessionary tax of 15%, capital goods and raw materials are duty free.
4. BOI agricultural marketing. No minimum investment, employment or new-land requirement. Must export 90% of output from a new company.	5-year tax holiday, 15-year concessionary tax at 15%, duty-free raw materials for export goods and exemption from foreign exchange control.
5. Thrust industry (rubber). New and existing companies making a minimum investment of Rs. 50 million, exporting at least 90% of output and employing at least 50 persons.	10- to 20-year tax holiday depending on investment scale, concessionary tax rate of 15% up to 20 years. Duty exemption on imports.
6. BOI investment in difficult areas. No minimum investment requirements, minimum of 50% exports, 150 new employees.	5- to 8-year tax holiday, thereafter, concessionary tax rate of 15% for 8-12 years. Duty-free capital goods and raw materials used for exports. Exemption from exchange control if 90% is exported.
7. BOI investments in designated zones: exporting at least 50 % of output and employing 150 persons	5- to 8-year tax holiday' thereafter, concessionary tax rate of 15% up to 20 years. Duty free capital goods and raw materials for export.
8. Outgrower schemes, minimum cultivation area of 5 ha for export of fresh and processed fruits and vegetables	10-year tax holiday for outgrower farms, duty free equipment, and machinery. Land given by the govt free.
9. Greenhouse agriculture, minimum investment of Rs. 10 million	10-year tax holiday.
10. Agricultural marketing	Duty free import of refrigerated trucks and tax holidays for up to 5 years.

Source: Tabor, S, S. Abeyratne, and R. Epaarachchi 2000. Budget Speech 2002.

### General Incentive Policy

Several investment incentives are offered to export-oriented companies. These include: (i) duty free imports of raw materials for export processing; (ii) import duty exemption for capital and intermediate goods provided that minimum export criteria are met or if such imports are effected by companies engaged in promoted sectors as defined under the BOI Law and the Customs Ordinance; (iii) lower tax rate of 15% for export income (The standard income tax rate is 35%, except for agriculture, fisheries, tourism, and construction.); and, (iv) preferential tax allowances.

### BOI Law, Section 17 Incentives for Agribusiness

Private investors in agribusiness can also benefit from provisions of Section 17 of the Board of Investments law. These include exemptions from income tax, customs duty and foreign exchange controls. Among activities entitled to these concessions are investments in the production and processing of non-plantation agricultural produce, research on high-quality seeds, seed production, cultivation under poly-tunnels and drip-tunnels using advanced technology, the development of marketing infrastructure such as storage facilities, and the development of the dairy and the livestock sector. Table 4.1 lists the various schemes.

Except during 1997, investments in agribusiness activities in Sri Lanka have been slow to pick up. Board of Investment statistics on agriculture-related investments that came into commercial operation indicate that those in the horticultural, livestock and fisheries sectors surged in 1997 (Rs 487 million) but have been declining since (Figure 4.2). Over 60% of the capital invested during the 1992-2000 period in horticulture, livestock and fisheries was financed by foreign investments. By contrast, local investors provided the larger share of the capital requirements in the oilseeds (52%) and other agribusiness sectors (88%). The data, however, do not indicate how much of the totals went to production rather than agro-processing and distribution activities. Government investment schemes that have distorted incentives in the sector by favoring some industries and investors over others resulted in considerable tax losses, and implementation created opportunities for rent-seeking and corruption.

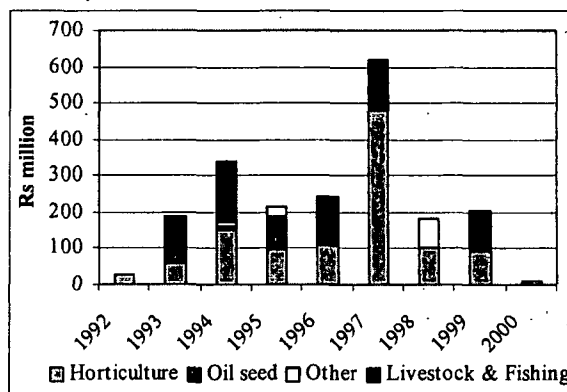
## Farmer Companies

In 1996, the Ministry of Agriculture, Livestock and Forestry, as per the Agrarian Services Act (see Chapter 3), initiated a program to establish farmer companies intended: (1) to help farmers get remunerative prices for their products; (2) to provide inputs on easy terms; (3) to increase production and improve the quality of farm products; and (4) through collection action, empower farmers to communicate their needs strongly enough to influence official policy. The companies were expected to involve themselves in the marketing, transport and distribution of farm produce. From 3 companies in 1997, the number grew to 111 in 1999, but of the 85 that registered, only 22 are in operation today.

## Forward Contracts

With the objective of guaranteeing reasonable prices for farm produce during the harvesting period, the Central Bank of Sri Lanka began piloting forward sales contracts (FSC) under the "Govi Sahanaya" scheme in 1999 (CBSL, 1999). An FSC is a legally binding agreement requiring a farmer to deliver an agreed quantity of a commodity at an agreed price to the contracting buyer on an agreed future date (Box 4.1). A bank usually facilitates such contracts. They have the dual benefit of assuring farmers a fixed price and ready market for produce, while providing buyers greater certainty in supply and costs of primary commodities. The program initially covered chillies, big onions, maize and some other crops in selected districts. During the 1999-August 2001 period, a total of

Figure 4.2: Agricultural investments by sector, 1992-2000, Rs million in current prices.



Note: Includes only agricultural investments under commercial operation.

Source: Board of Investments.

### Box 4.1: Govi Sahanaya Forward Sales Contracting for Agricultural Produce

The Central Bank, under the promotional title of 'Govi Sahanaya' (relief to the farmer), initiated a pilot for forward sales contracting in 1999. Although Sri Lanka has long had such forward marketing arrangements for selected perennial crops on an informal basis, the Govi Sahanaya was the first attempt to formalize a forward contract system, with such contracts deriving their legal status from the Sale of Goods Ordinance, enacted in 1896. In addition to the buyer and the seller, provisions were made for banks to participate as facilitators of the contracts. Hence, it can be called a tripartite arrangement among farmers, buyers and banks. A forward sale contract is purely a voluntary action into which the three parties enter of their own accord.

The contract helps the farmer by assuring a stable price for his produce. The price can be fixed by a mark-up over the cost of production, thereby giving an assured net profit to the farmer, depending on market conditions. At the same time, it assures a guaranteed supply to the buyers at a given price, thereby helping them to pre-plan their procurement process and the cash flow properly. The role of the banker in the contract is simply to disseminate information on the cost of production and the time of availability of products and bring together potential buyers and sellers. For these services, the banker is entitled to collect a commission from both the buyer and the seller. In addition, the process could also be financed by the bank by extending a direct loan or providing an indirect facility. In the former case, a direct loan could be extended to the farmer to finance cultivation. Once the goods are delivered, the same process could be financed further by extending a loan to the buyer. The bank could help the parties involved by discounting an inland bill of exchange, which is drawn by the seller on the buyer and accepted by the buyer. On the due date, the bank which discounted the bill will forward it to the buyer for payment. A further refinement to the operational process is the introduction of an internal letter of credit which could be opened by the buyer on the seller.

In order to encourage the use of forward contracts by farmers and buyers of the agricultural produce, the government announced in its Budget 2000, a waiver of the stamp duty on Sale Contracts, Inland Bills of Exchange and Internal Letters of Credit that may be generated to facilitate a Forward Sale Contract.

In 2001, the Central Bank was awarded a \$200,000 grant from the World Bank Development Market Place to expand this pilot program.

Source: Central Bank Annual Report 1999, Mr. A.S. Jayawardena, personal communication.

6239 contracts were signed (Paddy – 2403,<sup>25</sup> Maize- 1169, Sesame – 953, Big Onion – 1145, and other crops - 569) for a total value of Rs.228.3 million.

Despite its good prospects for success, the program has seen its viability jeopardized by government trade policies and interventions in the market. The sudden reduction in import tariffs in 1999 led to the drastic drop in paddy prices, which triggered Cooperative Wholesale Establishment procurement interventions in the market. CWE began purchasing paddy at a minimum Rs 13/kg, while the forward contracts had been fixed at Rs 12/kg.

### **Concessionary Credit Lines**

To promote investments in rural areas, the Government is offering concessionary credit to private investors. These integral components of externally funded projects include programs to promote small and medium enterprises in the Southern provinces and agro-processing in several districts of the country.<sup>26</sup> Their main rationale is to encourage investments in rural areas by mitigating the domestic credit crunch and the high cost of credit that is largely attributable to the government's sizeable budget deficits over the last decade (10.6% in 2001) and consequent domestic bank borrowings. The government borrowing in turn puts pressure on domestic interest rates as well as leading to the crowding out of credit to the private sector. Coupled with all the other incentive schemes, this type of credit assistance, however, is not sustainable over the longer term.

### **B. Labor Regulations**

Current labor legislations hinder smooth business reorganization and restructuring. The Sri Lankan labor market is divided between an informal sector and a formal one (both public and private) that enjoys many privileges and numbers about 1 million workers out of a total workforce of 7 million. Formal-sector workers are protected by labor laws such as the Termination of Employment of Workmen Act (TEWA - 1971) and the Industrial Disputes Act (1950). TEWA applies to private firms with 15 or more employees and prohibits dismissing any worker without prior, written consent of the Commissioner of Labor or the employee concerned. The Commissioner not only has the discretion to accept or reject a firm's application to terminate an employee, but also has the prerogative to determine the exact compensation to be paid. Since the Act does not specify criteria to be used in assessing cases, awards have varied widely. The process often takes far longer than the three months stipulated in the law as the period during which the employee is entitled to continue working. This Act is currently under review, with government recently announcing plans for its revision.

The Act creates several major problems for employers. In addition to considerable uncertainty for employers regarding the duration and outcome of the review process, the complex and protracted process involved in layoffs damages the work ethic and productivity of current employees. TEWA – coming into force when payrolls exceed 15 workers – also increases the transactions cost of restructuring enterprises, thus creating a strong disincentive against expansion and the achievement of economies of scale. In the Budget speech for 2002, the government announced plans to amend the Act. These amendments are supposed to include enforceable time limits on labor-dispute hearings and decisions by tribunals/arbitration panels, including cases of dismissal. A minimum compensation schedule for laid-off workers is also to be defined and enacted soon.

<sup>25</sup> Paddy is the raw product, which is milled into rice.

<sup>26</sup> Examples include the ADB-financed Southern Province Rural Economic Advancement Project (\$42 million 2001) and the Second Perennial Crops Project (\$11 million 1997).

### C. Direct Government Market Interventions

Two major government interventions crowd out the private sector in commodity marketing. These are the prevailing policy, which grants PRIMA, a Singaporean Company, a monopoly in wheat milling, and the price support, marketing and distribution activities of the Cooperative Wholesale Establishment, a government parastatal. These are elaborated below.

#### Cooperative Wholesale Establishment Domestic Marketing Operations

The Cooperative Wholesale Establishment (CWE) is the principal state trading enterprise operating in the agricultural sector. Assigned responsibility for stabilizing prices and assuring food security, CWE has over 40 wholesale depots and 120 retail outlets throughout the country to distribute and market imported and local produce. CWE purchases bulk quantities of agricultural commodities from farmers and also imports various products, based on the recommendations of the Ministries of Agriculture and Trade. The main items CWE imports include rice, lentils, onions, chillies, potatoes, sugar, wheat, wheat flour, and dried fish (Table 4.2). CWE's share of imports of table potato, chillies and onions has declined significantly -- to a market share below 10% of such imports -- as private trading has expanded. However, CWE's import share of rice increased during 1999 and 2000. Total CWE imports, however, remain a very small percentage of total production these commodities.

The government intervenes from time to time through the CWE to steady farm-gate prices. As no set policy exists to determine the quantity purchased, problems of surplus stock have arisen on occasion. In 1997, for example, the price of imported potatoes in the market was Rs.20.00/kg, while CWE domestic purchases ran at Rs.35/kg. The resulting losses were borne by the government. In the case of paddy purchases, since the Paddy Marketing Board closed in 1996, the CWE has taken over its duty of purchasing paddy under the Guaranteed Price Scheme. In 1999, the reduction in rice import tariffs from 35% to 10% led to a flood of imports, resulting in the drastic drop in paddy prices after the Maha harvest in 2000. Consequently, CWE, together with the Cooperative Societies,<sup>27</sup> purchased paddy at a minimum price of Rs 13/kg. Both institutions were provided concessionary credit for this purpose and the government again bore the losses.

Table 4.2: CWE procurement as a percentage of domestic production and imports, 1995-2000.

Commodity	1995	1996	1997	1998	1999	2000
Local Purchases as Percent of Domestic Production <sup>1/</sup>						
Table Potato	0.3	0.6	0.1	0.0	0.8	3.5
Dry Chillies	0.8	10.3	10.0	0.6	2.0	1.0
Big Onion	2.1	5.4	5.4	0.2	4.2	6.0
Paddy (As a % of total production)	0.5	0.3	0.1	0.9	1.1	3.4
Paddy (As a % of marketable surplus)	0.8	0.5	0.2	1.4	1.8	5.4
Imports as Percent of Total Imports						
Table Potato	11.0	6.0	3.0	2.0	0.6	0.4
Dry Chillies	18.0	5.0	0.0	1.0	0.5	0.0
Big Onion	8.0	7.0	5.0	5.0	7.0	4.0
Rice	0.0	8.8	7.0	8.0	31.0	40.0
Sugar	5.0	4.0	7.0	6.0	8.0	9.0

Note: 1/ CWE purchases both paddy and rice. Marketable surplus of Potato, Onion and Chilli is over 98% of the total production. However, the marketable surplus of paddy varies from district to district. For example, based on data from the Ministry of the Agriculture, the marketable surpluses of major paddy-producing districts are as follows: Kurunegala 50%, Ampara 83%, Polonnaruwa 86%, and Anuradhapura 60%. For this calculation a marketable surplus of 60% was used as the national average. Based on this calculation, it is evident that the amount of paddy purchased by CWE is not significant as a percentage of the total marketable surplus.

Sources: Weliwita and Eapaarachchi, 2002.

<sup>27</sup> The Multi-Purposes Cooperative Societies (MPCS) are also state-trading enterprises, which engage in marketing agricultural produce in the country. While they received government patronage in the early 1990s, MPCS's operational activities are now completely independent. They purchase local produce during the harvest season in an open, competitive market. They also import food commodities when necessary, and are subject to the same import tariffs as other organizations and private traders.

Until recently, the government, through CWE, had the exclusive right to import wheat and controlled the domestic price of wheat flour. For political reasons, the government lowered the prices of wheat flour and bread in 1994. The flour subsidy cost the government an estimated Rs. 5-6 billion a year in 1995 and 1996. The CWE imported wheat grain for PRIMA to mill until the privatization of the PRIMA Company in June 2001 gave it the right to import wheat grains. Currently, CWE sells wheat flour at prices above cost, and it has benefited from declines in the international price of wheat. While the formal market-interventionist role of the CWE gradually diminished over time, it still has the potential to maintain adequate stocks of essential commodities in the event of civil unrest, floods, shortages in festive seasons, or hoarding.

In January 2002, the government announced plans to restructure and split the CWE into five limited-liability companies. The creation of separate companies for retailing, wholesaling and distribution is intended to increase CWE's efficiency and reduce mounting losses (Rs 1.7 billion or Rs 187,000 per employee in 2001). Subcontracting retailing to the private sector to reduce theft and corruption will provide a good basis for full privatization. But at the same time, the Ministry of Commerce and Consumer Affairs announced that it will continue to allow CWE to sell commodities below market prices and in addition, allow CWE to expand its operations into other private-sector activities, such as power generation, manufacturing and services. This action will have the effect of further crowding out the private sector in retailing and merchandizing activities.

### **PRIMA Wheat Milling Monopoly**

Milling of wheat flour in Sri Lanka continues to be a monopoly of one company, PRIMA. In 1980, the GoSL entered into a 20-year contract with PRIMA, a Singapore-based company, to set up a flour mill in Trincomalee and supply flour for distribution through various government outlets. The company guarantees the milling of about 435,000 mt of wheat grain per year. The contract was extended by another five years in 2000, providing that for every ton of wheat milled, Prima retains the wheat bran and other by-products of milling (26%), while supplying the flour (74%) to the government. Flour distribution was channeled through the Food Commissioner's Department until it closed in 2002, passing the distribution function to the CWE.<sup>28</sup> During the contract period, PRIMA benefits from duty-free imports of wheat grain, duty free imports of mill-related equipment, and income-tax exemptions. Currently wheat imports are subject to a 5% tariff, while a 25% tariff plus a surcharge makes direct imports of wheat flour uncompetitive. The UNP Government reduced the subsidy given to the PRIMA Company on wheat flour in January 2002 to Rs. 2.75 per Kg from Rs. 5.75 per Kg (Sunday Times, January 20, 2002).

In the absence of any other flour miller, this tariff structure simply bestows monopoly profits on PRIMA, while harming consumers. The monopoly is especially detrimental to the large base of poor rural laborers, who prefer a wheat-based diet to rice. Since Sri Lanka does not produce wheat, the tariff does not protect any farmers directly, although rice farmers may receive a slight degree of indirect assistance in so far as wheat and rice are substitutes in consumption in Sri Lanka. The contract extension signed between the Government and Prima that established this situation does not expire until 2006, delaying the liberalization of the wheat flour market in Sri Lanka.

### **D. Access to Rural Infrastructure and Services**

*Lack of access to critical infrastructure and services is a major problem in rural areas.* Except in the Western province, infrastructure and services, such as roads, markets, telecommunications, electricity, and banking services, are not keeping pace with rural needs. The gap contributes to a highly uneven growth and development pattern in the country as mounting

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<sup>28</sup> The government bears the cost of transportation – about Rs 210 million a year -- from the mill to consuming centers.



infrastructure and service-related bottlenecks raise operating costs and reduce competitiveness for farmers and enterprises in the more remote areas. Continuing but slow-paced government infrastructure and services investments have not erased the sharp disparities in access across provinces. Of great concern is the fact that the shortcomings remain more acute where rural poverty rates are highest.

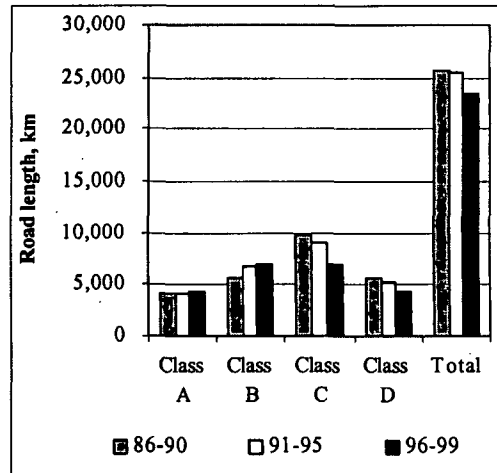
**Roads**

The road network in Sri Lanka has not kept pace with increasing rural needs. Based on the most recent available data from the Road Development Authority, the total road network appears to have declined between 1991-95 and 1996-99 (Figure 4.3). The length of trunk roads (Class A) and main roads (Class B) increased between 1986 and 1999, but secondary roads like agricultural (Class C) and graveled roads (Class D) declined considerably during this same period. Between 1995 and 1999, Uva province showed the highest increase in road length—121 kms were added, followed by Sabaragamuwa with 48 km. However, despite these additional investments, as shown below, these two provinces still have the lowest road densities in the country.

Road development is highly skewed in favor of the Western and Southern provinces (Figure 4.4). Comparing the road density in 1999 and the poverty rates for 1995/96 in various provinces reveals a clear negative correlation. The poorest provinces, such as Uva, North Central, Sabaragamuwa and the Northwestern Provinces, also those most dependent on agriculture, have the least access to road infrastructure.

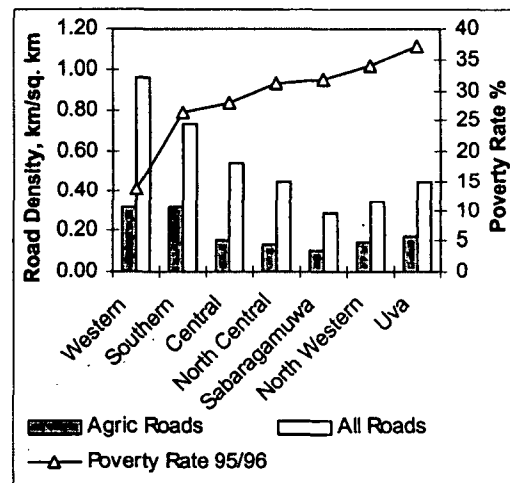
Inadequate infrastructure contributes to considerable road congestion and raises marketing costs. A recent study found that the average travel time from Southern villages to Colombo port, a distance of 130-150 km, takes 10 hrs. In the case of rice from the South, trucking costs alone amounted to about Rs 2.7 per kg, or about 20 percent of the market value. The associated delays in transport also contribute to increasing postharvest losses (and higher prices for urban consumers) for more perishable agricultural commodities (e.g. fruits and vegetables).

Figure 4.3: Road Length by Class of Road, Km, 1986-1999.



Note: Class A-all roads within the network of trunk roads. Class B-main roads connecting other important towns. Class C-agricultural and local roads. Class D-gravelled roads. Source: Road Development Authority.

Figure 4.4: Road density (1999) and rural poverty rates (1995/96) by province.



Note: Poverty rate (headcount) is based on Rs791.67 as poverty line (Gunewardena 2000) Source: Sri Lanka Road Development Authority

## Electricity

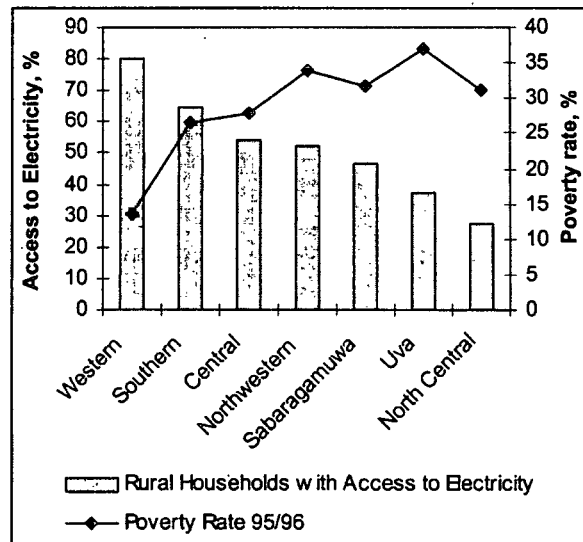
Access to electricity among rural households is also limited, especially in the poorest provinces. Only about 56% of rural households in Sri Lanka have access to electricity and, as with roads, there is a sharp disparity in access across regions, with electrification tending to be concentrated in regions where poverty rates (headcount) are also lower (Figure 4.5). The Western province, which has the highest rate of access among rural households (80%), has the lowest rural poverty rate in the country (14%). By contrast, only about 37% of rural households in Uva have electricity; this region also has the highest poverty level in the country (37%). As electricity is a critical input to many industrial and service activities, its unavailability acts as an important disincentive for investment.

## Telecommunications

Access to telephones improved in the 1990s, complemented by increased cellular services, but in rural areas outside the Western province, many households lack easy access. Beginning in the mid-1990s, a rapid expansion raised the number of telephone connections by 30% per year (Figure 4.6), and telephone density rose seven-fold, from about 7 to 50 telephones per 1000 persons. Nevertheless, North Central, North Eastern, and Uva provinces, where rural poverty rates run highest, had the smallest proportion of rural households reporting a telephone in their community (Table 4.3). The nearest telephones in these provinces are very distant, further increasing the transactions cost of using one. In Uva province, households reported that the distance to the nearest telephone was about 10 km. In North Central and North Eastern provinces, it was 6 to 8 km.

There is also a wide disparity across regions in access to markets and banks. Fewer than 5% of households report having a bank in their community in the Southern, North-Western, North Central and North Eastern provinces (Table 4.3). Under 15% of households in all provinces report having a market in their community, and the distance to cover to reach a main road, market, telephone or bank increases as poverty intensifies.

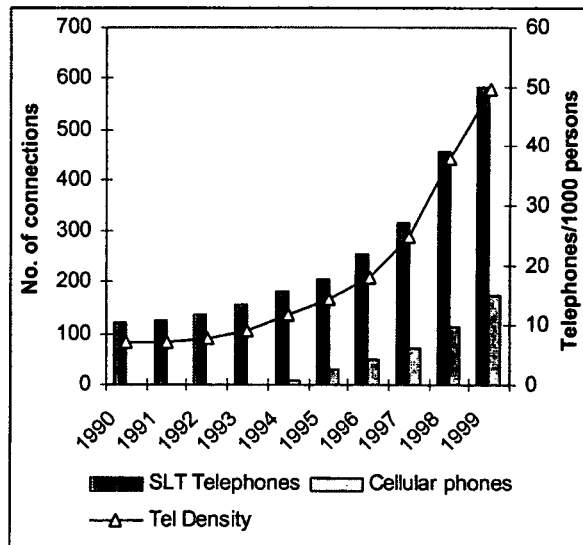
Figure 4.5: Rural Household Access to Electricity (1999/2000) and Rural Poverty Rates by Province (1995/96)



Note: Poverty rate (headcount) is based on Rs791.67 as poverty line (Gunewardena 2000)

Source: SLIS 1999/2000 data.

Figure 4.6: Access to telephone services in Sri Lanka, 1990-1999.



Source: Sri Lanka Telecom, Ltd and Central Bank of Sri Lanka.

## Education in Rural Areas

Education is an important determinant of agricultural and rural non-farm employment and incomes. Analysis of the SLIS 1999-2000 data indicates that a household head's level of education is correlated with earnings from farm and non-farm sources. In particular, agricultural incomes constitute a smaller share of total income in households where the household head has 10 or more years of schooling; uneducated household heads derive 31% of their incomes from agricultural activities (Table 4.4). The share of income from non-farm sources, in particular salary earnings, increases significantly as education levels rise for household heads. Salary earnings account for approximately 57% of total household incomes where the head has 10 or more years of education and drop to 23% where the household head had no education.

Table 4.3: Rural household access to roads, markets, telephone and banks by province.

<i>Percentage of Rural Households that have a</i>	<i>Western</i>	<i>Southern</i>	<i>Central</i>	<i>North-Western</i>	<i>Sabaragamuwa</i>	<i>North-Central</i>	<i>Uva</i>	<i>North Eastern</i>	<i>Total</i>
Market in their community	12	4	9	8	18	**	11	9	9
Telephone in their community	84	60	60	64	60	27	41	56	62
Bank in their community	31	**	16	4	30	3	21	4	14
<b>Average Distance (km)</b>									
To a main road in communities without access to a main road	1.9	3.3	3.1	2.8	5.7	5.9	12.9	3.7	4.0
To a market in communities without access to a market	4.6	5.5	5.1	5.2	15.7	9.4	9.8	6.7	6.8
To a phone in communities without access to a phone	3.4	4.0	4.0	4.5	5.8	5.8	9.9	7.9	5.5
To a bank in communities without access to a bank	4.5	6.7	5.6	6.8	7.2	9.2	11.8	7.7	6.7
<b>Poverty Rate (head count) 1995/96</b>	<b>14</b>	<b>26</b>	<b>28</b>	<b>34</b>	<b>32</b>	<b>31</b>	<b>37</b>	<b>n.a.</b>	<b>27</b>

Note: \*\*-significant.

Source: SLIS 1999-2000.

Table 4.4: Sources of rural household incomes by years of education of the household head

<i>Source of income</i>	<i>Percent share of household income of households with</i>				<i>Average</i>
	<i>No Education</i>	<i>1-6 years of schooling</i>	<i>7-10 years of schooling</i>	<i>More than 10 years of schooling</i>	
<b>Agricultural</b>	31.3	31.0	27.3	13.7	23.3
Farm	21.7	22.3	21.3	11.5	17.8
Casual Ag. Wages	9.6	8.7	6.0	2.2	5.5
<b>Non-farm</b>	47.4	48.7	52.2	66.6	56.5
Casual Non-ag wages	25.6	26.6	26.0	10.6	20.2
Public Salaries	9.8	10.7	13.5	36.2	21.3
Private Salaries	12.2	13.1	16.1	20.4	16.7

Source: SLIS 1999-2000.



## V. Policy Options for Promoting Agricultural and Rural Non-Farm Sector Growth

To meet the rapidly changing demands of both its rural and overall economy in the 21<sup>st</sup>-century, Sri Lanka needs a renewed rural development strategy. Experience in other East Asian countries (e.g, Taiwan and South Korea) with natural endowments similar to Sri Lanka's has shown that economic development and increasing industrialization eventually revise and diminish the role of the agricultural sector (Box 5.1). For Sri Lanka, as a lower middle-income economy, the transition from an agricultural to an industrial economy is especially challenging and complex. Although rural households in general are already less dependent on agriculture for their livelihoods, households involved in cultivation or raising livestock still comprise a large share of rural households and of the rural poor. Many such agricultural households, moreover, remain tied to low-value and low-productivity activities. Fostering more rapid growth in the rural economy--both in the agricultural and non-farm sectors -- requires a policy framework and package of investments that balance the interests of both sectors rather than one at the expense of the other. At the same time, it would be critical to ensure that more broad-based development could be achieved, expanding beyond the Western Province to all regions.

### Box 5.1: What Structural Adjustments To Expect Over The Next 25 Years: Lessons From East Asia

In a newly peaceful environment Sri Lanka has the potential to emulate the extraordinary growth and structural transformation pattern of Taiwan and South Korea. Both of those economies are as poorly endowed with arable land per capita as Sri Lanka, and in the mid-1950s, they were as poor as Sri Lanka. Because they opened up much earlier (the mid-1960s), they offer a picture of how Sri Lanka's economy could transform should it continue to liberalize its markets. Moreover, Taiwan is a (sub-) tropical island economy with a similar population to Sri Lanka. Having opened up permanently a quarter-century before Sri Lanka (the mid-1960s, compared with 1990 if Sri Lanka's first round of reforms in 1977-79 are ignored), they now have more than ten times Sri Lanka's per capita income – an achievement to which Sri Lanka can realistically aspire over the first quarter of this century. However, in terms of adopting liberal economic policies, Sri Lanka will have to do better than Taiwan and South Korea to match the latter's growth performance, for two reasons: because those East Asian economies were the first newly industrializing economies to adopt that strategy and so had no immediate competition; and because globalization forces have progressed such that economies that waver in their reform endeavors are penalized faster and more harshly now than in the past.

Should Sri Lanka return to an agenda of rapid economic reform and liberalize its markets, investments of domestic and foreign funds in the economy will grow. Given also the likely patterns of domestic and export demand growth, how will those additional capital investment resources be allocated, both intersectorally and within the agricultural sector itself? A long-term vision is necessary as a prelude to designing short- and medium-term strategies for all sectors, but particularly the agricultural sector because of the major structural adjustment pressures it is going to continue to experience.

There are some useful lessons from East Asian economies on the how the intersectoral structural adjustment pattern affects the agricultural sector. In the mid-1950s, both Taiwan and Korea were poor agrarian economies with more than 90 per cent of their export earnings coming from farms, just like Sri Lanka in 1970. By 1970, as its industrialization began to take off, Taiwan had almost exactly the same agricultural shares of employment, GDP and merchandise exports as Sri Lanka had in 2000. But note that agriculture's share of Sri Lanka's total foreign exchange earnings from services as well as goods was only 13 per cent in 2000. By 1995, Taiwan's agriculture share had fallen to less than 10 per cent of employment and less than 5 per cent of GDP and exports. Meanwhile, its comparative advantage in agriculture gradually changed to a comparative disadvantage; its net export position in farm products was soon lost to one of increasing net imports.

The situation to the mid-1990s for Taiwan provides a not unreasonable set of extrapolations for Sri Lanka by 2025 should the latter reduce remaining restrictions on its markets rapidly and remain an open economy thereafter, as Taiwan has done for the past three decades. It could be argued that agriculture's relative decline in Sri Lanka might be even greater than that shown for Taiwan, because Taiwan increasingly protected its farmers from import competition until the mid-1990s (after which it began reducing that protection leading up to its accession to World Trade Organization on 1 January 2002). On the other hand, one might argue that agriculture's share of Sri Lanka's economy has declined faster than it would have, had factor markets been liberalized before trade liberalization. Either way, a key lesson for Sri Lanka from Taiwan and South Korea is that even with massive agricultural protection, economic growth is unable to more than slightly slow the de-agriculturalization and growth in net imports of farm products of a rapidly growing economy that is relatively poorly endowed with agricultural land.

What about changes within the agricultural sector? Despite huge protection to rice farmers (with domestic rice prices set at several times international levels), Taiwan and Korea were unable to prevent the grains sector shrinking as diets moved increasingly towards livestock products, fruits and vegetables. Even so, and despite a great deal of permanent migration to the cities, farm families there have had to rely increasingly on off-farm earnings. A key lesson from this is that farm families in Sri Lanka can anticipate having to continue to face substantial adjustment pressure in coming years.

Source: Anderson 2002, "Agricultural Development and Trade Reform: Their Contributions to Economic Growth, Poverty Alleviation and Food Security in Sri Lanka," Background paper prepared for the Sri Lanka Agricultural Policy Review of the World Bank. Mimeo.

Formulating and implementing a rural development strategy that builds on synergies in the agricultural and non-farm sectors is a critical step toward enabling Sri Lanka to achieve rapid economic development and poverty reduction in the fastest possible time. Such an integrated rural development framework is critical because measures to promote more rapid growth and increased productivity in the agricultural sector can complement those that would also sustain growth in the non-farm sector, as illustrated in Figure 3.1. Global experience shows that because of strong forward and backward linkages, the development of the agricultural and non-farm sectors are highly interdependent (Box 5.2).<sup>29</sup> Developing a rural development strategy and putting it into practice, however, would be a challenging task due to the large number of Central Ministries and provincial governments that would need to be involved. The GoSL's program to formulate a Poverty Reduction Strategy would be a critical vehicle for completing such a task.

A redefinition of the appropriate roles for the public and private sectors must be an integral component of this new overall strategy. Clearly the role of the government is to provide the enabling policy and regulatory environment for private sector participation and to withdraw from activities that could be efficiently and effectively performed by the private sector. In the short to medium term, reforms would need to focus on two major areas: (i) fostering the appropriate policy and regulatory environment and moving institutional reform of public institutions to encourage increased private sector participation and investments and permit factor mobility, so as to maximize their contribution to the economy and (ii) strengthening rural infrastructure and services, with increased emphasis on operation and maintenance of physical assets to ensure their longer term performance.

**Box 5.2: Promoting the Rural Non-farm Economy: Lessons from Latin America and Caribbean**

Berdegue, Reardon, Escobar and Echeverria (2000), in a recent note, summarized some basic policy principles for promoting the growth of the rural non-farm economy, based on experience in Latin America and the Caribbean. These are outlined below:

- Agricultural policies can promote non-farm activities such as agro-processing and the other industrial, commercial and service sectors that characterize modern agriculture. Agricultural policies in areas such as technology generation and diffusion, infrastructure, education, agrarian reform, credit, etc, should therefore be designed and developed with these links in mind.
- Projects and policies aimed at promoting the rural non-farm economy should not just focus on improving the capacity of households to become involved in the non-farm economy, but should also stimulate the engines that pull rural households into it. Tourism and manufacturing are examples of such engines that are not traditionally viewed as part of the rural landscape. Engines for non-farm growth that offer employment to women in particular should be emphasized.
- Local governments and institutional participation will need to be engaged in a whole variety of capacities, ranging from land use planning, education provision, infrastructure investment, regulation, training, and financing.
- Efforts must be directed to ensuring that public institutions with responsibilities relating to non-farm activities (education, public works, small-scale industry, etc) coordinate efforts and go beyond traditional competencies to include the non-farm economy. Education and transport infrastructure in particular, must receive concerted attention.
- Richer and poorer zones must be treated differently, with less emphasis in richer zones on subsidization and more on reducing transactions cost. In poorer zones, public intervention to provide the basic enabling environment will continue to be required.

Source: Julio A. Berdegue, Thomas Reardon, Germán Escobar 2000 "Rural Nonfarm Income and Employment in Latin America and

<sup>29</sup> Forward linkages take the form of the agricultural sector supplying raw materials and agricultural products for downstream processing or direct consumption, agricultural household savings providing investment funds to the non-farm economy, and consumption by rural households of goods and services produced by the non-farm sector. Backward linkages take the form of the non-farm sector stimulating growth in the agricultural sector by supplying inputs for agricultural production activities and investing in the agricultural sector (Lanjouw and Feder 2001, Haggblade et al 2001).

## A. Creating the Enabling Environment for Agricultural and Non-Farm Growth

Improving the policy and regulatory environment in the agricultural sector would require the adoption of policies to ease access to improved technologies, create a more transparent and stable trade policy regime, allow full and transferable ownership rights to land, and ensure the sustainable use of water would be key to promoting increased productivity and incomes. Critical to promoting growth in the non-farm sector (and indirectly to the agricultural sector) would be adopting policies to speed up currently lagging private sector participation and investments in the sector. This includes rationalizing currently restrictive labor regulation and phasing out government involvement in activities that could be efficiently performed by the private sector (e.g. retail distribution, marketing). These reforms are listed in Table 5.1.

### Enhancing Agricultural Productivity Growth

**National Agricultural Strategy and Policy.** To meet 21<sup>st</sup>-century challenges, Sri Lanka needs to formulate an updated National Agricultural Strategy and Policy, consistent with its rural development strategy. The agricultural sector in Sri Lanka is part of an economy undergoing rapid changes as industrialization increases. In the context of agriculture's diminishing role and contribution to the economy, new and complex challenges arise. The first is to ensure the agricultural sector's continued growth, especially in the short to medium term, so that it not only does not burden the whole economy but actually -- together with the non-farm sector -- helps lift the large number of agriculture-dependent households out of poverty. A new strategy must lay out the priorities to achieve these goals and better define the relative roles of the public and private sector in the agricultural development.

An essential component of the National Agricultural Strategy will be a new balance in the roles of the public and private sectors in agricultural research and extension. Improving the effectiveness of both systems will give farmers greater access to improved agricultural technologies and market support services. Farmers identify these as major constraints to raising agricultural productivity and crop diversification. Where should the public sector concentrate in the future? Where could responsibilities be transferred to the private sector? In deciding these questions, policymakers should be guided by the characteristics of agricultural technologies and services, particularly the extent to which they are subject to market failures and externalities (i.e. their degree of nonexcludability and non-rivalness). These factors determine the ability of the private sector to earn adequate returns from involvement and investment in these activities. Table 5.2, by providing a useful characterization of some agricultural technologies and the incentives for private sector investment in their provision, can serve as a guide to the role the public sector should take.

Table 5.2: Characteristics of agricultural technologies and private sector incentives to provide them.

Type of Good	Public good	Common Pool	Toll	Private
Features	Nonexcludable and nonrival	Rival but not excludable	Excludable but nonrival	Excludable and rival
Examples	Weather forecast Mass communication of production and market information Natural management techniques Livestock vector control	Self pollinated seeds Common pasture management Shared fishery	Soil Analysis Farm management computer programs Private consultation on farming and marketing Livestock dipping	Hybrid seeds Biotechnology products Agricultural machinery & chemicals Veterinary supplies
Likelihood of provision	Very low	Low	Higher	High

Note: Non-excludable means a person who does not pay can still receive it. Non-rival means one person's use does not lower another person's benefit from it.

Source: Umali-Deininger, 1997; World Bank 2002.

Table 5.1: Policy Options to Promote the Sustained Growth of the Agricultural and Rural Non-Farm Sectors: Short to Medium Term

ISSUE	SHORT TERM	SHORT TO MEDIUM TERM
<b>I. Creating an Enabling Policy and Regulatory Environment</b>		
<b>A. Enhancing Agricultural Productivity Growth</b>		
National Agricultural Strategy	Undertake a comprehensive assessment of the structure, funding, and performance of the public agricultural research and extension systems	Formulate and adopt an updated National Agricultural Strategy and Policy to serve as basis for reorienting roles, organizational structure, funding and staffing of public agricultural research and extension systems to be in line with new developments and priorities and meet the changing needs of an agricultural sector in a middle income economy. Strengthen database for the agricultural sector ( e.g. land use statistics; area, production, yield; agricultural prices, market infrastructure, rural enterprises, etc)
Technology Policy	Streamline, modernize and update quarantine policies and regulations while protecting local diversity; conduct awareness programs to publicize new regulations; Finalize and implement seed-marketing procedures and regulations as per the National Seed Act, conduct awareness programs Privatize remaining government seed farms, enter into contracting arrangements with private sector for production of required seeds, if needed	Adopt Plant Variety Protection Legislation Strengthen technical capacity of National Plant Quarantine Service
Trade Policy	Commit to stable tariff policy Remove licensing requirements for commodity imports	Announce and commit to phased reduction of tariffs on major commodities (paddy, potatoes, chillies, onions, etc)
Land Reform and Land Administration Policies	Undertake a nationwide awareness and communications campaign on land policy reform to transfer full ownership rights to LDO beneficiaries and explain its implications for farmer's rights Eliminate requirement to obtain Commissioner of Agrarian Services' permission to plant other crops on designated paddy lands. Remove restrictions on farm sizes by amending the relevant legislation	Scale up program to strengthen land administration capacity to shift from deed to title registration systems to reduce transaction cost of land transfers Establish legal, regulatory, and procedural framework for efficient, effective and sustainable land-titling and title registration Complete restructuring and streamlining of land administration agencies to promote efficiency, transparency, coordination and cost effectiveness Develop a common information technology strategy including data management for all agencies dealing with land in order to make information on land tenure, land use, and land capability transparent and accessible on a sustainable basis



Table 5.1: Policy Options to Promote the Sustained Growth of the Agricultural and Rural Non-Farm Sectors: Short to Medium Term

ISSUE	SHORT TERM	SHORT TO MEDIUM TERM
Water Policy	Undertake extensive nationwide discussion and build consensus on National Water Policy, bringing into debate international experience on water policy reform, particularly farmer participation in irrigation management, cost recovery of O&M linked to improved quality of service, river basin approach to water resource management, etc. Increase priority in budget allocation to operations and maintenance of current systems	Implement National Water Policy and reorient and restructure existing multiple water agencies to be consistent with the Water Policy
<b>B. Strengthening Non-Farm Sector Growth</b>		
Labor Regulations	Finalize and adopt amendments to restrictive provisions of the labor laws Undertake a communications campaign to inform private sector (domestic and foreign) on reform of labor laws	Review labor laws to determine additional required amendments to eliminate disincentives to investments
Commodity Marketing Policies	Cease adding new commodities/services to CWE retail and distribution activities Draw lessons from forward contracting programs and integrate when expanding the program	Shift from subcontracting retail operations of CWE to full privatization. Eliminate PRIMA monopoly in wheat milling
Incentives for Commercial Private Sector	Refocus BOI towards attracting and supporting all investors Undertake a review of multiple incentive and subsidy schemes in agricultural and agribusiness Cease debt forgiveness of farmer agricultural loans, examine options for alternative schemes for risk management (e.g. crop insurance, futures markets)	Phase out tax holidays and concessionary credit schemes over the next 5 years Target fertilizer subsidies to poor households, phase out in the medium term Strengthen existing competition policy Introduce appropriate bankruptcy legislation that will allow firms to exit market quickly and at lower cost
Rural Education		<b>Improve availability and quality of education in rural areas</b>
<b>II. Strengthening Rural Infrastructure</b>	Increase priority in budget allocation to operations and maintenance of existing infrastructure	Increase investments in rural roads, markets, electricity in provinces beyond the Western Province

Given these parameters, in the case of agricultural extension, the government and private sector could explore a mix of options in both financing and service provision. There is growing recognition that, even where public financing of extension is justified, private service delivery is often more efficient for clients. This awareness leads to strategies for contracting extension services—delinking funding from service delivery. Contracted extension strategies take many approaches to dividing responsibilities for financing, procurement, and delivery of services, but most reforms involve public funding for private service delivery (Rivera et al. 2000). Competitive contracting instills a private sector mentality of cost-consciousness and results-orientation, even in public institutions that are forced to compete to provide services. Contracted extension systems seek to reduce costs and improve cost-effectiveness of public extension services, but most current reforms go further and attempt to draw on private sector funding to improve the financial sustainability of extension. Figure 5.1 illustrates the alternative arrangements possible in public and private financing and provision of extension services. These include the traditional public sector extension services, fully private

Figure 5.1: Alternatives for Public-Private Financing and Provision of Extension Services

		Financing of Extension Services		
		Public	Private (Farmers)	Private (Other)
Service Provision	Public	<ul style="list-style-type: none"> <li>◆ Traditional extension</li> </ul>	<ul style="list-style-type: none"> <li>◆ Fee-for-service extension</li> </ul>	<ul style="list-style-type: none"> <li>◆ Contracts with public institutions</li> </ul>
	Private	<ul style="list-style-type: none"> <li>◆ Subsidies to private extension service providers</li> <li>◆ Publicly-financed contracts for extension services</li> </ul>	<ul style="list-style-type: none"> <li>◆ Commercial advisory services</li> <li>◆ Sale of newspapers, magazines</li> </ul>	<ul style="list-style-type: none"> <li>◆ Information provided with sale of inputs</li> <li>◆ Extension provided to contract growers</li> <li>◆ Advertising in newspapers, radio, television, magazines</li> </ul>

Source: Alex, et al. 2001, Agricultural Extension Investments: Future Options for Rural Development, World Bank draft mimeo.

services, and public-private partnerships involving some type of contractual relationship.

To support effective policy formulation, there is an urgent need to strengthen the rural and agricultural database in Sri Lanka. Better data are needed on land use; area, production, and yield of various crops in addition to rice and plantation crops; prices (farm, wholesale and retail) of commodities in all major markets in Sri Lanka, market infrastructure, rural enterprises, etc

**Quarantine Policy and Regulations.** The streamlining and modernization of the national quarantine system is urgently needed to ensure that it effectively filters out harmful pests and diseases but does not bar entry to improved technologies. The costs of Sri Lanka’s highly restrictive quarantine regulations have been rising relative to its benefits in recent years. Necessary reforms include the regular and accurate updating of the “Host Index of Plant Diseases in Sri Lanka” and the list of prohibited and restricted plants and planting materials. Once revised, the new quarantine regulations should be publicized domestically and internationally through awareness campaigns to inform current and potential domestic and foreign private sector investors in the seed/planting materials sector.

In modernizing quarantine policies, the government can draw on a breadth of international experience. To protect agricultural production and indigenous biodiversity, international best practice requires that imported seeds and planting materials meet conditions that are designed to prevent the introduction of seed/plant-borne pest and diseases that are not present in the country and

that are economically or environmentally significant. (See Annex D, "Implementing Seed and Phytosanitary Reforms: Lessons from International Experience" for more detailed discussion). A number of inter-governmental organizations, including FAO's Interim Commission on Phytosanitary Measures (which supervises implementation of the International Plant Protection Convention [IPPC]), European and Mediterranean Plant Protection Organization (EPPO), and other regional organizations are part of ongoing efforts to improve the definition of science-based risks. Along with these organizations and agreements that focus on seeds, the Sanitary and Phytosanitary Measures Agreement (SPS) provides a framework for countries to adopt science-based phytosanitary controls for all goods, including seeds. To reduce the costs and inconvenience of phytosanitary controls and at the same time improve phytosanitary protection, Sri Lanka could explore cooperative arrangements with other countries in South Asia. This would call for governments to work together and with international organizations. For example, rationalization of phytosanitary controls is an important aspect of regional efforts to create larger and more efficient seed markets in Europe and Africa (e.g., across Central and Eastern Europe, across sub-Saharan Africa). To enable the National Quarantine Service to meet the fast-changing developments in the highly dynamic, global seed industry, capacity building in terms of both facilities and staff skills training would also be necessary.

**Seed Policy.** In partnership with the private sector, the government should quickly finalize and enact the seed industry regulations and procedures that have been pending for several years. These regulations derive from the National Seed Policy and National Seed Act, approved in 1996 and 1998 respectively. Establishing the rules of the game in seed marketing and distribution would be critical to encouraging private-sector participation and investments, and thus to expanding the markets for different kinds of improved seeds. In addition, the government should privatize the remaining government seed farms. Experience with the two earlier privatizations of government seed farms (Hingurakgoda and Pelwehera seed farms) resulted in greater productive use of these assets, including the near doubling of seed (e.g. paddy) output (CIC Agribusiness 2002). If needed, the government could sub-contract private firms to fill the seed requirements of various government programs.

**Plant Variety Protection Legislation.** Enacting intellectual property rights protection for seeds and planting material is a crucial move in encouraging private-sector research and development (R&D). In the absence of legislation protecting the results of private-sector R&D, very little such local investment has occurred. Without plant-variety protection, owners of the intellectual property inherent in many of those seeds have little incentive to bring them into Sri Lanka, adapt them to local conditions, and market them to farmers. International experience confirms the multiple benefits from adopting more liberalized yet environmentally prudent technology policies. The experience in Bangladesh, India and Turkey illustrates that the benefits include not only the rapid transfer of improved technologies and subsequent increases in agricultural and export incomes, but also increased private domestic and foreign investments in the seed industry (Table 5.3).

**Trade Policy.** To induce more private investments in agriculture, agro-industry and storage, reduce within-year price fluctuations, and improve food security, the government will need to resist the pressure to continue seasonal altering of tariff rates. The high tariffs for several critical agricultural commodities (including rice, potato, onions, and chillies) and their unpredictable adjustments not only unnecessarily increase the price and market risk faced by farmers, domestic traders, and consumers, but also discourage private investments.

Table 5.3: Seed Policy Reform and Impact on Domestic Industry and Technology Transfer

Country	Reforms Implemented	Post-reform regulations	Impact on seed production and trade	Impact on Technology Transfer
Bangladesh	1990: gov't ends compulsory variety registration for all but five crops (rice, wheat, jute, potatoes, and sugar cane)	* no barriers to new varieties for most crops * high barriers remain for non-gov't varieties of rice, wheat, jute, sugar cane, and potatoes	* more competition in vegetable seed * modest increase in trade of field-crop seeds * limited market entry by foreign companies (only one Thai-B'desh joint venture)	* many new vegetables varieties introduced * hybrid maize and sunflower introduced
India	1986: gov't includes seed and biotech companies as core industries, allowing large companies to enter 1988: gov't establishes procedures for public research agencies to sell breeder seed to companies 1988: gov't eases barriers to seed and germplasm imports for vegetables, coarse grains, and oilseeds 1991: gov't eases barriers to technology purchase and foreign investment for the entire economy	* low-to-no barriers to new private varieties for vegetables, coarse cereals, and oilseeds * import barriers for seeds and breeding material block introduction of new private varieties for other crops	* significant market entry by large Indian and foreign firms and also by new Indian firms * private seed companies take larger share of seed trade * moderate growth in volume of private seed trade, but large growth in value	* huge increase in rate of introduction for vegetable, cotton, coarse grain, and oilseed hybrids (>100 new cotton hybrids introduced in 1996); for these crops, technology nears or sets world best standards
Turkey	1983: gov't ends seed price controls 1983: gov't cuts performance tests to one year, allows companies to do their own, and establishes pattern to accept most private varieties	* low barriers to new private varieties for all crops	* significant market entry by foreign and domestic firms; number of private seed companies increases from <5 before reforms to ca 80 by 1990, including several subsidiaries, some joint ventures, and many international licenses * private companies take over major shares of the seed market; public sales continue to dominate some crops (eg, wheat)	* large increase in rate of introduction of new varieties; eg, from 1982 to 1987, sunflower hybrids increase from 3 to ca 30 and soybean varieties increase from 2 to > 40

Source: Gisselquist, Pray and Nash, 2002.

Over the short-to-medium term, the government needs to commit to phase out tariff protection gradually for various agricultural commodities. This reform will reduce the bias in favor of particular crops (e.g. rice, potatoes, chillies, onions) and thus allow improved domestic resource allocation and reduce the taxation of consumers who are made to pay above-world-market prices. With the removal of price distortions, cropping patterns could adjust to follow changing economic incentives, including shifting from low-value and low-productivity activities (such as rice production) toward commercial production of alternative higher-value crops. To minimize the adjustment cost associated with tariff reforms, other critical policy changes will have to match the phased tariff reductions with measures to lift the constraints on domestic, commodity and factor (land, seeds, technology and water) markets and to improve rural infrastructure. These complementary actions will help ensure that farmers have the freedom and the capacity to alter their resource-use decisions to meet the changing needs of the market.

The recent reintroduction of import licensing is not a step forward. Because they are less transparent than tariffs, such licensing, if not auctioned, invites corruption. If for political economy considerations and to minimize adverse impact, licensing could be phased out gradually, following the Uruguay Round's Import Licensing Agreement. In such circumstances, licensing procedures should: (i) be applied to all WTO members in a fair and equitable manner, (ii) maintain the same distribution of trade as might be expected in the absence of the quantitative restriction; and (iii) be

administered in a transparent way, requiring that all rules be published before they come into force and that renewals be both as simple as possible and administered by only one body.

**Land Policy and Land Administration.** The government's recent decision to grant agricultural households, who have received LDO land full ownership rights, will bring considerable benefits to these families. Experience worldwide has shown that more secure property rights benefit farmers and help improve their productivity by (i) improving households' security of tenure and thus their ability (and readiness) to make investments; (ii) providing better access to credit; and (iii) reducing the transaction costs associated with land transfers (See Annex E: "Reforming Land Policy and Land Administration: Lessons from International Experience for expanded discussion). To ensure the effective implementation of this policy, a nationwide awareness and communications campaign would be a crucial means of informing all eligible beneficiaries not only about the implications of these new ownership rights, but also the corresponding procedures involved in formalizing these rights, to ensure that lack of information about the program does not disadvantage beneficiary households. Consistent with granting farmers full ownership rights, the government should also, as an integral component of implementing this provision, remove the minimum-size restrictions on farm land.

In view of the government's priority commitment to foster a shift from low-value to high-value agriculture, it would be critical to remove the provision requiring farmers to obtain the permission of the Commissioner of Agrarian Services to shift to other crops in designated paddy lands. It is necessary, accordingly, to revise the Agrarian Services Development Act, No. 46 of 2000.

The government's program to phase in a shift from a deeds to a title registration system is also a vital step in ensuring the more efficient functioning of land markets. Especially in light of land-policy reforms, a title system is needed to facilitate boundary dispute resolution, improve transparency and accessibility of records, boost the willingness of lenders to provide financing, and ensure efficient land sales, leases, subdivisions, and other transactions (See Annex C for a systematic comparison of deeds and title registration systems). International experience validates the importance of establishing appropriate institutional mechanisms to administer land rights effectively. The experience from Thailand, where the Government has been carrying out a very effective long-term program for land titling, suggests that, in order to be effective, such institutions need to be legally valid, authoritative and complete, accessible and cost-effective, and institutionally as well as financially sustainable (See Annex E). Over the short-to-medium term, additional key actions are required to ensure the effectiveness of Sri Lanka's land administration system. They include:

- i. establishing the legal, regulatory, and procedural framework for efficient, effective and sustainable land titling and title registration;
- ii. completing the restructuring and streamlining of land administration agencies to promote efficiency, transparency, coordination and cost effectiveness; and
- iii. developing a common information technology strategy including data management for all relevant agencies in order to make information on land tenure, land use, and land capability transparent and accessible.

**Water Policy.** Building consensus and adopting a National Water Policy is essential to any strategic vision for the sustainable development and management of water resources. Key elements of the policy would be:

- i. promoting the shift from supply-driven goals to comprehensive planning, allocation and management within a river-basin framework;
- ii. formulating an appropriate legal and regulatory framework and reprioritizing expenditures to support such a shift; and

- iii. reforming institutional structures and procedures, building on increased participatory management of systems, to improve the management of water resources in Sri Lanka.

This policy would direct the priorities for investment and institutional reforms required to maximize returns on public and private investments over the longer term. The policy would provide the framework for redefining the roles of water-related departments to achieve more efficient, sustainable, and equitable inter-sectoral allocation of scarce water resources (surface and groundwater) among competing users (e.g. agriculture, residential, industrial). Conducting broad-based communication campaigns to discuss critical and sensitive issues, while educating stakeholders to the extent possible on lessons from international experience would be essential to successful implementation.

There is an urgent need to improve the delivery of surface irrigation services. This would contribute both to raising the productivity of existing crop areas and to facilitating the diversification by farmers to higher-value crops that require improved access and reliability of irrigation water supply. Effective action will necessitate:

- i. prioritization of expenditures from a primary focus on the creation of new assets, to demand-driven investments in rehabilitation and maintenance of existing infrastructure;
- ii. fostering greater user participation in managing systems and recovering costs, so as to ensure longer term financial and fiscal sustainability of operations of surface irrigation systems; and
- iii. re-orientating and restructuring existing water institutions to ensure efficient and client-oriented operations and improve coordination.

Reintroducing water fees -- at a minimum to cover O&M expenditures in surface irrigation - will be critical for several reasons. It will promote more efficient water use by reducing incentives for farmers to use water to excess. Raising the necessary financial resources will also enable the appropriate execution of O&M activities and thus ensure the longer term sustainability of surface irrigation systems and eliminate the costly current pattern of rehabilitating systems in almost 5-6 year cycles. Additionally, water fees could reduce the large fiscal burden of operating irrigation systems and contribute to the improved fiscal health of the country. To make their reintroduction acceptable, however, requires matching improvements in the quality of delivery of irrigation services, for which institutional reform of water agencies is a prerequisite. Now that Sri Lanka has initiated a participatory irrigation system management program, it is critical to building commitment in the water agencies to implement the program effectively. The successful experience of the State of Andhra Pradesh (India) in the comprehensive reform of its irrigation policies provides a useful example. Farmers there show a readiness to pay for good service, and the Irrigation Department shows a willingness to adjust to its new supportive role (Box 5.3). As a point of reference, the water fees charged by some selected states in India are presented in Table 5.4.

Table 5.4: Water Charges in Karnataka, Andhra Pradesh, Rajasthan, Uttar Pradesh and Maharashtra as of September 2001, Indian Rs/ha.

Crop	Maharashtra	Andhra Pradesh	Karnataka	Rajasthan	Uttar Pradesh
Sugarcane	4763 <sup>c</sup> /3180 <sup>b</sup> 8857 <sup>i</sup>	875	1000	574	474
Paddy	180 <sup>c</sup> /360 <sup>f</sup>	494 <sup>a</sup> /370 <sup>b</sup>	250	198	287
Wheat	360	250	150	148	287
Cotton	548 <sup>g</sup> /1088 <sup>b</sup>	250	150	178	114
Maize	270	250	88	67	
Pulses			88	79	212
Vegetables	548 <sup>g</sup> /2040 <sup>h</sup>			109	287

Note: a-first crop, b-second crop, c-flow, d-drip & sprinkler, e-on contract, f-on demand, g-rabi, h-hot weather, i -kharif  
Source: World Bank 2003, "Promoting Agricultural Growth in Maharashtra" forthcoming.

**Box 5.3: Ensuring Sustainability of Irrigation Systems: Lessons from Andhra Pradesh, India**

Drawing on international best practice and with strong backing from its Chief Minister, the state of Andhra Pradesh embarked on a bold and innovative program to reorient its irrigation sector. The main pillar of this reform program was the shift to participatory management of the Irrigation Department and Water Users' Associations (WUAs) surface-irrigation systems in the whole state, following the enactment of the Andhra Pradesh "Farmer's Management of Irrigation Systems" in 1997. This move came hand in hand with a program of systems rehabilitation and increased recovery of operations and maintenance costs. With strong political and bureaucratic leadership from the State, WUAs were formed in all public irrigation systems. This ambitious experiment has proved to be successful. Last year, for example, despite systemic water shortages, water distribution and overall productivity improved. The success to date is attributable to two factors – the intelligence and ingenuity of the farmers and extraordinary political and bureaucratic leadership.

The Andhra Pradesh Water Users' Association revolution has set a standard for other states to follow. The lessons could be best illustrated by quotes from a group of Haryana farmers, who went on a "study tour" of Andhra Pradesh: "Andhra farmers are poorer, but they pay much more for water than us... they are happy, because they get better service... and better cooperation between Agriculture and Irrigation Departments... we would pay more if we got better service... political will is very important ... and "no, this will not change in Andhra if the CM changes... the AP farmers told us that they will not allow a new government to give them free water".

In implementing the program, the government followed some key principles:

**Improvement of Management, Service Quality and Cost Effectiveness**

(i) *Participatory management* of irrigation operations and progressive turnover of responsibilities for O&M and collection of water charges to WUAs.

(ii) *Delivery of high quality service* achieved through better maintenance planning and management, full funding of maintenance works, rehabilitation of the irrigation system implemented by WUAs at their respective level in the system, and improved agricultural extension services.

(iii) *Cost effectiveness in services* delivery of each irrigation facility achieved through careful monitoring of costs and implementation of recommendations for reducing costs. Opportunities for savings (i.e., staff reduction, transfer of maximum possible responsibilities to users' organizations) and improved quality and efficiency are identified and implemented.

**Public Information and Awareness**

The strategy for the management of costs and revenue would be disseminated widely to inform WUA members and other user groups about the costs of O&M and irrigation investment requirements so as to integrate them into the decision making process and build support for the concept of self-financing for users' organizations and the ID.

**Institutional Mechanism for Cost Monitoring**

The institutional mechanism to monitor cost, such as a Water Tariff Review Unit would be established. It will monitor the technical integrity of the irrigation system, review all maintenance plans, examine the costs of O&M and their apportionment between various users (agriculture vs other sectors) and between the tiers of farmers' organizations and the Irrigation Department, and recommend adjustments as may be required in water charges and fees to match O&M costs..

Source: John Briscoe, 2002, "World Bank Water Resources Sector Strategy," draft mimeo; World Bank, 1998 Andhra Pradesh Economic Restructuring Project, Project Implementation Plan, mimeo; Keith Oblitas and Raymond Peters, 1999, "Transferring Irrigation Management to Farmers in Andhra Pradesh, India," World Bank Technical Paper No. 449, World Bank, Washington, D.C.

**Strengthening Rural Non-Farm Sector Growth**

**Labor Regulations.** The recent Government proposal to amend the Industrial Disputes Act and Termination of Employment Act should give a major boost to improving incentives for private sector investments in the non-farm sector overall. Its rapid adoption will be critical.

In the near term, the economic implication of the peace agreement, especially on labor markets, is an emerging concern. If and when a peace agreement is concluded, tens of thousands of low-skilled workers will be seeking civilian jobs. Many of the former soldiers will come from rural areas, so one might expect the rural sector to come under special pressure to expand its demand for labor if wages in rural areas are not to fall when hostilities cease. However, tourism export earnings should pick up once unrest abates. Tourist arrivals and US dollar earnings from tourism have not grown since the early 1990s; as a percentage of goods and services exports, those earnings have been halved over the past decade, from 6 to 3%. In recent years the tourism sector is estimated to have employed around 90,000 people (direct plus indirect). While the type of labor demanded by that industry would be somewhat different from that released by the military, upward mobility by current urban employees may be sufficient to provide openings for the surplus labor liberated by the end of the conflict. Other things being equal, overall investment of domestic and foreign savings in Sri Lanka will undoubtedly pick up as the prospects grow for a lasting peace, adding to the growth in

jobs in tourism and services, perhaps by several orders of magnitude, and dwarfing the growth in demobilized labor.

**Commodity Marketing Policies.** Reorienting the government's role in the marketing system would be critical to encouraging greater private sector involvement and investments. In particular, the highly subsidized retailing operations of the Cooperative Wholesale Establishment (CWE) crowd out and undercut private sector involvement in the domestic market. The government announced in January 2002 its intention to float a separate company to handle CWE's current retailing activities and to hand over its management to the private sector. The government should take the next bold step towards privatization. Selling these assets would not only remove the crowding-out effect, but would free up fiscal resources for other activities. In the immediate term, the government should hold off adding new commodities and services to CWE's retailing activities. Should the government wish to assist low-income households, using more-targeted measures such as food stamps is far more efficient than being directly involved in retailing.

The Government should phase out the PRIMA wheat milling monopoly as soon as possible. The present government should consider canceling the agreement, because even if that involves compensating PRIMA, this will be less costly to society than prolonging the current situation that harms consumers in addition to helping the miller.

Rather than direct involvement in markets, the government should explore options for taking a more facilitative role. One example is the initiative for forward-sales contracting initiated by the Central Bank. Another is the successful initiative undertaken by MASL to foster market linkages between a large community of small farmers and bulk buyers of agricultural commodities in System H (Box 5.4).

**Box 5.4: Diversifying Production and Markets for Produce in System H: A Success Story**

A review of farmer constraints to increasing agricultural productivity in System H in the Mahaweli Development Area revealed that lack of access to markets was a major problem. To help redress this problem, the Project Implementation Unit of the World-Bank-financed Mahaweli Restructuring and Rehabilitation Project appointed a private-sector development specialist to facilitate greater private-sector participation in System H. The specialist organized seminars and discussions with private traders to identify their commodity requirements and to determine ways for farmers in System H to meet these demands. An outcome of this initiative was a commercial agreement between a private company and water-user association in the Eppawala Block to grow and supply soybeans to the company during the 2000 crop year. The assured market encouraged farmers to diversify out of paddy. The water-user association also provided the mechanism to adjust the irrigation-water delivery schedule to satisfy the quantity and timing requirements of soybean cultivation. Prior to the shift in crop, 80% farmers in the Block grew rice on 50% of the irrigable land, and the balance was devoted to other crops. Total cropped area was about 1,900 ha. Due to the water savings from growing soybeans, a less water-intensive crop, farmers were able to expand their irrigated cultivated area by 40% to about 2,700 ha. The gross value of their output increased from Rs 3.5 million to Rs7.5 million. Since then, 12 other supply agreements with private companies have been negotiated to produce and supply maize, passion fruit, gherkin, black gram, vegetables and chickens.

Source: Mahaweli Restructuring and Rehabilitation project monitoring reports.

- **Incentives for Private Investments.** There is a need to take stock and rationalize the various incentives schemes being offered by different government agencies. This study provides only a partial list of incentive schemes for the agricultural and rural non-farm sectors. But their numbers and the instances of overlapping goals are increasing over time, with different Departments launching new ones with limited inter-departmental coordination. To facilitate market-driven investments, promote a level playing field for all private-sector participants and minimize government revenue losses, there is a need to refocus BOI towards attracting and supporting all investors, to phase out tax holidays and concessionary credit schemes over the next 5 years, strengthen existing competition policy, and adopt appropriate bankruptcy legislation that will allow firms to exit markets quickly and at lower cost. In view of the government's tight fiscal situation, it will also be critical to target fertilizer subsidies to poor households and phase it out over the next 5 years. This will promote more fertilizer efficient use and help ensure the sustainability of agriculture by encouraging balanced nutrient use.



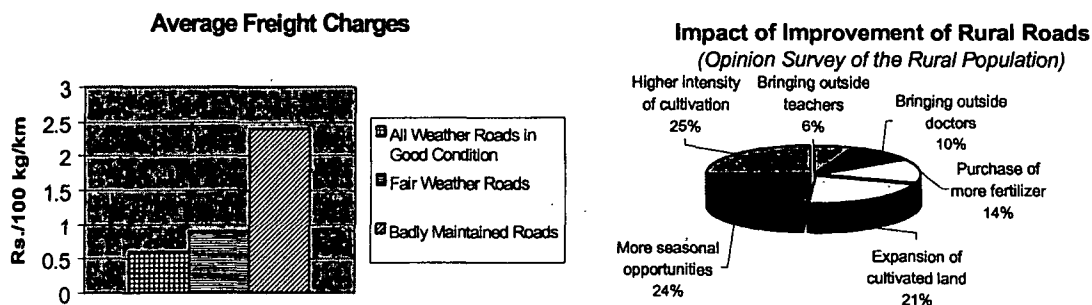
**Rural Education.** Investing in rural education continues to be very important. To assist farm families' adjustment to a gradual phasing out of tariffs on food imports and to make the most of new opportunities accompanying the introduction of new crop varieties and development of technologies, basic schooling for the next generation of rural households is essential. Improving the quality of the teaching and learning in rural schools would have a higher payoff for public investment under the more liberal policies listed above than in the past. This prospect arises not only because those staying in agriculture will be making more complex management decisions, but also because those leaving will be able to adjust more easily to non-farm life and work the stronger their general education.

### B. Strengthening Rural Infrastructure

There is an urgent need to improve rural infrastructure beyond the Western Province. Improved access and quality of rural infrastructure would contribute not only to raising the quality of rural life, but also to the successful implementation of government development plans for the modernization of agriculture and improving the investment climate for rural industries and services. Regression analysis using the SLIS 1999-2000 data shows access to rural infrastructure in addition to land owned, the size of the household, and education, are significant determinants of household participation in rural non-farm activities. It shows that lack of access to roads (the distance from the nearest main road) is negatively correlated with the probability of participating in non-farm employment. Participatory planning and implementation of rural infrastructure projects, which involves government and targeted users, would be valuable to ensure the appropriateness of investments undertaken.

**Rural Roads.** Accelerating rural growth will require increased investments in roads (rural roads and highways) while ensuring improved operations and maintenance of systems created. Notably, studies (Fen, Hazell, and Thorat 1999) have shown that additional government expenditures on roads have the largest impact on poverty reduction as well as a significant impact on agricultural productivity growth. The importance of adequate rural roads cannot be overstated. The impact of rural road improvement in Andhra Pradesh illustrates the cost savings and community benefits that could be achieved (Figure 5.2). Rural road investments, particularly in the large numbers of poorly connected provinces with high concentrations of poverty is critical. As noted earlier, there is a close link between the areas with limited road infrastructure and higher poverty rates.

Figure 5.2: Impact of Rural Roads Improvement on Rural Economy in Andhra Pradesh



Source: Rural Transport Surveys (1997) – Andhra Pradesh Economic Restructuring Project

**Rural markets.** There is a need to increase public/private investments in rural markets to reduce marketing costs and improve agricultural competitiveness. Existing markets are poorly

situated, equipped, and maintained. The high cost of domestic marketing raises the costs of agricultural inputs for farmers and the costs of agricultural outputs for consumers and agro-processors.

Achieving more rapid and sustainable poverty-reducing agricultural and rural non-farm sector growth will require a coherent and coordinated plan of actions by several ministries on several fronts as discussed above. This will not be easy. However, only when such an integrated package is introduced is it likely that Sri Lanka will see economic growth that will alleviate poverty and not leave any significant groups behind.

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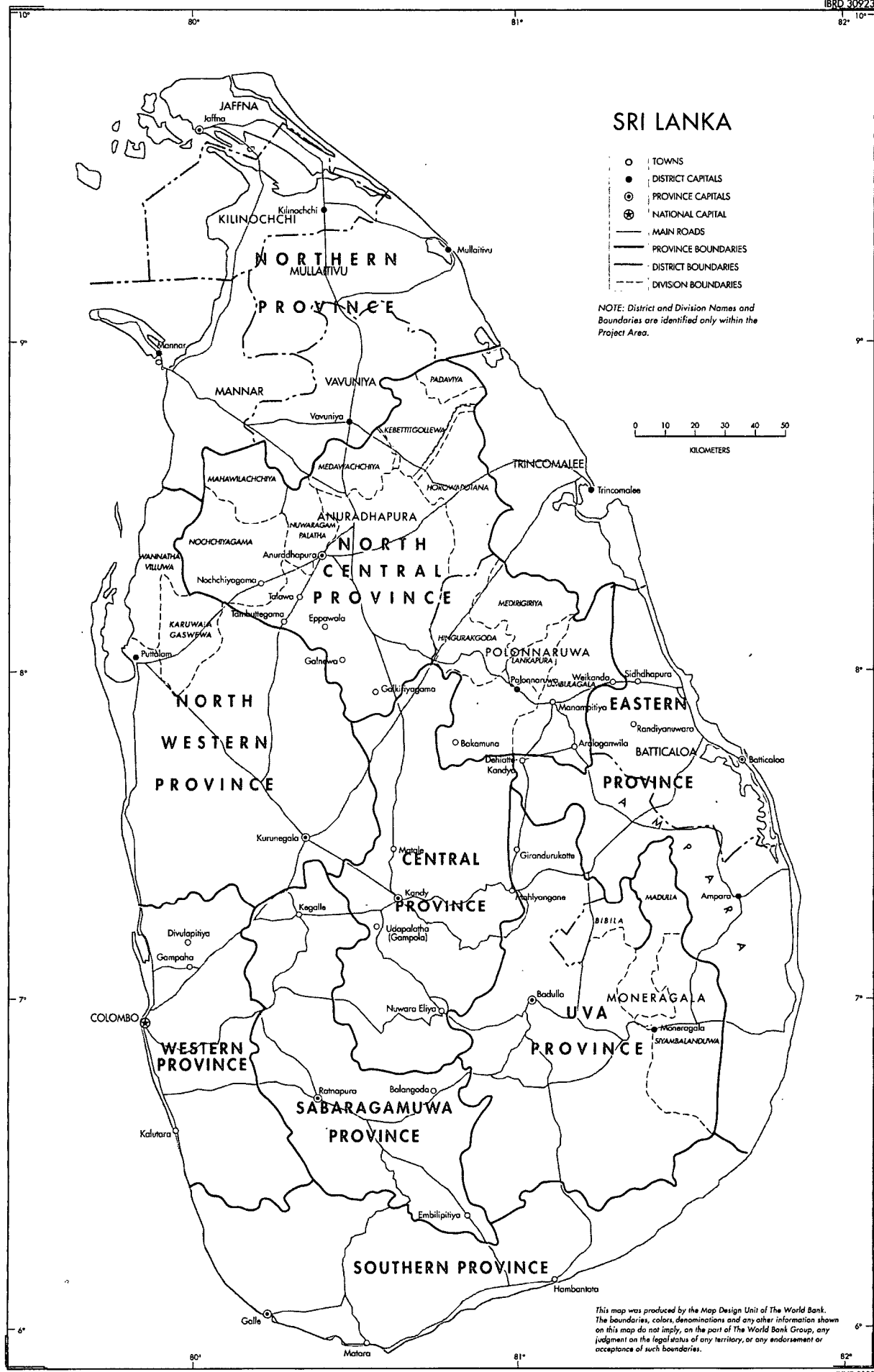
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**[MAP IBRD 30923]**





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