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Policy Paper No. 8

**Promoting Profitable  
Irrigated Agriculture:  
Trade and Fiscal Policies**

IMPSA

**IRRIGATION MANAGEMENT POLICY SUPPORT ACTIVITY**

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## Preface

**T**HIS PAPER IS a product of the Irrigation Management Policy Support Activity (IMPSA). IMPSA is a programme to assist the Government of Sri Lanka (GSL) in the implementation of its accepted policy of participatory management in irrigation and settlement schemes, in order to improve productivity, profitability and equity in the irrigated agriculture sector.

IMPSA was initiated by the Ministry of Lands, Irrigation and Mahaweli Development in association with the Ministry of Agricultural Development and Research. It is sponsored and financed by the United States Agency for International Development (USAID), through the Irrigation Support Project for Asia and the Near East (ISPAN) and is assisted by the International Irrigation Management Institute (IIMI).

For the execution of IMPSA, the GSL set up an inter-ministerial advisory committee, the Irrigation Management Policy Advisory Committee (IMPAC), to provide broad guidance for the implementation of IMPSA and to institute a mechanism to achieve consensus among the Divisions and Departments of the concerned Ministries on the recommendations to be adopted and implemented by the GSL. IMPAC is chaired by the Secretary, Ministry of Lands, Irrigation and Mahaweli Development, and comprises of the Secretaries of State of the relevant Ministries, together with the Heads of the Departments and Agencies under them. IMPAC is assisted by a Working Committee, the IMPAC Working Group, which consists of some of the IMPAC members as well as several other officials drawn from the relevant Ministries and Agencies.

Under the IMPSA Programme, ten Policy Papers are scheduled to be prepared and processed for presentation to the government. Each Policy Paper will be a concise statement of the recommendations of the IMPAC Working Group.

# Chapter 1

## INTRODUCTION

### 1.1. Purpose of the Paper

THE PURPOSE OF this paper is to propose a set of guiding principles and feasible strategies on trade and fiscal policies affecting irrigated agriculture in Sri Lanka, which would contribute to achieving high profitability in these systems in the future. The paper also sets out broad guidelines for the implementation of the strategies proposed.

The development of profitable irrigated agriculture depends on a large number of variables such as appropriate and efficient technologies developed through research and development (R&D), efficient operation and maintenance (O&M) of irrigation systems including their modernization, development of human resources involved in irrigated agriculture, development of an effective institutional system concerning the public and private sector agencies as well as the farmers' organizations, efficient land and water resources use, and investment policies. Each of these issues has a bearing on the performance and functioning of irrigated agriculture. The competitive price structure for agricultural products both processed and unprocessed, low level of unit cost of production of commodities, strategies for value-added commodity production, and higher yields are considered the most important primary elements in promoting profitability of irrigated agriculture of the country. Although the focus of these issues is essentially beyond irrigation management per se, they play the most important role in enhancing profits from this sector. Trade and fiscal policies can have both short and long-term effects on the profitability of irrigated agriculture more readily than on the other measures. A consistent set of trade and fiscal policies can have a long-term effect in achieving higher profits and thereby the sustained development of the irrigated agriculture sector of the country. Two necessary conditions for higher profits are increased agricultural yields and production of value-added items. They will increase returns to irrigated agriculture by several-fold. The adoption of value-added enterprises in the form of agro-processing industries will also help absorb significant numbers of farm labour thus increasing the returns per worker in the agriculture sector.

In making irrigated agriculture productive, dynamic and efficient as proposed in IMPSA Policy Paper No.1, it is essential to establish an efficient marketing system, convert part of the output into processed products through the installation of appropriate

agro-industries, and to provide appropriate fiscal measures and incentives for producers both for direct agricultural production as well as for value-added products. If trade policies are not in line with other production and management policies affecting the irrigated agriculture sector, irrigated agriculture cannot be profitable. For processing to take place efficiently, the production of basic agricultural stuff itself will have to be increased significantly, and hence policies governing production itself are important. Therefore, production, processing and marketing are related to macro-economic policies such as the exchange rate, and fiscal issues such as subsidies, credit, input supply, extension and even the delivery of irrigation water. Hence, the policies covering all these areas must be well-integrated with each other; in other words, we cannot think of irrigation policies in isolation from the policies of the overall economy including trade and marketing.

It is in the above context that appropriate trade, marketing and fiscal policies integrated with the policies on primary (crops and stock) and secondary (processing) production must be considered within the scope of irrigation management policies under IMPSA.

## **1.2. The Methodology**

THE FOLLOWING METHODS were used in the development of this Paper.

- i. Review and synthesis of three Staff Working Papers developed under the related subjects.
- ii. Examination of available literature.
- iii. Consultation with senior government officials and selected private sector officials through the medium of a "Consultation Panel."
- iv. Informal and formal discussions with key officials of the relevant agencies.
- v. Information and feedback obtained from a series of consultative workshops held for a selected group of experts drawn from various public institutions as well as for a selected number of farmer representatives.
- vi. Discussions between the IMPSA Secretariat and IIMI/SLFO staff comprising the IMPSA Team.



## Chapter 2

### MACRO-ECONOMIC AND FISCAL POLICIES

#### 2.1. Exchange Rate

THE EXCHANGE RATE for a country's currency represents its value relative to foreign currencies. It is the rate at which a country must give up its currency to obtain other countries' currencies in order to import goods and services. This rate also determines the value in domestic currency of exported goods and services. Exchange rates serve to equilibrate the international demand for flows of imports among countries, and exchange rate changes match changes in relative prices between countries. The Sri Lankan rupee has been allowed to float toward an equilibrium in keeping with the market forces.

The appreciation of the Sri Lankan rupee during the pre-liberalization period relative to the currencies of its main competitors and input suppliers had led to a steady decline in the profitability of export businesses, encouraging movement into non-traded activities as well as highly protected import-substituting enterprises.

In August 1990, Sri Lanka introduced a market-oriented exchange system for determining daily exchange rates based on the weighted average of the previous day's inter-bank rates. Such a flexible exchange system was adopted both to prevent future misalignments of the rupee and to de-politicize future exchange rate adjustments.

The efforts toward a market-oriented exchange rate regime adopted in August 1990 is a major step. Indeed, the recently adopted export-promoting measures are important in the overall incentive package to ensure an adequate return to efficient export and import substitution. Flexible exchange rate management will be critical in maintaining international competitiveness and as a fundamental component of the crop diversification and export promotion program. For export-oriented crop diversification however, a market-oriented exchange rate is a pre-requisite but not a sufficient condition.

#### 2.2. Taxes

THE GOVERNMENT HAS, from time to time, announced tax incentives specifically directed to support agriculture and agro-industries and the maximum facility has already been made available. It is unlikely that granting further tax relief will necessarily boost production or processing. The positive contributions of the tax system to a more liberalized, growth-oriented development strategy have also been recognized. To this end, important

efforts are now being made to reduce trade taxes through increased reliance on direct consumption taxes and to lower the country's dependence on protected import-substitution enterprises by expanding the export sector.

### **2.3. Tariffs**

THE PREVAILING TARIFF structure permits the import of only selected commodities and manufactured goods into the country as an incentive for local production and manufacture. The reduced tariffs for the import of machinery for agriculture and agro-processing are also to be noted. Although the prevailing tariff structure is not detrimental to the import machinery for agriculture and agro-processing, the substantial tariff of about 45 percent levied on the import of spare parts is to be noted. The authorities believe that it is difficult to levy a lower rate on spare parts of machinery connected with agriculture due to their inter-changeability with spare parts of machinery used for non-agricultural purposes. The cumbersome procedures in tariff administration have been streamlined by adopting a four-band system of tariffs.

### **2.4. Subsidies**

DIRECT SUBSIDIES OF irrigated agriculture include investment on irrigation works and subsidized credit. A small subsidy is also hidden in seed and planting materials since the total cost of their production is not charged to the farmer. It is the government policy to remove direct subsidies gradually and the fertilizer subsidy has been withdrawn completely. The impact of these subsidies on production and marketing is yet to be studied considering the individual production frontiers of individual producers and enterprises. However, there is a need to reduce the cost of production on the one hand, and maintain productivity, on the other. The utilization of green manures and other types of organic manures in combination with small quantities of fertilizer may partly reduce production cost and help maintain soil fertility which is vital for profitability of irrigated agriculture. Subsidies have been increasingly used to promote social welfare as well as social productivity and efficiency. Subsidies have come to be regarded as a means to increase the income level of producers who otherwise suffer because their production costs have risen or the prices they receive have fallen.

One solution would be to broaden farmers' access to credit, even unsubsidized but available with less paper work and formalities. It is to be noted that the previous government programmes providing subsidized credit have been ineffective since only very little of the total credit disbursements for agriculture had been channelled through institutional sources. One strong solution to make credit available to producers would be to channel them through farmers' organizations with less formalities.

### **2.5. The Government Budget**

SOUND MANAGEMENT OF government budgetary policy plays a critical role in shaping the course and patterns of agricultural development and economic growth. The overall size of

the government budget is determined not only by the quantum of the GDP but by the willingness of the government to run and finance budget deficits, and its willingness and ability to tax the domestic economy to produce revenue. Both the level and pattern of financing have important macro-economic implications.

The economic effects of an increase in government spending depend on whether the increased expenditures are financed by an equivalent increase in taxes, by an increase in the money supply (non-bank borrowing or monetization of the deficit), or by foreign and domestic bank borrowing. Managing the fiscal deficit involves the careful assessment of the complex implications of altering any of these policy variables.

If large fiscal deficits are financed by advances from the Central Bank (i.e., an increase in the money supply), inflation is fuelled, inflationary expectations mount, and uncertainty increases regarding future price developments, including the exchange rate. A government deficit financed by domestic borrowing increases interest rates unambiguously, crowding out non-public borrowing and private investment. Foreign financing of the deficit will carry debt service obligations, with adverse effects on medium- and long-term growth. Large foreign resource inflows, including grants, will typically lead to an appreciation of the real exchange rate, undermining export and import-substitution growth. Financing the deficit through higher taxes may create economic inefficiencies and affect the country's growth performance.

## Chapter 3

### TRADE AND MARKETING POLICIES

#### 3.1. Production Planning

TRADE AND MARKETING policies cannot be discussed in isolation from production and hence production planning is discussed here. The process of production planning should be market-oriented. The present status of production planning in agriculture involves the preparation of the agricultural implementation programme by the Ministry of Agricultural Development and Research (MADR) which is based on past experiences with regard to the area under different crops. A production plan based on demand projections and market orientations is not made due to the paucity of various facilities. From the farmers' perspective, the extent planted is based on past experiences with regard to marketing. Hence, commodities for which there was a competitive price in the previous year are produced in large quantities in the subsequent year which drives the price down. This leads to over-production of certain crops, severe fluctuations in prices and in the deficit of production of other crops, and haphazard imports of agricultural products causing hardships to the farmers and to the country.

Only a little monitoring takes place with regard to the extent damaged, the expected yield, the time of arrival of crops at the market, and the expected output. Once the crops are harvested, farmers themselves have to look for markets. They face severe problems with regard to the disposal of the crop. Price information is not available to the farmers who are mainly at the mercy of the private merchants. Therefore, the farmers are forced to sell their crops to the private traders who know the market quite well while the farmers do not. In areas where farmers' organizations are being developed, some of them have ventured into marketing with satisfactory results.

#### 3.2. Trade and Marketing Policy Instruments and Institutions

##### 3.2.1. *The Rice Sector*

RICE IMPORTS DECLINED steadily in the 1960s and the 1970s. Since 1980, rice imports have stabilized at an average of 10 percent of the total production, accounting for approximately 25 percent of the consumer basket, 75 percent of the total grain consumption and 45 percent of the calorie intake, and employing almost one-half of the labour force available in the irrigated agriculture sector. Rice in Sri

Lanka has been an important political and economic commodity since the years following World War II. Three major policy instruments have been used to affect the rice market over the past five decades: the Rice Rationing Scheme, Domestic Procurement and the Guaranteed Price Scheme, and Import Management.

***The Rice Rationing Scheme.*** Until 1978, the government subsidized consumers through the provision of free rice or through heavily subsidized rationed rice available to almost all households. Imports were used to bridge the gap between total consumption requirements and the amount domestically procured at a guaranteed price. To implement the rice ration scheme, the total rice ration and the average price at which the ration should be available to consumers were first determined. Based on the import price, the next step was to determine the amount which was to be imported and the level of the support price necessary to generate the residual amount which was to be procured from domestic sources.

To administer the rice rationing scheme, the government used a dual-price system, one applying to the consumers and the other to the producers. In general, the guaranteed producer price had been above the import price until 1984; thereafter the price differential has been fluctuating.

To reduce the high cost of subsidies while giving the market a larger role in determining prices, the rice ration scheme was replaced in 1979 by a system of food stamps. The food stamp program was intended to protect low-income households from the potential adverse effects of removing the subsidy. Eligibility for food stamps was limited by income criteria, which in the first year reduced coverage to about 50 percent of the population. Food stamps were given to eligible consumers to purchase basic food items at authorized shops at non-subsidized prices.

***Domestic Rice Procurement and the Guaranteed Price Scheme (GPS).*** The GPS was initiated in 1948. In 1971, the Paddy Marketing Board (PMB) was assigned the tasks of handling rice procurement, storage and milling. The PMB paddy purchases under the GPS were carried out through the PMB temporary procurement stores, Multipurpose Cooperative Societies (MPCS) and private agents. The PMB arranged for milling through its own mills or through contract to private-sector mills. Milled rice was then distributed to the Food Commissioner's Department which made the rationed rice available to consumers through its rice stores and authorized dealers. Imports were also channelled through the Food Commissioner's Department to supplement domestic procurement.

***Import Restrictions.*** The Cooperative Wholesale Establishment (CWE) of the Ministry of Trade and Shipping had a monopoly on importing rice (and other essential food items such as flour, onions and chillies) until November 1988, when private-sector imports of rice were authorized. Rice imports, however, require a government license and are subject to a quota system. Import levels for a given year

are based on estimated per capita consumption, estimated production for that year and a predetermined support price.

In 1990, a system of bonded-warehouse storage was initiated. Under the bonded-warehouse system, the Food Commissioner's Department gives a sole-source license to three off-shore private companies to import and store rice as a buffer stock for later sale. Although the property of the private sector, imported rice is stored in the Food Commissioner's bonded warehouses in which storage space is leased out at commercial rates. In 1990, authorized imports were limited to 200,000 metric tons and were divided among the three companies in the amounts of 100,000 mt, 60,000 mt, and 40,000 mt. Rice in excess of monthly stock requirements was sold for any price above the GPS price. Monthly stock requirements are based on estimated production during the season.

### **3.2.2. *Other Irrigated Crops***

GOVERNMENT POLICY TOWARD the other irrigated crops has varied with time. During the early and mid-1970s, the government policy aimed at limiting imports to protect producers and achieve self-sufficiency in chillies and onions. Imports of these two commodities were banned for several years. When the ban was lifted after 1977, importation resumed, but in 1979 a floor price system was implemented.

The floor price system still exists, with floor prices established annually for maize, blackgram, groundnut, soybean, sesame, chillies, cowpeas, greengram and finger millet. But in practice, the system is not functioning as there is no workable mechanism to support it. In the past, the PMB was responsible for implementing floor prices. However, the government has recently been unwilling to allocate the funds needed to operate an effective price support system.

Import restrictions are today used to retain influence over price. The CWE has a monopoly on the imports of onions and chillies. Even for commodities such as maize, which are assigned to the private sector, an import permit is necessary. In more recent years imports of onions and chillies have averaged 20-25 percent and 10-15 percent, respectively, of total production.

Sri Lanka has traditionally exported a number of field crops such as groundnut, sesame, cassava, blackgram, castor seeds, and on occasion, maize. The export of most of these items has varied. However, exports of fruits and vegetables have been modest, though increasing at a steady pace since 1980.

While there are no significant taxes on the export of irrigated crops, tariffs on imports are variable and, in some cases, quite protective. In 1989, for example, tariffs ranged from 100 percent for potatoes, to 60 percent for dhal, greengram and soybean, and 5 percent for chillies, onions and soybean oil.

### 3.2.3. *Institutions and Policies*

SEVERAL GOVERNMENT ORGANIZATIONS are involved in the formulation of the policies outlined above. The National Food Policy Coordinating Committee is a cabinet level committee that meets monthly to review food availability and prices, and to evaluate the overall agricultural situation. The Cost of Living Committee is a working committee which reports to the Food Policy group. It meets weekly to evaluate the price situation and coordinate action on such matters as the import of onions and chillies or any action that may be deemed necessary to keep the cost of living from escalating. Decisions may also be made in this forum to adjust import tariffs, if adjustment is deemed necessary to reduce food costs.

The CWE is a corporate body engaged in the wholesale and retail sale of commodities. The CWE had broader import responsibilities in the past and is presently the sole importer of onions and chillies. At times, the government has used the CWE to support farm prices, as in 1989, when there was an unusually large crop of big onions.

Other major institutions include the Export Development Board (EDB) which has been used to promote exports. Export Production Villages (EPVs) comprise an organizational support scheme designed to develop small farmer companies for the production and marketing of selected export crops. Twenty EPVs are now active, with each EPV numbering 50-1,000 farmer families. However, their performance and the problems faced by them are not readily known. The most recent addition to this list of organizations is the farmers' organizations which do not have adequate facilities and incentives to get involved in direct marketing. Lack of information on price and market opportunities is a serious problem affecting the private firms and farmer's organizations.

There are several policies already in force such as the national export plan, science and technology development policy, policy for the development of non-traditional export crops, tax and tariffs policies, the Greater Colombo Economic Commission (GCEC), and the industrial development strategy, just to mention a few which directly affect irrigated agriculture. These policies and programmes are under the jurisdiction of different Ministries and Departments among which there is no proper co-ordination. This arrangement is not conducive to the profitability of the irrigated sector. It is recommended that a steering committee at national level should be established comprising the irrigation, agricultural, trade and industrial Ministries and private organizations including representatives of apex farmers' organizations to formulate policies and to co-ordinate efforts affecting trade and marketing in the irrigated agriculture sector. Suitable linkages should be established between this committee and any other related national level committees including the Cabinet sub-committees.

### **3.3. Marketing Channels**

RICE IMPORTS AMOUNTED to approximately 12 percent of the total production in 1985-90. Prior to 1990, imported rice was distributed through the MPCSSs. Today, rice is imported by private companies under a bonded-warehouse storage system as mentioned in the previous section.

The PMB domestic procurement of rice has fallen to less than 3 percent of production in recent years (1985-90). The Paddy Marketing Board purchases paddy through temporary procurement stores, MPCSSs, private agents and Agrarian Service Centres.

In private-sector channels, supplies are purchased at the farm level throughout the year by collectors, brokers and millers. Milled rice is sold to wholesalers before reaching consumers via the retail trade.

Imports of onions and chillies in the last 3 years amounted to about 30 and 20 percent, respectively, of total production. As already mentioned, the CWE is the sole importer of both crops. Although a proportion of imported onions and chillies is sold through the CWE retail stores, the two commodities are usually marketed through the private trade.

In the domestic market, primary assemblers buy chillies and onions from producers at the farmgate or at cooperative collection points. Intermediate buyers are local traders who purchase from local collectors, small traders, and regional wholesalers. Final wholesalers operate in major consumption centres such as those in Kandy and Colombo.

Marketing channels for other field crops and domestic fruits and vegetables vary somewhat from crop to crop, among regions, and from season to season, but most of these crops have similar marketing patterns. Farmers sell either to local traders, local collection agents who procure for other trading establishments, or directly to regional wholesalers. These primary buyers resell to Colombo wholesalers or other regional wholesalers who in turn supply retailers in their particular areas.

There are two major marketing channels for exported fresh produce. Farmers sell to village traders who sell to the wholesale market in Colombo. Exporters in this market carry out the sorting, grading and packing at their warehouses in the Colombo area prior to shipment. In the second marketing channel such as that for gherkins, small farmers sell directly to the exporter commonly through a contract farming arrangement.

### **3.4. Market Performance**

#### ***3.4.1. Market Competition***

AGRICULTURAL MARKETING IS the performance of all economic activities involved in the flow of agricultural products from the point of initial production to the consumers. Marketing agents connect producers and consumers by being willing to pay the farm price for the product in order to sell it to the consumer for an economic



return. They are buyers who transport, store and process a commodity in order to sell it to the consumers in the time, place and form desired. Marketing agents play a dual role: the role of physical distribution which is concerned with the physical handling and transfer of goods as they move through the marketing channels, and the role of adding value to farm commodities.

Competition among participants is a prerequisite to effective agricultural market performance. A first step to measuring market performance is to ask how closely the marketing system approximates a competitive market. By isolating the nature of market imperfections or departures from competitive conditions, we may better see the imperfections and prescribe corresponding remedial measures. Major elements of a competitive market include: a large number of buyers providing alternative possibilities to farmers, equal access to marketing activities, and adequate knowledge of prices and trading opportunities.

At the village level, a variety of marketing agents exist ranging from boutique keepers to local traders, collectors, and itinerant traders and other outside buyers, including rice millers in distant places sending their lorries to procure paddy both during in-season and off-season periods. A large number of traders can also be identified at the wholesale level in rice, fruit and vegetable and other commodity markets. Although "market leaders" exist in major wholesale centres, particularly for major commodities such as rice, onions and chillies, prices are controlled by the traders. With the withdrawal of state agencies from the direct marketing and trading business, the private trader appears to be the one who controls the prices of commodities. It is to be noted that trading and marketing cannot be left entirely in the hands of the commercial firms; as an interim measure, before being handed over to the private sector, the government has to perform an important function with direct purchases from the producer. In the long run, this role has to be taken over by farmers' organizations which can compete with the private firms. They have already undertaken several marketing activities satisfactorily.

To create a competitive market, the government has implemented various programmes in the past including the efforts to develop regional wholesale markets. The most recent scheme in this direction is the establishment of purchasing centres, one per Assistant Government Agent (AGA) Division, which are to be manned and operated by private individuals. The scheme is very new and its impact is yet to be seen.

Market intermediaries use a combination of price and non-price services to compete for available supplies. Farmers appear to be well aware of the several outlets for their commodities and of the trade-offs between boutique traders who provide farmers with consumption and/or production credit in exchange for part of their harvest, versus outsiders offering higher prices but no credit.

### **3.4.2. Price and Marketing Margins**

EFFECTIVENESS OF THE MARKETING system can be tested by analyzing market arbitrage over time and space. Traders mediate against price differences across time and space by moving the commodity from low-price markets to high-price markets. In a well-functioning market, participants respond immediately when they notice that prices in two markets are different and profits can be made by buying in the low-price market and selling in the high-price market.

The marketing margin is the difference between what is paid by the consumer and what is received by farmers. It is the price of all utility-adding activities performed by marketing agents. This includes: expenses of performing marketing functions over space (transport), time (storage) and form (processing); returns to the agent's capital, management, entrepreneurship and labour; and a provision for risk bearing. The extent to which the marketing margin is accounted for by these cost elements provides a basis for judging how closely prices approximate those resulting from a competitive market. The marketing margin enjoyed by the private trader is believed to be very high for commodities such as paddy and chillies which can be stored.

Even though annual and monthly prices for agricultural commodities are collected regularly in Sri Lanka, only a limited analysis of these prices can be found. International prices and market information of the relevant commodities are not available to all market participants. Analyses based on the relationship between price behaviour and marketing costs are particularly lacking.

## Chapter 4

### AGRO-INDUSTRIES

#### 4.1. Rural Industrialization

THE IMPORTANCE OF rural industrialization for long-term development is fully recognized. Given the specific focus of this paper, and the mandate of IMPSA, agro-industries are emphasized here; but this should be understood as part of a broader rural development policy. A policy supporting rural industries could ensure rising living standards in rural communities and small towns.

#### 4.2. Constraints to Development

THE CONSTRAINTS EXPERIENCED by agro-industry in Sri Lanka have already been documented. Some constraints can only be overcome through policies established at the national level. Other constraints can be addressed by one or more food-related Ministries. These include the Ministry of Agricultural Development and Research (MADR); the Ministry of Lands, Irrigation and Mahaweli Development (MLI&MD); the Ministry of Food and Cooperatives (MFC); the Ministry of Trade and Commerce (MTC); the Ministry of Finance (MOF); the Ministry of Industries (MI); and the Ministry of Rural Industries (MRI).

The principal constraints to agro-industrial expansion which can only be addressed at the parliamentary level with the support of the food-related Ministries include:

- \* economic instability;
- \* lack of raw materials, capital and appropriate machinery for food and fruit processing industries;
- \* civil unrest;
- \* inadequate market information and demand projections;
- \* geographic location in relation to EEC, Middle Eastern, and USA markets;
- \* lack of adequate infrastructure facilities such as cost-effective air transport for export of perishables, insufficient inland communication capacity, lack of roads from farm-gate to markets and poor packing industry;

- \* absence of adequate co-ordination and policy directions;
- \* lack of research on food processing methods; and
- \* lack of facilities for dissemination of R&D information and training.

Although current agro-industry participants have learned to deal with these constraints to some degree, their profitability and future expansion have been limited; investors, both national and international, prefer not to get involved in agro-industrial ventures and potential outside investors find Sri Lankan investment opportunities less attractive than other alternatives.

Within the control of one or more of the food-related Ministries are constraints which inhibit domestic agro-industry development and expansion. In order to encourage agro-industry to utilize the increased agricultural production of Sri Lankan irrigated lands, these constraints must be addressed and resolved. To do so may require trying, and discarding, several programmes before the right one is found. Different geographic regions or provinces might require different, or combinations of different, methods. A highly flexible approach is essential if solutions for resolving constraints are to be found. It is recommended that an institutional mechanism be identified to coordinate research and development in this area and subsequently provide technical training to individuals or organizations so that investors can make use of this information in a pragmatic manner.

### **4.3. Incentives**

MANY COUNTRIES OFFER an "investment incentive package" to encourage agro-industrial expansion, because their experience has proved that the resultant investments have generated dramatic increases in employment and farm and labour incomes. These packages take many forms, but usually include tax holidays, free land, personnel training grants and import duty exemptions, as well as additional, localized incentives. The countries that are most effective in attracting investors have created "one stop shopping centres" where a potential investor, either local or foreign, can obtain in one office all of the necessary input data related to their enterprise, enabling a more rapid analysis and decision. Also provided are introductions to other groups who, in the last two years, might have expressed an interest or had experience in similar enterprises, but who have chosen to defer or not to proceed. If no information is readily available for a specific enterprise, this office makes the necessary arrangements to obtain the pertinent information promptly, so that the potential investor does not have to spend his time searching out and visiting other government offices and trying to identify the leading members of related enterprises.

No such "one stop investor service" is available in Sri Lanka. Although the Sri Lankan Small Business Development Centre has developed some skills in this kind of informational service, particularly for non-agro enterprises, the information is not complete enough for an investor to develop a bankable business plan. Investors must still go to many governmental agencies where only incomplete, usually outdated, data are made available. Before

proceeding to the analysis and decision process, the potential investor must try to locate missing data as well as to update the data which he has been given. Although assistance may be offered, the response time is so slow as to render such assistance virtually useless.

Irrespective of their decision as to their participation in an incentive package for investors, the food Ministries would be well-advised to work with other appropriate Ministries to develop some sort of "one stop" export document clearance service. If they have any hope for attracting agro-investment risk capital for the development of the Mahaweli lands, they would also be well-advised to re-think and revise the quantity of land now allocated for agro-industrial development as well as the present requirement to relinquish developed lands at the end of a ten-year period. The government should develop a mechanism to ensure long-term lease of land to private investors with sufficient safeguard conditions being placed on the lease.

#### **4.4. Opportunities**

##### *a. Private seed companies*

The most obvious agro-industry opportunity in Sri Lanka would be to encourage the private sector to operate seed farms and processing centers and concentrate governmental agencies to concentrate on a regulatory role in the maintenance of seed purity, viability and freedom from disease. Two well-equipped but under-utilized seed testing laboratories are available for use in this regulatory process and appropriate institutional strengthening is required.

The Department of Agriculture (DOA) is naturally concerned that farmers would not have an adequate or timely supply of seed should they relinquish the seed processing facilities. Also, it projects that the production and cleaning of seed paddy by private companies would increase the price to the grower. The DOA is also rightly concerned to prevent the introduction of new plant diseases and pests into Sri Lanka.

To facilitate private seed companies, the DOA needs the freedom to multiply, clean and sell the best and disease-free planting materials available from any world source, subject to plant quarantine regulations. However, it should be ensured that the testing period required by the DOA for any seed imported into Sri Lanka should be reduced to the minimum, depending upon the crop and variety concerned.

Increased production of higher-value crops requires greater usage of higher-yielding genetic material than is now available in Sri Lanka. Obtaining access to the best-adapted, highest-producing planting materials for irrigated production, and making them available to the grower, are critical to the success of farming and agro-industry. Unless there is greater flexibility of MADR in providing access to high quality planting materials, investment and employment in agro-industries will be minimal. The MADR should retain regulatory control of seed purity, viability and phyto-sanitary factors, plant quarantine regulations, and permit access to the best planting materials available

from the commercial seed world to maximize investment and employment opportunities on irrigated lands.

If the irrigated lands are to be developed aggressively, and the farmer is to produce products which will be competitive in the export markets, the farmer must have access to the best commercial seeds available in the world market. Without such seeds, there will only be slow development, if at all.

*b. Other agro-industry opportunities*

In the Mahaweli area, the Mahaweli Agricultural and Rural Development (MARD) and Mahaweli Enterprise Development (MED) programmes have already identified, analyzed and profiled other agro-industry opportunities for irrigated lands, and this information is available to interested potential investors. Among the enterprises which have been proposed by these and other programmes, the pickled vegetable and the fruit juice projects offer the highest probability of competitive returns on invested capital.

In areas outside the Mahaweli, similar pilot programmes to experiment with new agro-industries would be extremely worthwhile. They could open up new opportunities for the farming community and for other private entrepreneurs to tap the vast potential for optimization of the benefits of agricultural production and help to bring about higher incomes for farmers and more employment opportunities in the rural areas. Opportunities also exist for processing a large variety of food items for domestic consumption. Among them are processing of cow pea, greengram, soybean, etc., to make them palatable to the local people.

*c. Necessity of dialogue and coordination of efforts*

The subject of agro-industrial development is perceived in different ways by the private sector and the related governmental agencies. The private sector may feel that adequate priority and attention are not forthcoming from the government agencies responsible for evaluating and expediting agro-industry's requests. The agencies, on the other hand, may look upon agro-industry entrepreneurs to be monopolistic and greedy for excessive profits.

These perceptions by all parties, right or wrong, should be recognized. It is essential to establish a meaningful dialogue and involve both sides in the making of the necessary changes in governmental policy to develop a highly flexible, workable programme for the economically viable development of the irrigated agriculture. Farmers' representatives must also be invited to participate in these policy discussions and decisions.

There is a necessity to coordinate various policy efforts concerning agro-industries. The policies on production must be well-coordinated with processing, both of which should be linked to effective R&D and extension. At present, there is no common platform for

dialogue and coordination to take place. This can be corrected by establishing a steering committee to look into agro-industrial development. This committee should comprise members from the relevant agricultural, irrigation, and industrial Ministries, representatives of a few associations dealing with agro-industries and farmer representatives selected from an apex farmers' body.

## Chapter 5

### CONSTRAINTS AND OPPORTUNITIES

#### 5.1. Import Substitution, Protection, and Food Security

A MAJOR OBJECTIVE of the policy on irrigated agriculture over the past several decades in Sri Lanka has been to achieve self-sufficiency in staple food crops, especially rice. This objective was based on the assumption that an import-substitution strategy would save foreign exchange which would otherwise be utilized to import foreign rice and other staple food items. Although some of the limitations of this strategy have been increasingly acknowledged since the 1977 liberalization, irrigated agriculture remains to a certain degree protected. The main objective of this section is to provide a critical review of the remaining trade restrictions and investigate the extent to which they are consistent with the current emphasis on crop diversification and export promotion.

Numerous arguments are commonly put forward in making the case for the protection of irrigated agriculture in Sri Lanka. The most common of these is that the provision of protection has led to high growth rates in production, thus building an import-substitution sector that has saved scarce foreign exchange which would have been otherwise utilized to import foreign rice and other staple food items. Analysis of available evidence suggests, however, that the positive effects of protection on irrigated agricultural production may have been overestimated, and hence that there may be an important qualification to the conclusion that the development of this sector could not have been achieved without protection.

Profitability of rice production is a function not only of farmgate prices but also and perhaps more importantly of a variety of other factors, including yield levels and input costs. Available data indicate that net returns to irrigated agricultural crops have been inadequate in recent years.

A large variety of agricultural commodities which can be grown locally are imported at present. These include basic starchy staples and specialized products. The annual value of food imports (other than milk products) has ranged from 2 to as much as 8 percent of the country's total Gross Domestic Product (GDP) during the last decade. It is prudent to build up and maintain adequate food stocks in the country, through government-private sector cooperation. Finally, trade and fiscal policies should be set in a way that ensures a reasonable level of self-sufficiency in basic food stuffs consistent with a competitive market economy.



## 5.2. The Guaranteed Price Scheme and the Floor Price

THE GPS PRICE remained constant at Rs 12 per bushel between 1965 and 1967. Throughout this period, market prices remained slightly below the GPS price, which acted as a ceiling rather than as a floor price. Since 1967, average farm price has been consistently above the GPS price. Price differentials have been substantially higher in recent years (more than 50 percent in 1989 and more than 40 percent in 1990).

It is evident that the PMB's present low share in the domestic market is not sufficiently high to provide a domestic price support mechanism, suggesting that the GPS may have outlived its usefulness. Nor does the fact that private importers are not permitted under the bonded-warehouse system to sell rice at any price below the floor price justifies its existence: by the nature of their role as rational economic agents, rice importers will not release stocks when prices are at their seasonal low.

A floor price system still exists for a variety of other crops such as maize, blackgram, groundnut, soybean, sesame, chillies, cowpeas, greengram, and finger millet. In practice, the system is not functioning since a workable implementing mechanism is no longer available to support floor prices.

In order to make the GPS effective and to maintain the floor prices, it is essential that the PMB purchase paddy and other food crops directly from the producers, at least in a limited quantity during critical periods. Its mere presence in the market can and will create an impact on the price so that both the producer and the consumer will benefit from such an effort. In the long run, the trading and marketing businesses are to be handled by an effective private sector including the farmers' organizations. For this purpose, it is very important to strengthen the capacity of the farmers' organizations to get directly involved in commercial activities. This may be done through a system of contract farming where production planning is done on the basis of pre-identified markets.

## 5.3. Credit

THE MOST COMMON attribute of rural credit interventions in Sri Lanka has been to provide credit to specific activities or groups of market participants at a subsidized rate. The most important limitation of subsidized interest rates derives from the fungibility of credit. Worldwide evidence suggests that, due to the interchangeability of financial instruments, the ability of credit planners to target loans to specific activities is illusory. Since money can be interchangeably used, borrowers may not always carry out the specified activity, as loan proceeds can be diverted to unintended activities that may offer higher returns.

In addition, the Sri Lankan rural credit system has been by most accounts unable to recover more than a fraction of the disbursed loans. Due to the heavy claims of subsidized credit on the government budget, subsidized interventions in this area are generally sporadic and of a short-term nature. Accordingly, loans under these programmes are often viewed by borrowers as grants, so that borrowers have little incentive to repay their loans. Several

studies have indeed revealed that the possibility of access to further loans is a fundamental factor in explaining loan repayment performance.

This result may also help explain lower delinquency rates among Sri Lankan farmers and marketing agents who borrow from boutique keepers and other rural moneylenders. Since the possible loss from failing to receive new loans may be graver than any sanction that a lender can impose on delinquent borrowers, the latter find it attractive to maintain a good credit rating so that new loans can be obtained on a timely basis.

The direct claims of continued credit subsidies and high delinquency rates on the government budget may lead to undesirable macro-economic effects. Subsidized interest rates create excess demand for loans by priority borrowers. Such excess demand places considerable (political as well as economic) pressure on the government to make more credit available to these borrowers.

#### **5.4. Other Inputs**

TO ENHANCE THE productivity of irrigated agriculture, the availability of other inputs in adequate quantity with acceptable quality and services are required. Among them, farm power, seed, agro-chemicals, market information, extension, insurance and pension schemes are to be highlighted. There is significant potential for improving the quality of these services.

The profitability of irrigated farm production process may also be increased by enhancing the productivity of factors of production (such as land, labour and other inputs), and/or by reducing the cost of production. The productivity of factors of production may be increased by improving management and by changing the technologies including the type, quality and quantity of imports.

Labour is a major input in farm production. Wage rates have been increased in the recent past and consequently labour now takes a significant share in the cost of farm production. Rising wage rates, however, are a common phenomenon in the development process. Therefore, strategies to reduce cost of production should come through a reduction in the cost of other inputs. Such opportunities may include the introduction of economies of scale by the farmers' organizations, local supply of appropriate farm machinery by rural industries, supply of local substitutes for costly inputs such as chemical fertilizer and agro-chemicals, etc. Such a process, in turn, would absorb rural labour in large quantities or help reduce the proportion of population involved in agriculture without having adverse effects on productivity. In fact, both the productivity and profitability per unit of labour will be increased during this process.

#### **5.5. Farmers' Organizations**

The farmers' organizations should be encouraged to get involved in marketing, distribution of inputs and even to undertake extension and other services. Credit must be channelled

through these organizations. The best remedy for the constraints faced by the farming communities with regard to input and service distribution is to channel them through farmers' organizations. If credit is to be organized through them, the cost of administration as well as recovery could be improved. In order for the farmers' organizations to have an effective role in input distribution and get involved in marketing, certain facilities and incentives must be made available for them. Among them are the recognition of these organizations by government institutions at all levels including the banks, and involving them in decision making and implementation.

An effective involvement of farmers' organizations in trade and marketing activities would enable them to exercise some control over prices and marketing activities.

## **5.6. Market Information**

MARKET AGENTS IN Sri Lanka obtain their information mainly through an informal system in which local traders receive price information via telephone or telegraph from Colombo, as well as from the marketplace and from other traders. Farmers have less recourse to outside sources since they obtain their market information either from traders or from prevailing supply and demand conditions in the local market. In this connection, it is important to revitalize the price information disseminating system which operated sometime back.

More effective formal information channels have been less successful in providing relevant and timely information to market participants. A number of government agencies collect market information on a regular basis. However, there is no co-ordination among these agencies and as a result, the marketing information is not made available to producers and consumers in time. Moreover, information with regard to overseas marketing opportunities is not made available to prospective marketers and many small-scale operators find it impossible to collect such information at their own cost. This is an area where the government will have to step in and make marketing information available.

The Marketing and Food Policy Division of AR&TI collects and publishes weekly information on wholesale and retail prices in 11 different regional markets for most commodities. It also collects farmgate prices, which are published monthly. This information appears to be directed primarily at public-sector companies and administrators. It is necessary to make price and market information on commodities available both to the consumers and to the producers on a daily basis.

The present one-minute news pertaining to prices broadcast over the Sri Lanka Broadcasting Corporation is not sufficient to provide detailed information on individual commodity prices or on area markets. Prices are also collected by the Central Bank and by the Department of Census and Statistics of the Ministry of Agriculture. However, data collected are not as extensive, nor are they published in as timely a manner as those collected by the Marketing and Food Policy Division of AR&TI. No analysis of this information is done.

In this connection newspapers and electronic media must be made use of since this system of communication is available in all rural and urban areas of the country. This will improve the bargaining power of the producers and the consumers will be better informed about the price of commodities. Crop forecasting and stock position must be reviewed constantly and the relevant information must be communicated to the producer, consumer and trader. This information would promote market competition and fair prices. Farmers' organizations should be made use of in crop forecasting and monitoring.

## 5.7. Research

RESEARCH ON A NUMBER of issues could substantially improve marketing which should be the basis for planning in irrigated agriculture in Sri Lanka. Areas where considerable progress can be made include:

*Supply and demand parameters.* Although some information on consumer demand response to prices is available for certain commodities and commodity groups, a complete set of estimates of farmers' supply response to prices is lacking. Predicting consequences of pricing and incentive policies requires such parameter estimates, particularly in a country such as Sri Lanka where a transition to a market-oriented economy is being implemented. Without a more complete knowledge regarding the potential impact of alternative courses of action, decisions tend to be based on intuition with very little evidence of possible outcomes.

*Protection and comparative advantage parameters.* These are available only for maha 1990 rice production. Development of such parameters for other seasons and crops can be an invaluable input to more informed public-sector research investment decisions. Domestic Resource Costs coefficients which refer to the ratio of the sum of the opportunity costs of the domestic factors of production in the production of a commodity to the value added it generates constitute one means to estimate comparative advantage. But such coefficients do not account for commodity and resource complementarities, variation in soil type, availability of water, land constraints, and, more generally, all resource restraints that vary by time of the year. Such detailed analyses require considerable data on characteristics of representative resources situations or typical farms, but analysts and policy makers are rewarded by additional insight into comparative advantage by determining the mix and level of enterprises providing highest returns to fixed resources.

*Post-Harvest technology.* Most studies of the agricultural marketing system in Sri Lanka emphasize that post-harvest losses are high. Such losses are due to a combination of physical, physiological, entomological and socio-economic factors, ranging from inadequate harvesting and handling operations to improper storage to product exposure to heat and other adverse weather conditions in the marketplaces. Improved methods of storage, processing and transportation should also be researched.

Investment in post-harvest technology research is justified on several grounds. Post-harvest losses reduce supplies available to consumers, with adverse effects on supply and demand balances resulting in higher food costs and prices. The market for irrigated

agricultural commodities in Sri Lanka is changing. Crop diversification is proceeding at a slow but steady pace, new crops are being introduced, and new market opportunities are being explored. Accordingly, new crop varieties and new transport, and handling and storage techniques should be tested and when they prove economically rewarding they should be brought to the attention of the trade community.

*Price behaviour, and marketing costs and incentives.* Limited analysis is now being conducted on the impact of economic and non-economic factors affecting seasonal and spatial price behaviour for individual commodities and commodity groups. Similarly, no analysis is carried out on the extent to which the marketing margin for these commodities is accounted for by cost elements such as transport, storage and processing costs and agents' returns to capital, management and labour. In the absence of these and similar data, inappropriate approaches to analyzing market conduct and structure are likely to prevail.

## Chapter 6

### RECOMMENDATIONS

**A** MAJOR OBJECTIVE of irrigated agricultural policy in Sri Lanka over the past several decades has been to achieve self-sufficiency in staple food crops, especially rice. This objective was based on the assumption that an import-substitution strategy would save foreign exchange which would have been otherwise utilized to import foreign rice and other food staples. The limitations of such a strategy are now being increasingly recognized and major efforts to liberalize agriculture and the national economy are being implemented. Sri Lanka is now striving to create a market-friendly environment. Advancing across this broad front are policies based on market-determined exchange rates and prudent fiscal policies featuring a broader tax base and lower trade restrictions.

Irrigated agriculture is now at the crossroads where renewed policy and investment initiatives will be required to expand its vigour and ensure its long-term viability. Central to the continued vitality of irrigated agriculture are sound trade policies and a dynamic marketing system. Sound trade policies are rooted in the premise that efforts to ensure food security are essential on welfare as well as on economic grounds.

In this perspective, the recommendations in this Paper are as follows.

#### *Macro-economic policies*

- \* To implement a consistent set of macro-economic policies in the agriculture sector that would ensure food security whilst maximizing profitability.
- \* Promoting an investment pattern that encourages the efficient use of existing irrigation infrastructure while expanding the supply of other critical physical infrastructure such as rural roads, telecommunication, freight services, etc.
- \* Exploration of ways and means of lowering the present high tariff levied on spare parts for agricultural equipment.
- \* Working out a system of support toward the utilization of organic and green manures.
- \* The development of an effective system by the government to monitor production planning. This should involve the estimation of requirements of various agricultural commodities, the identification of areas/locations for their production and ensuring continuous monitoring of

yield and possible output and making use of this information to assess import requirements. The process of production planning should be market-oriented. For this purpose buyers and producers including farmers' organizations should be brought together, i.e, in deciding the production plan of an area. The MADR should initiate this and coordinate the efforts.

### ***Policy co-ordination***

- \* The development of an effective system to co-ordinate policies affecting the agricultural sector of the country. The co-ordination mechanism should include all the relevant Ministries, Departments and even private sector organizations. A steering committee at the national level should be established comprising the irrigation, agricultural, trade and industrial Ministries and private organizations including representatives of apex farmers' organizations to formulate policies and co-ordinate efforts in the area of agro-industries development. Suitable linkages should be established between this committee and any other related national level committees including Cabinet sub-committees.
- \* Strengthening of technical and policy analysis of irrigated agriculture through appropriate institutional arrangements so that the potential impact of alternative courses of action can be evaluated and informed decisions can be made.

### ***Market promotion***

- \* Increasing reliance on markets to guide agricultural production and resources allocation. This will free scarce government funds and personnel to focus on higher-priority functions which the private sector will not or cannot do.
- \* Providing an enabling environment for the functioning of a competitive market. This includes a regulatory framework and a monitoring system to ensure market competition.
- \* Assessing and evaluating various efforts implemented from time to time to promote marketing at specific intervals. Future policies should be based on a thorough review of these studies.

### ***Farmers' organizations***

- \* Promoting the involvement of farmers' organizations in trade and marketing so that inputs including credit and other services could be channelled through these organizations.

### ***Market information and analysis***

- \* The development of a system to collect and analyze prices and market information in respect of national and international markets. This mechanism should be built within an agency under the MADR.
- \* Establishing a market information system that provides relevant and timely data to agricultural market participants. Just as market and policy analysis is a prerequisite to informed decisions by policy makers, information on supply and demand conditions is

essential in guiding farmers' and traders' buying and selling decisions. This information should be used for future planning purposes.

- \* Making use of newspapers and electronic media to disseminate price and other market information on a daily basis.

#### ***Provision of facilities and incentives***

- \* The development of a more vigorous and responsive research and extension system. Continuous research must be carried out in critical areas such as yield increase, cost reduction and ways to achieve higher profits and post-harvest technologies.
- \* Assistance by the government to the private sector whenever necessary to conduct research or obtain necessary technology on matters such as post-harvest technology, agro-industries and in the provision of basic infrastructure facilities for the development of agro-industries such as electricity, telecommunication, water and roads. An institutional mechanism to co-ordinate R&D and training should be worked out within an appropriate agency.
- \* The establishment of a 'one stop business centre' by the government from which possible investors could obtain all relevant information necessary to establish agro-industrial ventures.
- \* Activating the PMB to purchase paddy and other crops at least in a limited quantity during critical periods.

#### ***Credit***

- \* Making available credit even non-subsidized but accessible to all sectors of the farming community for agricultural production and marketing with less paper work and formalities.