

# ECONOMIC REVIEW

Sept:  
1982

## PRESIDENTIAL POLLS

## THE CHANGING ELECTION SCENE

One aspect of social life in Sri Lanka that has changed completely over the last thirty five years is the people's attitude to politics. Eight general elections have seen the politicisation process getting more and more firmly embedded and peoples involvement grow stronger. New social groupings have formed while others have receded in importance and the medium through which their aspirations have surfaced is mainly through politics; even though this aspect is only a surface interaction of the relative strengths of these social groupings and the consciousness of voters. The media has played a crucial role in this whole process both reflecting changing voter aspirations and influencing voter attitudes.

THE CEYLON DAILY NEWS. TUESDAY, SEPTEMBER 9, 1947



SECTION OF THE MAMMOTH CROWD that waited patiently outside the Galle Courthouse while the counting of votes went on inside on Sunday.

COLOMBO MONDAY.



PART OF THE MAMMOTH GATHERING outside the General's Office yesterday to hear the results of the North and Wellawatte-Galkissa elections.

DAILY NEWS, MONDAY, AUGUST 25, 1947



MR. D. S. SENANAYAKE handsomely garlanded yesterday after his resounding victory in the Mirigama election was announced.

CO, THURSDAY, AUGUST 28, 1947



MR. S. W. R. D. BANDARANAIKE, who was elected with a handsome majority at Attana, shaking hands with the defeated candidate, Mr. C. Gunasekera, at the Colombo Kachcheri yesterday after the result was announced. On the left is Mr. V. Coomaraswamy, Government Agent, who was the Returning Officer.

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THE ECONOMIC REVIEW is intended to promote knowledge of and interest in the economy and economic development process by a many sided presentation of views & reportage, facts and debate.

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THE ECONOMIC REVIEW is published monthly and is available both on subscription and on direct sale.

**NEXT ISSUE**

- \* A post election analysis of what the statistics reveal
- \* Export of apparel products from Sri Lanka, quotas and manufacturing potential
- \* Openness and Inflation: the experience of Sri Lanka
- \* The medical representative in a Third World country

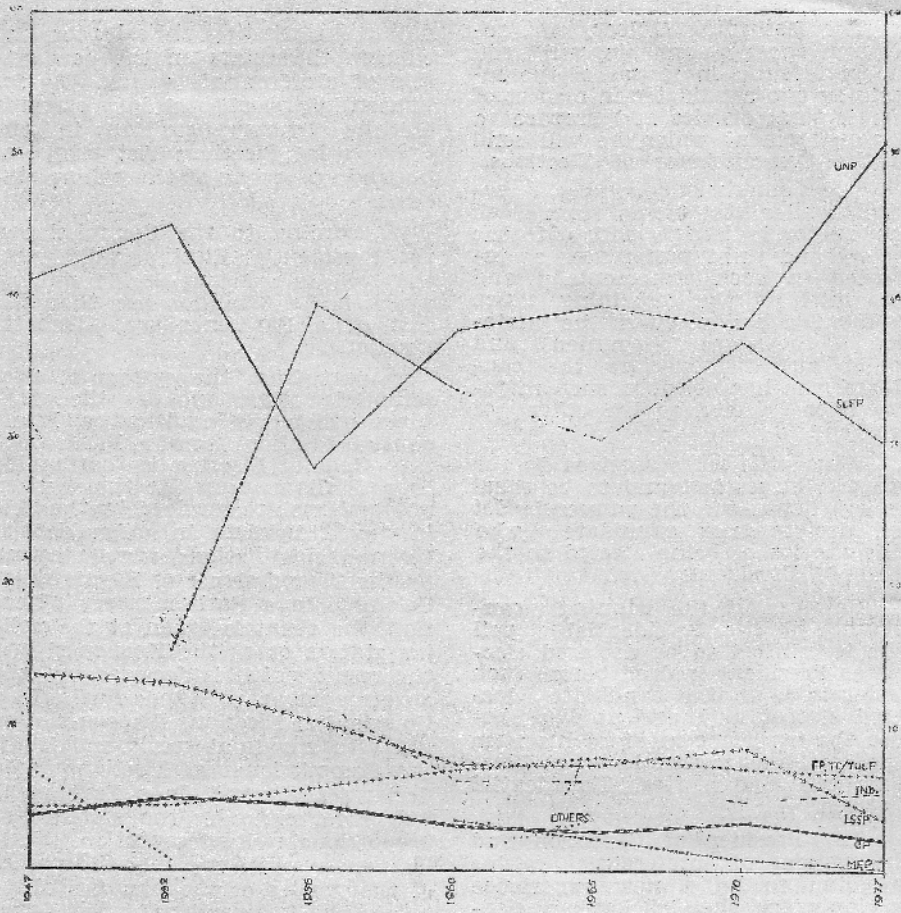
**COVER ARTIST**

G. P. Athulathmudali, whose speciality is art education, has wide experience in illustrating for publications

# DIARY OF EVENTS

July

- 1 An agreement was signed with the International Fund for Agricultural Development (IFAD) for a loan of SDR 7.1 million (Rs. 160 million approximately) to be utilised in a coconut development project. The project which is to be carried out by the Coconut Development Authority consists of programmes to develop small holder plantations and to provide extension services, research assistance, and credit and marketing facilities.  
An agreement was signed with the French authorities, for a loan of French francs 80 million (Rs. 273 million approximately). The proceeds of the loan will be utilised to finance the Greater Colombo Telephone Exchange; Purchase of meteorological equipment for the Katunayake Airport; Ratmalana Railway Workshop, and Construction of an 80 MW Diesel Plant for the Ceylon Electricity Board.  
A one dollar per barrel price increase on Iranian crude oil came into effect. Iran currently supplies about half of Sri Lanka's crude oil requirements at US\$ 30.55 per barrel. The CPC Chairman said that this increase will cost Sri Lanka about Rs. 100 million this year.  
About 5000 enumerators began visiting the 1.8 million agricultural holdings in the country to collect data necessary for an agricultural census.  
The cost of living index figures (Colombo Consumer's Price Index) as computed by the Department of Census and Statistics for June 1982 was 416.3. The figure in June 1981 was 375.0 and June 1980 was 320.4.
- 2 A new Companies Act replacing the old 1933 law became operative with the Minister of Trade and Shipping signing the order. The new act contains many innovations like provision for offshore companies and people's companies and gives wide powers to the Registrar of Companies.
- 9 The Sri Lanka Aid Group meeting in Tokyo pledged US\$ 668 million aid to Sri Lanka for the next year, the Finance Ministry announced in Colombo. Fourteen developed countries and three international organisations attended the two day meeting.  
The US will not sign the international Law of the Sea treaty which has been under negotiation since 1974, President Reagan announced in Washington. He said that the portion of the treaty dealing with deep sea bed mining of minerals did not meet US objections.
- 10 OPEC faced a crisis after the apparent collapse of an agreement to use output curbs to prop up prices in a surplus balance world market, when a meeting of the 13 oil Ministers in Vienna broke up after they failed to agree on demands by Iran and Libya for higher production quotas within an overall OPEC ceiling of 17.5 million barrels a day.  
The Republic of Maldives became a member of the Commonwealth.
- 12 An agreement was signed with the Kuwait Fund for Economic Development, for a loan of Kuwaiti Dinars 12.9 million (Rs. 860 million approximately) to help finance the cost of system C of the Mahaweli Development Project.
- 13 Finance Ministry sources stated that while the World Bank and the donor community had been generally complimentary of Sri Lanka's economic performance during 1977-82, at the recent Tokyo meeting of the aid consortium they had noted certain laxities creeping into the financial arrangement and control structure this year. Most donors believe that a more realistic exchange rate was absolutely essential. Attention was drawn to the increase in Sri Lanka's commercial borrowings and the government was alerted to keep a sharp check on this.
- 15 The People's Bank stopped accepting deposits subject to monthly payment of interest and fixed deposits for a period of over six months; and announced it would pay 13 per cent interest on six month deposits. Existing deposits, however, were to be serviced at the contracted rates until maturity.
- 19 A group of governmental experts of developing countries met in Geneva to finalise the rules for the negotiation of a global system of trade preferences (GSTP) among developing countries.
- 20 The number of Americans living below the Government-designated poverty line climbed by 7.4 per cent to almost 32 million last year as a serious recession pushed unemployment to its highest level in over 40 years, the US Government announced.
- 22 The Stage II of the steel works of the Ceylon Steel Corporation — "the Steel Melting and Continuous Casting Plant" — was declared open. This Plant is designed to produce steel billets using locally available scrap iron. The total cost of the project is estimated at Rs. 183 million, of which the foreign component is Rs. 64 million.
- 26 Israel's war in Lebanon has placed new strains on an economy already burdened with high military spending, and was undermining Government hopes of bringing inflation below the 100 percent mark. The Government says the conflict has cost over \$ one billion, with a further \$500 million needed to replace military equipment, stated reports from Tel Aviv.
- 27 West German Economics Minister Otto Lambsdorff said the US recession has not yet hit bottom and warned that the world could face a depression unless the trend to protectionism is halted.  
Japanese rubber production, including synthetic rubber, fell 9.3 per cent in June to 83,465 tonnes from a revised 92,050 a year earlier, but was up 8.6 percent from a revised 76,800 in May, Japan's International Trade and Industry Ministry stated.
- 29 With a view to encouraging investment in new buses by private omnibus operators, the Government announced an increase in the rate of depreciation allowance on purchases of new buses in computation of income tax. This enhanced rate of depreciation will be allowed, on investment in new buses carrying over 15 passengers, with retrospective effect from 1st April 1982 to 31st March 1983.



## THE PRESIDENTIAL POLLS

Over eight million voters in Sri Lanka will be entitled to cast their votes on October 20 to choose, for the first time, an Executive President.

The system of voting at the forthcoming Presidential Election will also be a new experience for them for, unlike at the past general elections, they will not only be able to vote for the candidate of their choice but indicate their second and third preferences as well. Where no candidate receives an absolute majority, the second and third preferences will determine the winner.

On polling day, the voter will be given a new type of ballot paper on which he is expected to mark, not the familiar cross (X), but the figure "1" in the space provided for the purpose on the right hand side of the ballot paper opposite the symbol and the name of the candidate for whom he votes, as shown in the example below.

A	Symbol	1
B	Symbol	

However, while casting his vote for any candidate, where there are more than three candidates for election, he may specify his second and third preferences, by marking the figure "2" to indicate his second preference and the figure "3" to indicate his third preference opposite the symbol and the name of the candidate. (The two examples given here are from the Presidential Elections Act, No. 15 of 1981).

A	Symbol	1
B	Symbol	
C	Symbol	2
D	Symbol	3

Every ballot paper will contain a list of the names of candidates in Sinhala, Tamil and English, described as in their respective nomination papers, and arranged alphabetically in Sinhala in the order of their surnames, or where there is no surname, in the order of their ge names, or where there is no surname or ge name, in the order of their other names. (See notice on page 4).

According to the Presidential Elections Law, the poll will be taken from 7 a.m. to 4 p.m. unless the Commissioner of Elections, by noti-

fication in the gazette appoints any other hour.

According to the Elections Commissioner Mr. C. de Silva the counting of votes will take place at 22 Kachcheries and the Government Agent will be the Returning Officer, except in the case of the Mannar and Mullaitivu districts which come under the Vanni electoral district. The Government Agent of Vavuniya will cover those two districts as well, with the assistance of the respective Government Agents of these two districts.

However, in the Colombo and Gampaha districts the counting of votes will take place not in the Kachcheries but at Royal College, Colombo and the Pattalagedera Teachers' Training College, Gampaha. This was because the kachcheries would not be able to cope with the large number of counting centres in the two districts.

There will be 165 counting centres throughout the island; one counting centre for each polling division which is co-terminus with the existing parliamentary electorates.

To facilitate counting four of the parliamentary multi-member constituencies have been split. Colombo Central has been divided into three polling divisions; while the old electorates of Nuwara Eliya-Maskeliya, Batticaloa and Akurana have been each divided into two polling divisions, although the multi-member constituency of Beruwela has not been divided as the numbers are more manageable.

Before the count is taken, the Elections Officer will verify the number of ballot papers in each ballot box. Once that is over, begins the proper stage of the count when the ballot papers will be sorted according to the valid votes received by each candidate.

According to a schedule in the Presidential Elections Act No. 15 of 1981 a vote shall be cast by voting the figure "1" against the symbol and name of the candidate of first choice; while if there are more than three candidates for election second and third preferences are specified by marking the figure "2" and "3" opposite the symbol and names of preferred candidates. At the end of the count the counting officer will prepare a written statement of the number of votes cast in favour of each candidate, not taking into account the second or third preference in favour of any candidate, and will deliver the statement and the sealed

THE COMMISSIONER OF ELECTIONS  
 COLONBO

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NO. 100

1951

1. Mr. J. S. ...  
 2. Mr. ...  
 3. Mr. ...  
 4. Mr. ...  
 5. Mr. ...  
 6. Mr. ...  
 7. Mr. ...  
 8. Mr. ...  
 9. Mr. ...  
 10. Mr. ...

The Returning Officer, on receipt of these statements, will add the preference in favour of the remaining two candidates in respect of his electoral district and prepare a fresh statement which he will send to the Commissioner of Elections.

The Commissioner who will receive similar statements from all the electoral districts will add the second and third preferences as indicated in such statements and see which of the remaining two candidates has received the majority of the votes so counted and would forthwith declare the candidate who has obtained such majority to be elected to the office of President.

Where the votes received by the two candidates is found to be equal he will determine the winner by lot and declare such candidate who wins the lot as being elected to the office of President.

However, if the winning candidate at the Presidential poll who is entitled to be declared elected as President is dead before such declaration, or if a candidate declared elected as President dies before the commencement of his term of office, the Commissioner of Elections will hold a fresh Presidential Election.

The Presidential Election and the system of preferential voting is going to be a new experience not only for the Sri Lanka electorate but also for all election staff.

The Commissioner has stated that it was the duty of the candi-

dates contesting the election to educate the voters on the new system of preferential voting. As for himself, he would be only carrying out the statutory provisions in the Presidential Elections Act such as putting up posters at the polling stations.

According to the Commissioner, the Presidential Election will cost the State about Rs. 55 million, which is Rs. 3 million less than the cost of a Parliamentary General Election.

Apart from the system of preferential voting, one of the features which distinguished a Presidential Election from a Parliamentary General Election is that unlike in a Parliamentary Election when nominations are received by the GAs in the 28 districts, in a Presidential Election nominations were received by the Commissioner of Elections in Colombo. In a Parliamentary Election, the count is taken at the polling station or at the Kachcheri and the result which is declared by the government agent stands final. In a Presidential Election, the count does not give any final result and it is the Commissioner of Elections who declares the result. In a Parliamentary Election under the system of Proportional Representation, ballot papers will have only the names of the parties or the numbers allotted to the independent groups and their symbols whereas in the case of the Presidential Election the ballot papers will have the names and symbols of the candidates.

packets of the votes in the Government Agent who is the Returning Officer for the district.

The Returning Officer will, from the statements furnished to him by all the Counting Officers (including the Counting Officers at the counting centres where postal ballot papers were counted), add the number of votes cast in favour of each candidate in that electoral district, and prepare a statement which he will transmit to the Commissioner of Elections in Colombo. The Commissioner of Elections will in turn, ascertain from the statements received from all the electoral districts whether any candidate has received more than 50 per cent of the valid votes cast at the election. Where a candidate has received such an absolute majority he will immediately declare such candidate elected to the office of President.

However, if no candidate has received an absolute majority, the Commissioner will eliminate from the contest the candidates other than the candidate who had received the highest and second highest number of votes and direct the Returning Officer to take measures to count the second and third preferences of these two candidates.

The Returning Officer will direct the Counting Officers in their respective districts to break open and count only the packets which contain the votes cast in favour of the eliminated candidates. At the end of the count, they will once more prepare a statement, this time showing the second and third preferences counted as votes in favour of the remaining two candidates in the contest.

**Casting a Ballot - What the Act Says**

**MANNER OF VOING**

"The voter, on receiving the ballot paper, shall forthwith proceed into the compartment to which he is directed by the presiding officer or any person acting under that officer's authority and there solemnly mark the ballot paper as near as may be in accordance with the directions given for the guidance of voters in the Third Schedule to this Act."

"The voter will go into the place reserved for the marking of ballot papers and mark the figure '1' in the space provided for the purpose on the right hand side of the ballot paper opposite the symbol and the name of the candidate for whom he votes."

While casting his vote for any candidate, the voter may

Where there are more than three candidates for election, signify his second and third preferences, by marking the figure '2' to indicate his second preference and the figure '3' to indicate his third preference opposite the symbol and the name of the candidate."

**And Voter's Intention**

"When the presiding officer is satisfied that any mark made on a ballot paper clearly indicates the intention of the voter to give his vote to any candidate or to signify if he has so desired his second or his second and third preferences in favour of any candidate, the presiding officer shall not reject the ballot paper under subsection (1) on the ground solely that it has not been marked in all respects in accordance with the directions specified in the Third Schedule to this Act for the guidance of voters."

*Presidential Elections Act, No. 15 of 1951.*

# The Second Republican Constitution (1978)

The 1978 Constitution whose declared objective is to establish a "Democratic Socialist Republic of Sri Lanka", is a deviation from all previous constitutions in Sri Lanka, in that it attempts to straddle both the Presidential and Westminster models of Government.

Coming as it did in the wake of the First Republican Constitution drafted in 1972, it is sometimes also referred to as the Second Republican Constitution.

## The Executive President

One of the chief features of the 1978 Constitution is that it provides for the first time for an Executive President who is the Head of State, Head of the Executive and a Commander-in-Chief of the Armed Forces. He is elected by the people and holds office for a term of six years.

Though the present incumbent of the post President Jayewardene was not elected by the people to the highest executive office, he holds the post by virtue of Article 103 of the Constitution which declares:

"Notwithstanding anything to the contrary in any other provision of the Constitution, the person holding the office of President immediately before the commencement of the Constitution shall be the first President under the Constitution and shall be deemed for all purposes to have been elected as the President of the Republic and shall hold office for a period of six years from February 4, 1978".

Therefore, while President Jayewardene is by virtue of this constitutional provision, the de facto "elected" President, the candidate who is elected as the President at the forthcoming Presidential polls will de jure be the first elected President.

The President under the new Constitution is not a member of Parliament. He has no function through a Cabinet which, unlike in America, is chosen from the legislature which is the supreme legislative body. The President cannot pass laws, repeal laws or amend laws. Nor can he send back laws to Parliament, as the American President can, for reconsideration.

However constitutional experts have noted that the amended Article 3 (3) and Article 52 (3) could pose serious conceptual problems. Article 3 (3) emphasises that the President shall be the repository of executive power, implying that the Cabinet and other executive functionaries would be subordinate to the President and act in an advisory capacity. On the other hand, Article 52 charges the Cabinet of Ministers (of which the President

is the Head) with the direction and control of the Government, thus implying that the President is defined under para 1 first among equals in a collegial decision-making body which is collectively responsible and answerable to Parliament. It has been pointed out (for example by Neelan Therothelam) that this could create an ambiguity as to the relationship between the President and the Cabinet of Ministers which has important implications for the style and manner in which executive power is to be exercised.

One of the major criticisms of the Presidential system as envisaged under the Second Republican Constitution is that the fusion of power of the Head of State and of the Head of Government in a single individual could, in the wrong hands lead to despotism. However, since no other individual apart from an "impeached" Prime Minister could have wielded as much power as an "impeached" President.

## Power of Discretion

There are however, two features which differentiate the Executive President under the Second Republican Constitution from the Prime Minister of the First Republican Constitution. Firstly, in the power of dissolution of Parliament the Prime Minister is inevitably a victim of the dissolution while the President is untouched by the dissolution process which he initiates. Secondly, the President may assign to himself ministerial subjects and functions and exercise statutory powers, but unlike in the case of the Prime Minister such powers and functions shall not be subject to judicial review.

## Presidential Advisers

The 1978 Constitution also provides for Presidential advisers who could be drawn from the highest talent in the country. Such a team of advisers could help the President in policy decisions which may not be politically expedient but could be beneficial to the country in the long run. The system of Presidential advisers has been criticised by some as being "a government within a government", but those who support such a system argue that even the Prime Minister under previous constitutions had an invisible cadre of advisers and that it would be better to formalise such a system of advisers who would now become more visible and accountable. The only shortcoming in such a system is that there are no safeguards such as the requirement to appear before Select Committees to enhance their accountability.

## Minority Parliamentary Support

The Executive President, under the Second Republican Constitution,

also runs the risk of facing a hostile majority in Parliament which could result in a deadlock between the executive and the legislature. (See Section on President vs Parliament).

## Removal of President

The President may be removed from office by a resolution of Parliament providing that the President is permanently "incapable or discharging the functions of his office by reason of mental or physical infirmity or that he has been guilty of a crime, international violation of the Constitution, treason, bribery, misconduct or corruption involving the abuse of the powers of his office or any offence under the law, involving moral turpitude." Upon the resolution being passed by a two-thirds majority of the House, the Speaker shall refer the allegation or allegations contained in such resolution to the Supreme Court for inquiry and report. Where the Supreme Court holds that the President is not fit to hold office, the verdict of the Court has to be endorsed by a two-thirds majority of Parliament voting in favour of the removal of the President from Office.

The office of President could also fall vacant either due to death, resignation, or if the President ceases to be a citizen or fails to assume office within six months.

## Presidential Election

The Third Amendment to the Constitution, approved by Parliament on August 26 this year empowers an incumbent President to call for a presidential election after completing four years of his six-year term to enable him to seek a mandate from the people for a fresh term.

Upon the proclamation made by the incumbent President declaring his intention of seeking re-election the Commissioner of Elections is required under the amendment to take a poll for the election of the President.

The amendment has been criticised as restricting the franchise of the people in that it enables an incumbent President to choose the date of his own election. The Supreme Court however, which heard four writs filed by the Civil Rights Movement and certain individuals ruled that the new amendment did not affect the franchise or sovereignty of the people and therefore did not require the approval of the people at a referendum. The Court said that "By reducing the irrevocable period of the President's office from six to four years, the President would be enabled to discover the will of the people and the people will be given an opportunity to express their approval or disapproval of his stewardship or his programme of action prior to the expiration of the full period of six years".



Ballo: Boxes Brought in for the Court - 1977

### The Prime Minister

It has been argued that the Second Republican Constitution has reduced the Prime Minister to a mere figure-head. While it has to be conceded that the powers of the Prime Minister have somewhat diminished under the present constitution, some also point out that he still is an important personage in the political system. He is second-in-command to the Executive President and it is he who feels the pulse of Parliament. It is he who arranges the business of Parliament and also transacts business with the group in the Opposition. He takes part in debates that deal with national questions. He answers questions on government policy.

While the Prime Minister is in a sense the First Minister of the President, he may also be removed by the President the same way as the former French President Giscard d'Estaing removed his Prime Minister Jacques Chirac, while the President himself could keep his majority in Parliament intact. However, one would expect the President to work together with the Prime Minister if the system is to work meaningfully.

### Proportional Representation

The Constitution also departs from previous Constitutions in that the people will vote not for individuals but for political parties that seek their support. This system of Proportional Representation provides for the election of candidates in proportion to the number of votes cast for such parties. (See Section on 'Proportional Representation')

### The Judiciary

The Second Republican Constitution also seeks to guarantee the independence of the judiciary. The number of judges appointed by the President to the Supreme Court has been fixed at ten. A government cannot therefore appoint more judges who are well disposed towards it, except by amending the constitution.

The Supreme Court is empowered to decide on the constitutional validity of legislation, as in the case of the Bill on the Third Amendment to the Constitution, but only before such legislation is adopted by Parliament. If the Supreme Court rules that the proposed legislation is ultra vires the Constitution, since under the PR system governments are not likely to enjoy a two thirds majority, they will be able to amend the constitution only with the co-operation of the opposition.

### Fundamental Rights

Fundamental rights are regarded as being an integral part of the sovereignty of the people and have for the first time, been made justiciable. The 1978 Constitution guarantees six types of fundamental rights, namely the right to freedom of thought, conscience and religion (Article 10), the freedom from torture (Article 11), freedom of equality (Article 12), freedom from arbitrary arrest, detention and punishment and prohibition of retroactive penal legislation (Article 13), freedom of speech, assembly, association, occupation and movement (Article 14), and right to constitutional remedies (Article 17).

The framers of the Constitution have selected the right to freedom of thought, conscience and religion (Article 10) and the freedom from torture (Article 11) for entrenchment in the Constitution while the other freedoms are subject to the usual requirement of State Policy.

There has however been some criticism that the restriction giving effect to the principles of State Policy, is too wide to confer sufficient practical value to the exercise of fundamental rights.

One of the novel features of the present Constitution is that it enables the people, by means of a Referendum, to participate in the decision-making process of government and in the making of laws. Certain

matters such as the extension of the life of Parliament or extension of the term of President require, in addition to a two thirds majority of Parliament, the direct approval of the people at a referendum. Further, the President is empowered to call for a Referendum to seek the verdict of the people on any question which he thinks is of national importance.

### The Public Service Commission

A Public Service Commission is once more established, although the Cabinet of Ministers retains considerable power in regard to the appointment, transfer, disciplinary control and dismissal of public officers.

### Ombudsman

For the first time, provision has been made in the Constitution for a Parliamentary Commissioner of Administration, known as the Ombudsman, who is charged with the duty of investigating and reporting on complaints of violation of fundamental rights and other injustices committed by the officers of the public and local administration. Critics, while welcoming the principle of having an Ombudsman, have charged that the exclusion of Ministers, Deputy Ministers and Members of Parliament from coming under the purview of the Ombudsman would detract from the value of this new institution. They also point out that there are not sufficient constitutional guarantees to safeguard the independence of the office of the Ombudsman.

### Consultative Committees

The Constitution also provides for the creation of Consultative Committees of Parliament whose objective is to obtain the effective participation of the different strands of political power represented in Parliament.

### Religion, Language and Citizenship

The Second Republic Constitution has retained the "foremost place" accorded to Buddhism in the 1972 Constitution. Sinhala is recognised as the official language while Tamil has been accorded the status of national language.

The present Constitution has also done away with the distinction between citizens by descent and citizens by registration and provides for only one class of citizens.

As a people, Sri Lanka are comparatively new to the Republican experience and therefore it is still too early to say what impact the Second Republican Constitution of 1978 would have on the country.

### President VS Parliament

The President of the Second Republic serves a term of six years and so does Parliament which is also elected for six years. However, when there is a time gap between the election of a new President and the election of a new

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Parliament, there could arise a crisis such in the Constitution when a President who is still in office is confronted by a majority in Parliament which belongs to a different complexion.

One of the options in the President under the constitution, is to dissolve Parliament before its six-year term ends. If he is again faced with a hostile majority in Parliament he could then try the second option open to him of using the constitution to dissolve Parliament a second time, which however, he can do only one year after the previous general elections.

As pointed out by some constitutional experts, restricting the option to a period of one year after a general election could result in the President being confronted during the year with a deadlock and perverse Parliament, which can refuse to pass the statement of Government Policy, Parliament could also sanction the annual budget with its own amendments, not acceptable to the President and his members in office.

The President may dissolve Parliament before the constitutional limitation of one year ends if Parliament rejects the Annual Appropriation Bill within that year.

Some constitutional lawyers believe that Parliament, rather than risk dissolution, will amend and mangle the Annual Appropriation Bill in a way totally unacceptable to a government without actually revoking the Bill. In such a situation, they point out, a newly formed government which does not have a majority in Parliament will govern the workings of the new system of proportional representation. Have to go to the mercy of the Opposition or make way for another government more suitable than itself.

If one is to go by past election results and opposition acts by the former sides — as is generally the tradition of the new amendments — it is seen that apart from the two cases of 1955 and 1977 it would have been unlikely for any single party to dominate Parliament in the past legislatures. The historical experience then that we have to go by would lead us to the view that if PR had existed in the past it would have led to a high degree of instability with frequent conflicts between legislature and the executive presidency.

Apparently, it was in anticipation of such a dilemma that the Government recently sought to bring in an amendment to the Constitution which would enable the President to dissolve Parliament twice within a period of one year.

However, if the same situation is reproduced even after such an amendment, the President would have to rule with whatever majority that emerges.

In such an event, the President and the new Parliamentary majority will have to learn to share power as provided in the Constitution of the Second Republic, but if the new majority in Parliament is overwhelmingly one or few situations could arise. The President would rule with whatever majority that emerges in the event of which there could be a shift of power from the President to the Prime Minister. Alternatively, the President could revert to the position of a constitutional figure-head of State.

**The PR System**  
One of the two features of the present Constitution is the system of Proportional Representation which has replaced the old first-past-the-post system of electing members through territorial constituencies.

Under the PR system, the district is the constituency, except in the case of the administrative districts of Madurai, Vayandura and Madhavaram which have been combined to form the Vayal electoral district for Parliament; though in respect of district development councils they have been assigned 33 three-seater districts.

The system of Proportional Representation operates at three different levels, viz elections to Local Government bodies, Development Councils and Parliament. It was first adopted for local Government elections in 1957 and again for District Development Council elections in 1963.

Each political party or group of independents seeking to contest the elections is required to present a list of candidates equal to the number of seats assigned to each district. The list would also have an additional number of names of persons who would take the place of a member who is elected but chooses to resign his seat, leaves his party or dies.

The system of Proportional Representation is designed to enable a better reflection of the electorate than was possible under the Old Westminster system, so that every significant trend of public opinion is reflected in the legislature.

One of the criticisms of the old constituency system was that it produced rather peculiar results. At the 1967 general elections, for example, the United National Party (UNP) gained 50.9 per cent of the votes but obtained 33.7 per cent of the seats in Parliament. Had the PR system been in force there would have been more equal proportions between seats and votes and it would have obtained only 57.1 per cent of the seats.

It has been said that one of the advantages of the PR system is that political parties and groups of independents would obtain seats in Parliament in rough proportion to the support they enjoy in the

electorate.

The creators of the 1972 Constitution also point out that under the new system there is a greater chance of establishing stable government over a reasonable length of time because MPs who choose to leave their party will face the prospect of losing their seats in Parliament and their positions may be replaced by their political parties.

Others, however, say that under the new system, MPs would cease to have the intimate contact they used to have with their constituents under the former electorate system and would become the prisoners of their respective political parties, and consequently the party machine could become all powerful. Proponents of the PR system believe that the democratic process would check the power of the party leadership. They also point out that unlike in the past when MPs wasted their time attending minor grievances of voters they would now devote their attention to wider issues of development.

One of the major criticisms of the system is that Article 56 (3) would eliminate political parties and independent groups that fail to get at least 12.5 per cent of the votes polled. This critics maintain would defeat one of the main objectives of the PR system which is to enable every significant political opinion to be represented in the legislature. It has been pointed out that if in a number of constituencies a party obtains less than the required 12.5 per cent of the votes, a considerable number of votes would be wasted and in effect such votes would be disfranchised. The proponents of the present constitution argue on the other hand that the cut-off point could help the growth of a two party system and prevent the emergence of a legislature where a multiplicity of parties would hinder its effective functioning.

The provision for a bonus seat for the list that gets the highest number of votes in a particular electorate has also been criticised as being disadvantageous to small parties. For example, regional parties and those of the left. There is a possibility of large parties getting several bonus seats throughout the country which are not backed by votes. But those who strongly support the PR system argue that the bonus seat would help to stabilise the party that has been elected by the majority.

Critics of the PR system are also not happy that the new system has done away with by-elections which were traditionally considered a barometer for measuring public opinion between elections, while others believe that by-elections do not in any case reflect the true state of public opinion and only result to destabilising the political system.

## What the Statistics Reveal

The statistics in these tables show clearly the growth in the entire electoral process and its various features. One clear indication is the increasing number of electoral districts and polling stations that have been required with each successive general election. As seen in table 1 both the number of polling districts and the number of polling stations have had to be more than doubled bet-

ween 1956 and 1977. The numbers had moved up from an average of about 2,350 in 1956 to about 6,150 in 1977 and today are in the region of about 6,700.

An even stronger indicator is the cost to the State for conducting the elections which in 1970 amounted to about Rs. 8.5 million, while in 1977 it was close to Rs. 21.5 million. At this stage the

Presidential Election is estimated to cost Rs. 55 million and a general election Rs 53 million. These costs to the State per elector have been estimated at -/76 cts in 1956 in 1960 (March) at Rs. 1/07; in 1965 at Rs. 1/21; in 1970 at Rs. 1/53; and at nearly Rs. 3/- in 1977. Today's cost would be closer to Rs. 7/- per voter.

The turnout of voters at the polls has also been steadily increasing with each general election, while the electorate has grown from around 3 million in 1947 to 6.7 million in 1977 and 8.1 million today. There has been a tendency for the turnout at the polls to show a steady increase with almost all general elections. The percentage turnout in 1947 was 55.8 percent; by 1965 it had reached 82.1 percent and in the general election of 1977 it was 86.7 percent. Another significant factor seen in table 2 is that the percentage of rejected votes has also come down with each general election upto 1970. It was as high as 2.1 percent in the first general elections, but came down to .53 percent in 1965 and to .53 percent in 1970 and 1977.

The heavy turnout of voters in Sri Lanka's general elections has been regarded as a strong reflection of the political consciousness of its people, built up over five decades of exercising the right to the franchise. As seen in table 6 one of the only other countries having a similar type of universal franchise, and where voter participation was higher, was West Germany which reached a voter participation of 90 percent in 1972 and 1976; and 87.8 percent in 1980. Countries such as USA, Japan, France and the United Kingdom had a lower participation rate than that of Sri Lanka.

Table 5 gives an indication of numerous shades of political parties that have been represented in the country over the last 3 decades. As many as 9 different parties have been represented during this period. The trend however, as indicated in our earlier issues on elections was the popular vote of particular parties (the total number of votes received by all candidates fielded by each of these parties) has gradually been concentrated in 2 or 3 major political parties. In the three General Elections of the decade between

Table 1 INCREASE IN POLLING DISTRICTS AND POLLING STATIONS  
GENERAL ELECTIONS, 1956-1977

Date	Number of Electoral Districts	Electorate	Number of Polling Districts	Number of Polling Stations	Average No. of voters per Polling Station
1956	89	3,464,159	2,258	2,433 (Includes 175 female Polling Stations)	1,424
March, 1960	145	3,724,507	3,532	3,659 (Includes 127 female Polling Stations)	1,018
July, 1960	145	3,724,507	3,532	3,664 (Includes 132 female Polling Stations)	1,017
1965	145	4,710,887*	4,647*	4,771** (Includes 147 female Polling Stations)	975**
1970	145	5,505,028*	5,485*	5,613** (Includes 154 female Polling Stations)	977**
1977	160	6,667,589	6,033	6,280 (Includes 247 female Polling Stations)	1,062
1982***		8,145,015		6,621	1,230

\* Including the two member Electoral District of Colombo South, candidates for which were returned uncontested.

\*\* Excluding the two-member Electoral District of Colombo South.

\* Including the Electoral District of Welimada, candidate for which was returned uncontested.

\*\* Excluding the Electoral District of Welimada.

\*\*\* Provisional

Source: Commissioner of Elections, Report of the General Election of 21, July 1977.

Table 2 PERCENTAGE OF VOTES POLLED AND VOTES REJECTED  
GENERAL ELECTIONS, 1947-1977

Year	Electorate	Turn out of Voters at Polls	Percentage of Turn out	Percentage of Votes Rejected
1947	3,048,145	1,701,150	55.8	2.1
1952	2,990,912	2,114,615	70.7	1.34
1956	3,464,159	2,391,538	69.0	.95
March 1960	3,724,507	2,889,282	77.6	.89
July 1960	3,724,507	2,827,075	75.9	.63
1965	4,710,887	3,821,918*	82.1	.75
1970	5,505,028	4,672,656**	85.2	.53
1977	6,667,589	5,780,283	86.7	.53

\* Two-Member Electoral District of Colombo South was uncontested.

\*\* Electoral District of Welimada was uncontested.

**Table 3 VOTING STRENGTH BY DISTRICT—1970, 1977 AND 1981**  
(NUMBER OF VOTERS—DISTRICT PERCENTAGE FOR SPECIFIC YEARS)

	1970		1977		1981	
	No.	%	No.	%	No.	%
1. Colombo	706110	13.8	825908	12.4	972196	11.9
2. Gampaha	591286	10.7	705363	10.6	838268	10.5
3. Kandy	485206	8.8	588246	8.8	717508	8.8
4. Kandy	396164	7.2	475171	7.1	564567	6.9
5. Galle	387974	7.1	443143	6.7	512489	6.3
6. Kalutara	373133	6.8	432854	6.5	499215	6.1
7. Jaffna	362358	6.6	408261	6.1	493708	6.1
8. Kegalle	295533	5.4	349333	5.2	406548	5.0
9. Ratnapura	288861	4.7	325537	4.9	402202	4.9
10. Matale	289846	5.3	341417	5.1	399838	4.9
11. Badulla	176747	3.2	217260	3.3	260187	3.4
12. Anuradhapura	150214	2.8	200319	3.0	278594	3.4
13. Polonnaruwa	154060	2.8	215705	3.2	267678	3.3
14. Hambantota	143712	2.6	187557	2.8	241986	3.0
15. Digamadulla	124722	2.3	154831	2.3	204269	2.5
16. Nuwara Eliya	129467	2.4	158920	2.5	201879	2.5
17. Matale	113282	2.1	148244	2.2	187226	2.3
18. Batticaloa	107186	2.0	132943	2.0	174480	2.1
19. Trincomalee	79761	1.5	97417	1.5	133646	1.6
20. Polonnaruwa	67003	1.1	83168	1.3	127624	1.6
21. Moneragala	60070	1.1	86104	1.3	126558	1.6
22. Vanni	57091	1.0	84915	1.3	119093	1.5
	5505028	100	6667589	100	8145015	100

Based on Department of Elections data.

**Table 4 VOTING STRENGTH BY DISTRICT—1970, 1977 AND 1981**  
(NUMBER OF VOTERS AND PERCENTAGE INCREASE PER DISTRICT)

	1970	1977	% Increase 1977 Over 1970	1981	% Increase 1981 Over 1977	% Increase 1981 Over 1970
	1. Colombo	706110	825908	17.1	972196	17.7
2. Gampaha	591286	705363	19.3	838268	18.4	41.3
3. Kandy	485206	588246	21.2	717508	22.1	47.9
4. Kandy	396164	475171	19.9	564567	18.9	42.6
5. Galle	387974	443143	14.2	512489	15.7	32.1
6. Kalutara	373133	432854	15.8	499215	15.8	33.7
7. Jaffna	362358	408261	12.7	493708	20.9	36.3
8. Kegalle	295533	349333	18.2	406548	16.4	37.6
9. Ratnapura	288861	325537	25.8	402202	23.6	55.4
10. Matale	289846	341417	17.8	399838	17.1	37.9
11. Badulla	176747	217260	22.9	260187	29.1	58.5
12. Anuradhapura	150214	200319	33.3	278594	39.1	65.3
13. Polonnaruwa	154060	215705	39.8	267678	24.4	73.8
14. Hambantota	143712	187557	30.5	241986	29.0	68.7
15. Digamadulla	124722	154831	24.1	204269	31.9	67.8
16. Nuwara Eliya	129467	158920	22.8	201879	27.3	55.9
17. Matale	113282	148244	30.9	187226	26.3	65.5
18. Batticaloa	107186	132943	23.0	174480	30.5	61.9
19. Trincomalee	79761	97417	22.1	133646	37.2	67.9
20. Polonnaruwa	67003	83168	22.2	127624	44.8	105.8
21. Moneragala	60070	86104	43.3	126558	47.1	110.7
22. Vanni	57091	84915	48.7	119093	40.3	108.6
	5505028	6667589	21.1	8145015	22.2	48.1

Based on Department of Elections data.

Figures in the above two tables are based according to electorates listed in the 1981 electoral districts. Where such electorates were placed in larger electoral districts in 1970 or 1977 they are renumbered here on the basis of the 1981 position.

1980 and 1976 the UNP and SLFP together collected 68%-75% of the popular votes, while in 1977 these two parties together had over 30 percent of the votes. From July 1980 the votes of the two parties have increased as follows.

	SLFP	UNP
1980	1.0 %	1.1 %
1983	1.2 %	1.8 %
1976	1.8 %	1.9 %
1977	1.0 %	3.2 %

There has been a steady trend upto 1976 which was not continued with the 1977 results. The greater concentration of votes in a single party in the North and Eastern Province was also a feature in the 1977 election as indicated in table 5. Under the then scheme of parliamentary elections in Sri Lanka, obtaining a majority of seats by a party in the National State Assembly did not necessarily imply that a majority of voters backed that particular party.

Tables 3 and 4 show the increasing strength of the electorate by district. What is significant in these tables is that the districts such as Moneragala, the Vanni and Polonnaruwa have increased their voting strength by over 100 percent between 1970 and 1977; whereas districts such as Colombo, Galle, Kalutara, Jaffna, Kegalle and Matale have recorded an increase of only 32-38% during this same period. The following 10 districts have shown an increase of over 80 percent in their electoral strengths during the 10 years since 1970: Moneragala, Vanni, Polonnaruwa, Anuradhapura, Hambantota, Trincomalee, Batticaloa, Digamadulla and Badulla.

Furthermore, these 10 districts which had only 18.3% of the total voting strength of the country in 1977 today contain 22.9% of the total electorate. The additional 4 percent gained by these districts over the ten year period amounts to almost 800,000 more votes in these areas.

Table 5 ANALYSIS OF RESULTS OF ELECTIONS BY POLITICAL PARTIES AND INDEPENDENTS—GENERAL ELECTIONS 1946-1977

Year of General Election	Members of Parliament	Turnout of voters & percentage	VOTES AND PERCENTAGE OBTAINED AND SEATS WON BY PARTIES AND INDEPENDENTS										
			T.C.	CWC	CP	FP	LSSP	MFP	SLFP	UDF	UNP	Other Parties*	Independents
1955	3,161,159 53	3,391,538 68.0	8,917 0.3	—	119,705 1.7	142,758 3.1	271,204 10.4	1,046,277 29.5	—	—	748,810 22.0	—	316,504 12.0
1960 March	1,721,557 151	2,889,282 77.6	18,275 1.2	—	9,300 0.3	136,444 7.7	175,285 10.3	124,332 10.5	647,175 23.1	—	909,184 29.1	146,239 4.7	579,450 17.3
1960 July	3,721,307 151	2,827,098 75.9	2,400 0.1	—	80,219 3.0	213,733 7.0	229,005 7.4	106,800 3.3	1,602,171 33.6	—	1,144,166 27.6	54,257 1.4	121,895 6.4
1965	4,719,537 151	3,821,918 82.1	39,046 2.4	—	109,731 2.7	217,914 5.4	302,193** 7.5**	95,665 2.4	1,221,477 30.2	—	1,560,920** 39.2**	140,770 3.7	259,560 6.4
1970	5,501,078 151	4,673,558 85.2	115,567 2.2	—	169,109 3.4	275,727 4.5	433,224 8.7	40,571 0.9	1,859,509* 35.9	—	1,892,525 37.9	—	349,006 5.9
1977	8,657,359 188	5,989,239 66.7	—	62,707 1.0	123,856 2.0	22,449 0.4	225,317 7.6	22,669 0.4	1,855,331 29.7	349,643 6.4	4,179,221 50.9	—	334,014 5.6

T.C. All Ceylon Tamil Congress; CP—Communist Party of Sri Lanka; LSSP—Lanka Sama Samaja Party; MFP—Sri Lanka Freedom Party; CWC—Ceylon Workers Congress (Political Wing); FP—Federation of Free Lanka Farmers; MFP—Mahajana Front; UDFF—United National Front; UNP—United National Party.

- \* Istika Yaukithi Paramana and Lanka Pajjathathavadi Pakshaya.
- \*\* Two-Member Electoral District of Colombo South was constituted—1 of the LSSP and 1 of the UNP were retained.
- † Electoral District of Welisara was constituted.
- ‡ Includes votes cast for some minor and small parties recognised under section 2A and 2B (A) of the previous provisions of the law.

(Act No. 11 of 1969) governing the recognition of political parties (Details appeared in Table VI Sessional Paper XX of 1966).  
 § Includes 2 members elected from minor parties (1956 Election).  
 ¶ Includes members elected from minor parties March 1965 Election (Details appeared in Table VI of Sessional Paper XX 1966)

Table 6 COMPARATIVE STATEMENT OF VOTER PARTICIPATION IN GENERAL ELECTIONS IN SRI LANKA, INDIA, UNITED KINGDOM, FRANCE, WESTERN GERMANY, JAPAN AND PRESIDENTIAL ELECTIONS IN THE U.S.A.

SRI LANKA		INDIA		UNITED KINGDOM*		FRANCE*		WESTERN GERMANY*		JAPAN*		U.S.A.	
General Election	Turn Out %	General Election	Turn Out %	General Election	Turn Out %	General Election	Turn Out %	General Election	Turn Out %	General Election	Turn Out %	Presidential Election	Turn Out %
1957	55.8	1952	46.99	1950	82.9	1951	74.0	1949	76.0	1948	72.7	1948	51.1
1952	70.7	1957	57.81	1951	82.6	1956	79.7	1953	83.0	1952	75.6	1952	61.6
1956	61.0	1962	55.75	1955	75.8	1958	74.7	1957	84.3	1953	74.5	1956	59.4
1960 (March)	77.6	1967	61.53	1959	78.7	1962	66.9	1961	86.3	1955	75.2	1960	62.8
1965 (July)	82.1	1974	55.29	1964	77.1	1967	79.1	1965	84.7	1958	76.8	1964	61.9
1965	82.1	1977	60.31	1966	75.8	1968	78.6	1969	85.2	1960	79.7	1968	60.0
1970	85.2			1969	79.0	1972	79.4	1972	90.4	1965	70.4	1972	55.7
1977	86.7			1971 (February)	73.8	1979	82.7	1976	80.9	1967	73.0	1976	54.4
				1974 (October)	72.8			1980	87.8	1969	67.8	1980	54.0
				1979	75.0					1972	50.7		
										1976	73.5		
										1979	68.0		

Source: \* Secretariat of Election Commission of India.

† "The International Almanac of Electoral History" by Thomas T. Mackie and Richard Rose (Macmillan Press Ltd. London 1974).  
 ‡ "British Electoral Facts 1835-1975" by T. W. S. Craig (Macmillan Press Ltd. London 1976) and information supplied by Parliamentary Research Services, Chichester, West Sussex, England, through the courtesy of Mr. W. S. Craig.

Source: Commission of Elections, Report of the General Election of 21 July 1977 and Keating's Contemporary Archives.

## A country running out of reserves: the downturn in Mexico's economy

The crisis facing Sri Lanka's tourism industry just now is a direct repercussion of the worsening financial position faced by Mexico through its balance of payments problems (See 'Conventional' column on page 12). The adverse international economic environment has also resulted in sharply higher costs of foreign finance which Mexico requires so desperately at this juncture.

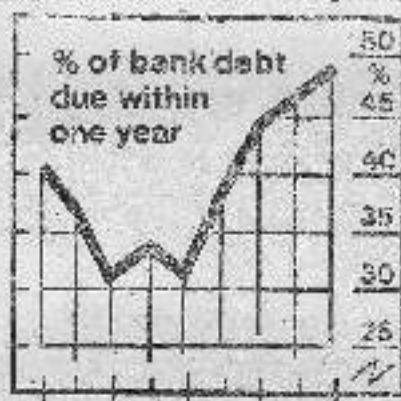
After four years of spectacular GNP growth backed by a rapidly increasing oil wealth and vast amounts of foreign credit, the tide suddenly turned for the Mexican economy. By the end of August this year the world's financiers had, according to the *Economist*, "put together a rescue package for a dollar-dry Mexico with the speed of a conjurer's hand. But Mexico's financial crisis has not disappeared. It threatens to haunt the international credit market for years".

The rescue operation is said to be an enormous task, involving the managing of foreign debt of about \$60 billion of which over \$15 billion is due for repayment in the next few months of 1982. These loans have been taken from nearly 1,100 foreign banks, most of them American. Furthermore, the US provides Mexico with almost two-thirds of its imports and there is American concern too that funds should also be found to finance these. As his net worth increased so did Mexican imports from the US, going up from US\$ 1.7 billion in 1960 to US\$9.9 billion by 1979; while Mexican exports to US also soared from US\$ 1.2

billion to US\$ 9.6 billion in the same period. There was also a sharp increase in the US investments in Mexico during this time.

Mexico has also borrowed heavily from the private capital market: in July the  *Economist* reported that in its hard pressed state Mexico was paying 10½% interest on a \$100 million loan, the most expensive ever.

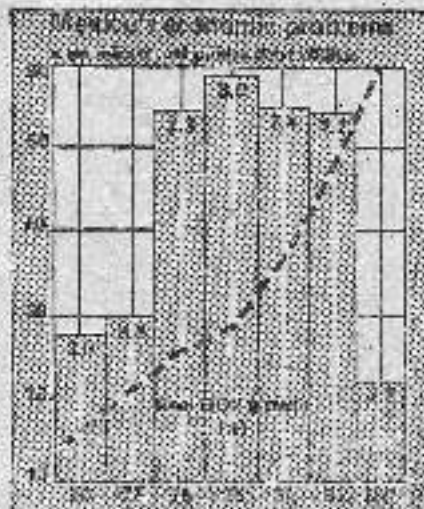
The rescue package offered for Mexico at the beginning of September includes a possible Bank for International Settlements (BIS) three month credit for US\$ 1.85 billion; this credit to be guaranteed by America's Federal Reserve System and the Bank of Spain. There are also offers from the US of advance payment for high grade Mexican crude oil and also for guarantees of credit in the US for crop exports to Mexico. There are also attempts to obtain a moratorium on principal



repayments from the public sector falling due within the next three months. These measures are expected to prop up Mexico's economy for about three months.

Meanwhile, an IMF team has stepped in and is now negotiating terms and conditions for further loans to Mexico, which could run to US\$ 4.8 billion in three years.

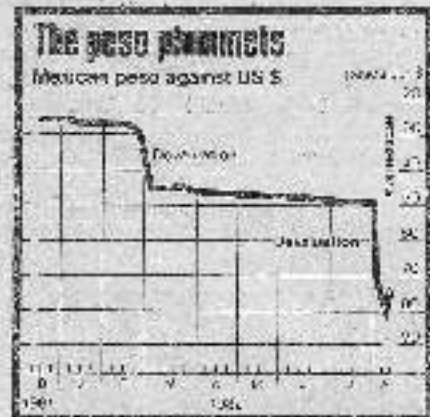
Mexico was in the most desperate financial plight among all countries in the Latin American and Caribbean region by the beginning of 1982. The fuel exporting countries of this region had heavily widened their current account deficits last year (from \$4.5 billion in 1980 to \$10 billion in 1981) as a consequence of a strong increase in their volume of imports, by as much as 32 percent. Most of these increases in imports and the resulting enlar-



ged deficit was concentrated in Mexico, Peru and Venezuela. To finance their external deficits, these countries almost doubled their net foreign borrowings. Mexico was responsible for the bulk of the net borrowing, amounting for \$12.7 billion in new debt in 1981. Exchange-rate management was a serious challenge for policy makers in several of these countries: periods of over-valuation were followed by massive devaluation in the four countries of Argentina, Bolivia, Costa Rica and Mexico.

Mexico's peso was devalued against the US\$ on February 20 and again in August. One reason was the impact of the weakening prices of its oil exports since mid 1981. With the falling oil revenues, and fears of devaluation in early 1982, there appeared a great interest among wealthy Mexicans in property in the US and a resulting heavy flight of capital from the country, including a run on the peso. This situation was halted with a 30 per cent devaluation of Mexico's currency and a jump in the value of the dollar from 28.80 to 35.50 pesos. Fears of further devaluation, together with high US interest rates, are continuing to cause a dangerous drain of capital out of Mexico.

Merely to keep its old debt rolling Mexico has to go on a major borrowing spree and raise an estimated US\$ 28 billion this year, of which 17 billion is needed to renew existing loans. A borrowing target of this magnitude seems beyond Mexico's capabilities, especially as many international bankers have excluded Mexico from their "acceptable" borrower's list. Over 20 per cent of Mexico's foreign debt is short-term loans of one year or less and with international currency reserves of around US\$ 3.5 billion its cash-flow is said to be extremely tight and imports becoming more and more difficult.



## IMF Compensatory Financing

Sri Lanka's external assets continued to decline over 1982, with a decline in real earnings from its exports and an increasing import bill. The International Monetary Fund thus approved a loan of SDR 39.2 million (approximately Rs. 875 million) for Sri Lanka under the compensatory financing facility. This drawing is intended to compensate for a shortfall in Sri Lanka's export earnings during the 12 month period ending July this year. During this 12 month period Sri Lanka's export earning from tea, the leading commodity export, fell by SDR 31 million, and from rubber by SDR 15 million from medium-term trends. Together, these two commodities account for about half of Sri Lanka's export receipts. (The average export price for tea, during the first four months of this year, at Rs. 32.65 per kilogram recorded a decrease of 12 percent compared to the same period in 1981, while the average export price (fob) for rubber, during this same period, declined by 21 percent from Rs. 23.30 per kilogram to Rs. 18.31 per kilogram).

By June 1982 the International Reserve of the Central Bank had come down to Rs. 5,015 million, according to Central Bank data. The position of International Reserve of the Central Bank has been as follows since the beginning of 1982:

Month	Rs. Mn.
Jan.	7,788
Feb.	6,496
March	6,742
April	6,867
May	6,122
June	5,015

According to latest provisional data, Sri Lanka's gross external assets declined by Rs. 1,054 million in June, and stood at Rs. 7,495 million (SDR 329 million) as at the end of the month. The level of gross external assets at the end of June, was adequate to finance approximately 2 months imports projected for 1982. In the International Reserve of the Central Bank, the major debit items were the sale of foreign exchange to commercial banks and the acquisition of Special Drawing Rights (SDRs) amounting to Rs. 2,385 million and Rs. 159 million respectively; also exchange rate adjustment Rs. 121 million and amortization of loans Rs. 118 million.

The Central Bank also reported that the cumulative change in exchange rates since 16th November, 1977 indicated that by end of July, 1982 the Rupee had depreciated by 23.4 per cent against the U.S. Dollar, 19.9 per cent against the Pound Sterling, 20.2 per cent against the Japanese Yen and 17.2 per cent against the SDR.

## COMMODITIES

## Cinnamon Market Faces Crunch

The export market for cinnamon has experienced a slump from about the middle of this year with Sri Lanka's biggest buyer Mexico facing serious balance of payment problems. By mid September, reports stated, a kilogramme of cinnamon of C5 quality which earlier fetched Rs. 50/- had come down to Rs. 35/-. According to Colombo auction prices by the end of August H 2/3 quality quills were sold and quoted at Rs. 23/75 to Rs. 26/75 per kg. as against Rs. 25/25 to Rs. 27/75 per kg. an year earlier. Cinnamon chips were sold and quoted at Rs. 4/- to Rs. 5/- a kg. There has been a general drop in prices and in early September since smaller quantities were coming into the market there was a slightly better demand.

Producers, particularly in areas

the major importers of Sri Lanka's Cinnamon but exports to both these sources have fallen in recent times.

According to table 2 exports have continued to rise in recent years both in quantity and value and reached a peak of 9,174 metric tons and a value of Rs. 30 million last year. In 1982, however, upto the first four months of this year, cinnamon exports were trailing behind last year's performance. As seen in table 2 both quantity and value of exports in 1982 had fallen behind that of 1981. Over the next four months there were indications that both volume and value of exports had plunged even further. Prices in the local market were falling and while producers were asking relief from the Ministry of Trade, the trade was asking that the floor price of cinnamon, which varies between US\$ 4152 per mt. ton for C5 quality to US\$ 2211 per mt. ton for H2 quality be revised.

Table 1—MAIN BUYERS OF CINNAMON PRODUCTS

	Quantity M.T.	1980			1981		
		Value Rs. m.n.	% Value	Quantity M.T.	Value Rs. m.n.	% Value	
1. Mexico	1279.4	57.1	25.1	4717.8	262.4	61.0	
2. U.S.A.	1064.6	34.3	15.1	758.9	33.1	7.7	
3. Chile	237.3	8.1	3.6	561.3	25.4	5.9	
4. Colombia	256.3	8.1	3.6	346.4	15.1	3.5	
5. Denmark	16.5	.4	.2	282.7	11.4	2.7	
6. Germany F.R.	1774.2	8.5	3.7	205.7	10.6	2.5	
Others	3311.2	111.3	48.9	2300.8	72.1	16.8	
Total	7939.5	227.8	100	9173.6	430.10	100	

Source: Sri Lanka Custom of Returns

of the Southern Province such as in the Bentara-Elpitiya, Karandeniya and Hiniduma electorates, whose livelihood depends on this crop, were left with large unsold stocks since buyers had refused to accept them. As seen in table 1 over 60 per cent of the value of cinnamon imports was accounted for by Mexico last year and in 1979 too Mexico was the largest buyer accounting for nearly 25 per cent of the total value of exports. Traditionally Mexico and US have been

There was one official view that over-production could have aggravated the crisis for producers. Since the market was good in 1981 exports increased by over 2,000 tons and producers were expecting this trend to continue, but conditions have changed in 1982. Another view was that though sections of the trade were pressing for a reduction in the floor price the interests of producers, who are now most affected, will have to be considered first.

Table 2—SRI LANKA'S CINNAMON EXPORTS FROM 1980

	1980		1981		1981		1982	
	MT.	Rs. Mn.	MT.	Rs. Mn.	MT.	Rs. Mn.	MT.	Rs. Mn.
Cinnamon Quills	4,965.0	206.8	7,611	403.6				
Cinnamon Quillings	661.3	14.3	670.1	16.3				
Cinnamon Chips	1,998.7	3.7	449.2	4.4				
Cinnamon in other forms	32.2	.4	34.5	1.3				
Total	7,939.5	227.8	9,173.6	430.10	2,178.3	102.9	1,832.0	83.0

Source: Sri Lanka Customs Returns

## Successful trials on Sri Lanka's first solar dry kiln

There are now plans for expansion of Sri Lanka's first successful proto-type solar dryer, which has dried over 3,000 cubic feet of green rubber since it was set up in 1961. Some of this timber has gone into the top planks of the office furniture supplied to the new Parliament building.

The solar dryer set up at the Borow Rubber Wood Project at Horawa, which limits defects associated with wood shrinkage, has also drawn the attention of scientists at the Chestnut Tea and Rubber Research Institutes, who have been considering possibilities of using a similar solar dryer in different aspects of drying their agricultural products. The potential of such a drying chamber to dry cereals and grains could also be a possibility if the results of the proposed expanded dryer fulfil the required standards.

The US Forest Products Laboratory in Madison, Wisconsin, designed and built this low cost solar dry kiln when Hope Todd, the Director of Borow (a subsidiary of the Industrial Development Board), visited the Wisconsin Institute and saw the proto-type dryer developed for low-latitude localities and thought it would have application in Sri Lanka. On his return to this country he contacted the local mission of US Agency for International Development and requested support to arrange the Forest Products Laboratory to help in building a solar kiln in Sri Lanka.

The two scientists in charge of the wood drying research Institute of the US Forest Products Laboratory who helped to set up the solar dryer at Horawa writing in a recent issue of "World Wood" make a strong case for such dry kilns. They state that "even for domestic markets, dry kilns can be justified in developing countries. Such kilns eliminate long air drying times and reduce moisture content to levels lower than can be attained with air drying."

But processors in many of these countries lack capital to build state-of-the-art commercial dry kilns. And the cost of fuel facts to operate kilns is often prohibitive. For these reasons, solar dry kilns offer an attractive alternative. Solar dry kilns can be built and operated quite inexpensively in labour-intensive societies and no purchase of fuel is needed."

Before this project Borwood has only an air drying shed. Lumber was held for about three months in an attempt to air dry from 60% down to 15% moisture content. A moisture

content of between 12% and 15% is suitable for the moist Sri Lankan climate. But problems with distortion and cracking of finished furniture indicated that the moisture content of the air dried lumber was probably above 15%.

The solar kiln was built in February 1961. Initial tests showed that 35-cm-thick rubberwood air dried to about 15% moisture content can be finish-dried in the solar kiln to 10% in less than a week. Borwood plans to operate the kiln in this manner i.e. air dry from green moisture content of about 60% down to 25 to 30% (this should take 30 to 45 days), then finish dry in the solar kiln to 10%. With this programme, drying time can be shortened by about 60% and provide a final moisture content safely under 10%.

Dr. William T. Sturman, project leader reported recently that the proto-type solar dryer establish-



Workers install the solar collector for the solar lumber dryer built in Horawa. Because the collector separates from the drying chamber, it can be sized to supply the required energy demand.

ed at the Borow Complex has functioned very satisfactorily over the past 18 months, except for minor defects. He recommended that a clean-up of the proto-type dryer should be accomplished as a continuation of the research and development of the existing dryer with the intention that this expanded proto-type would pave the way for the establishment of a commercial dryer. He has also suggested various modifications to existing dryers and advised on such possibilities as having a heat exchanger, and using off-cuts and wood waste which could provide the required heat to the chamber during non-sunshine hours.

These American scientists also visited Horawa recently to establish a Horawa proto-type solar dryer at the Forest Research Institute of the Government of Borow for their research in rubber drying. On the way to Borow they visited Sri Lanka to evaluate the performance of the Horawa dryer so that if necessary similar modifications could be introduced in the Borow project.

The moisture content of timber at the Borow Project after solar drying was approximately 10% on the average. The value of the solar drying chamber in addition to other forms of drying such as oil and electricity is approximately 1.01¢ the cost per cu. ft. Borwood is now working towards having a heat exchanger established at the proto-type dryer so that there could be three charges per month i.e. the capacity of the existing kiln will increase from 150 cu. ft. to 225 cu. ft.

A complete Meteorological Station had been established for monitoring solar radiation, temperature and rainfall, relative humidity, wind, sunshine recorder and other meteorological data required for an expansion of this project.

In the expanded project, for which assistance is now being sought, the drying chamber would have a capacity of 3,200 cu. ft. in comparison to the 800 cu. ft. of the existing proto-type dryer, and would give a drying lumber quantum of 1,000 to 1,500 cu. ft. per charge. The production target at the Horawa Complex is 5,000 cu. ft. of green timber per month and the expanded dryer is expected to give a 40 per cent drying capacity monthly which would save drying time up to three months.

This improved drying process is to be put to good practical use on a new LILBO/UNEP assisted project for producing glue laminated structural components from rubber wood. It will now be possible for this project also to move from the research and development stage to that of commercial utilization. UN expedite and modern equipment, together with industrial facilities backing, have all been combined to produce wealth out of a wood that was originally considered mainly for burning.

# The Economy

## Emerging Trends in the Open Economy

The post-1977 economic reforms (economic liberalisation/open economy) though creating substantial investment and economic growth rates, have come up against problems which could even undermine the viability or the sustainability of the 'open economy' over time. Some of these problems were highlighted at the World Bank sponsored Aid Group meeting held in Tokyo in June this year. The principal weaknesses in the open economy as it has operated since 1978 may be summarised as follows:

- Lagging export growth in the context of high import growth and deteriorating terms of trade.
- Relatively low level of investment in manufacturing compared with tourism, trade and construction.
- Poor national savings performance in the context of a high rate of investment.
- Economic instability as reflected in growing deficits in the government budget and the current account in the balance of payments, and continued high rate of inflation.
- Prospects of a drastic decline in foreign exchange reserves by 1983 (and even an exhaustion of reserves by 1984) unless early corrective measures are taken to reduce the budgetary gap and deficit in the external accounts.
- Absence of a major energy conservation effort in the context of a tight energy situation.
- Evidence of worsening relative income inequalities carrying with it serious socio-economic consequences.

In this column we begin a discussion of the first two weaknesses mentioned above namely, the lagging export growth and the relatively low manufacturing growth; and this discussion and also an analysis of the other issues will be left for subsequent columns in this journal.

### Lagging Export Growth

An acceleration of overall export growth was one of the principal objectives of the economic reforms of 1977. An economy with liberalised imports can obviously be viable in the long term, only if exports grow fast enough and adequately to meet the growth in imports. The resort to foreign loans and aid to finance the import-export gap can only be a

transitory phenomenon. A fairly quick and sizeable increase in exports is a sine qua non to sustain an open economy. In the case of Sri Lanka, the substantial deterioration in the terms of trade in recent years (by about 30 per cent during 1977-81), resulting in a considerable decline in the import purchasing power of a unit of exports, is a further factor in the need to accelerate export growth. The resource endowment and the size of the domestic market which limit the scope for efficient import substitution are also important considerations in the need to achieve high export growth. The recorded successes of other countries which have pursued open economy policies (e.g. S. Korea and Taiwan) were largely a result of a successful export performance realized within a relatively short period of time with the adoption of liberalised policies.

What has been the record of Sri Lanka's export performance in the past four years of a liberalised economy? As seen in Table I below,

TABLE I SRI LANKA'S EXPORTS AND IMPORTS

	Total Export Value	Total Import Value	Export/Import Ratio%	Export Volume Index	Import Volume Index
	—US Dollars—			1978	100
1977	741	721	103	94	73
1978	848	941	90	100	100
1979	979	1447	68	101	123
1980	1048	2053	51	99	140
1981	1069	1832	58	102	145

the growth in exports has considerably lagged behind the growth in imports. While the import expenditure (in US Dollars) grew by 154 per cent during 1977-81, the export earnings (in US Dollars) has grown by only 44 per cent. As a result the export/import ratio (that is, the extent of the import bill financed by exports) fell sharply over the years from 90 per cent in 1978 to 51 per cent in 1980 and 58 per cent in 1981. The lagging export growth is more clearly evident in the volume figures. During 1977-81, while import volume has very nearly doubled, the export volume has recorded a growth of less than 9 per cent. Besides the deterioration in the terms of trade (which has reduced the import purchasing power of a unit of exports by about 30 per cent), a major reason for the widening foreign resource gap has been the almost insignificant increase in the volume of exports.

The major factor behind the slow growth in the overall export volume is decline in the volume of plantation exports. During 1978-81, the export volume index of all three plantation products had recorded a decline. It may be noted that plantation exports still account for over one half of the country's overall export earnings. Hence, rehabilitation of the production base of the three plantation crops would be a central factor in the country's export performance in the future years. However, the results of rehabilitation efforts would be available only in the medium and long-term. In the case of rubber, for example, the acceleration of replanting would initially bring down the level of exports (in the rest of the 1980's) with enhanced exports appearing only in the 1990's.

### Shift to Export Oriented Manufacturing

One of the major objectives of the 'open economy' policy was to create an export-oriented manufacturing sector based on the country's comparative advantage (mainly cheap labour) in contrast to the import substitution strategy of the earlier years. A package of incentives in the form of liberalised imports of inputs, export processing zones, tax incentives, and a con-

ducive investment climate were offered to both local and foreign investors. But the achievements have so far been below the anticipated levels.

On one side of the balance sheet is the virtual elimination of a number of high-cost industries, particularly small enterprises, in the face of competition from the free flow of imported substitutes under import liberalisation. According to a survey of unregistered small scale industrial establishments conducted by the Central Bank, a considerable number of enterprises active in 1976 were reported to be inactive in 1981 because of their inability to face the competition from imports and also partly because of liquidity problems. The most adversely affected industries included those producing handloom textiles, sugar cane jaggery, handmade paper, fabricated metal products, pottery and cane products. (Continued in next issue)



## FEATURES

### A Study of the Prices of Drugs Purchased by the State Pharmaceuticals Corporation from 1973 to 1981

L. G. Jayewardene and T. Atapattu

Drug prices have been a socially and politically sensitive issue in Sri Lanka and in the early 70's the State became the sole importer of drugs though after 1977 licensed importers from the private sector were once again permitted to import. In this study the Chairman of the State Pharmaceuticals Corporation Dr. (Mrs.) L. G. Jayewardene and the Corporation's Statistical Officer T. Atapattu examine the prices of drugs bought between 1973 and 1981 and make observations on prices of drugs bought for the private sector and State Medical Stores and factors related to changing prices. They show in their study that between 1973 and 1979 as many as 70-84 percent of drugs imported had increased in price; and of a total of 226 items, nearly one-third or 74 had increased in price by over 100 percent. Despite drastic price reductions by the Corporation after November 1977, the changes in parity increased from 80% - 92% for foreign currencies and this affected the retail price of drugs.

The price of drugs is a socially and politically sensitive item to which the state and the public show a critical awareness. As a means of reducing the indiscriminate imports of drugs, the State, through the National Formulary Committee, in 1959, selected and rationalized the drugs that should be imported.

In 1973 the State Pharmaceuticals Corporation (SPC) was established with the further hope of reducing unnecessary expenditure on drugs.

Pressure from pharmaceutical manufacturers of the developed world was also reduced by transfer of buying from the private sector to a state monopoly by the SPC. As a policy, quotations are called for generic names. In 1978 a move was also made to purchase drugs from socialist countries which trade under generic names.

The SPC was the sole importer of drugs for Sri Lanka from 1973 to 1977. After this date the State allowed a free import of drugs, approved by the National Formulary Committee, to licensed importers.

In this study, we examine the prices of drugs bought for the private sector by the SPC during the years 1973 to 1981. Observations are also made on some large sales purchased made for the State Medical Stores (SMS). During this period, the study includes observations on the sale prices of drugs and factors related to price.

#### PURCHASE PROCEDURE

A brief reference to the purchase procedures adopted by the SPC is relevant.

Tenders are made by "World Wide" (WW) tender, by "Restricted Quotations" (RQ) where offers are called from known acceptable suppliers, and by "Direct Quotations" (DQ) from monopoly suppliers.

#### PRICES OF 84 DRUGS BOUGHT UNDER WORLD WIDE TENDER (WW)

A study was made of the prices of 84 items (from different sources) purchased after world wide tender (almost continuously) between 1973 to 1977 (since only a few purchases were made by world wide tender after 1977. "World Wide" prices are not updated after 1977).

The final price in 1977 has been studied in relation to the prices of 1973, and described as price increase, decrease or static price.

The majority of items show a price increase which apply to commonly used drugs such as antihypertensives, antidiabetics, analgesics, and vitamins.

The study of purchase prices between 1977 and 1978 show that the highest number of price increases is in 1978; 154 items out of 231, while 38 items show a price decrease.

#### WEIGHTED AVERAGE PRICES OF 58 "FAST MOVING ITEMS" BOUGHT ON "WORLD WIDE TENDER" 1973 - 1977

The weighted average price of 58 fast moving items, obtained after world wide tender, from different

suppliers was studied to 1977. These items belong to the same therapeutic groups mentioned in the paragraph above.

In this group also the majority of items show price increases with the largest number in 1975, when 46-67% of items show price increases.

In 1977, 33 items show a price increase, 19 items a price decrease, while less than 10 are static.

Table 1 shows the number of items were purchased between 1973 and 1980 from a monopoly supplier or from a single known reliable source due to the clinical importance of the item.

The base year for price comparisons is 1973. Each succeeding column shows the number of items with price increases, decreases etc. over the immediately preceding year.

#### Price Increases

The majority of price increases are in 1977 and 1979 where of a total of 210 and 155 items purchased, 113 and 108 respectively show a price increase. In 1980 due to a deliberate policy to reduce imports, only 115 items were imported but 70 items (61%) show a price increase. These facts are significant as each item is purchased from the same source and the prices show a steady increase.

#### Price Decreases

The largest number of items were purchased in 1977. Therefore the majority of price decreases - 41 of 210 purchased, is also seen in 1977.

This high purchase of drugs in 1977 is partly explained by major staff changes within the Corporation, when sufficient controls may not have been exercised on the number of items imported.

#### PERCENTAGE PRICE VARIANCE OF ITEMS OBTAINED FROM SINGLE SUPPLIERS 1973 TO 1980

The percentage of price increase/decrease etc in Table 2 below refer to the same items as discussed in Table 1. The base year for comparison is 1973.

Table 1 - PRICE VARIATIONS OF DRUGS OBTAINED FROM A SINGLE SOURCE BETWEEN 1973 AND 1980

Year	1974	1975	1976	1977	1978	1979	1980	1980.73
Total number of items imported	169	149	155	210	161	155	115	
Number of items with Price Increases	94	105	95	113	92	106	70	105
Number of items with Price Decreases	16	10	19	41	28	19	12	08
Number of items with Static Price	59	34	41	56	41	30	33	03

\* In 1981 some of the earlier monopoly and virtual monopoly sources were discontinued therefore imports for 1981 are not discussed under this heading.

Table 2—PERCENTAGE PRICE VARIANCE OF ITEMS OBTAINED FROM SINGLE SUPPLIERS 1973 TO 1980

Year	Country*							
	73	74	75	76	77	78	79	80/73
Total no. of items imported								
A	109	148	153	200	161	155	118	
Price Increases								
B	5	0	6	7	1	9	8	UK/India
C	1	2	7	5	0	1	0	Hong Kong
D	4	11	9	9	7	6	8	U.K.
E	15	24	38	19	18	23	8	India
F	60	72	55	74	66	73	40	Switzerland West Germany India
Price Decreases								
G	84	105	95	114	92	105	71	105
H	69	24	31	56	41	70	55	02
Static Prices								
I	12	6	15	22	17	12	6	05
J	3	2	2	18	3	4	3	01
K	3	2	2	8	8	3	4	02
L	10	10	19	40	28	19	12	08

\* Data refers to countries with the highest number of increases etc. within the range.

**Price Increases**

Table 2 shows that the majority of price increases are 0.5%—24% over the previous year; price (row 'R').

These increases do not restrict themselves to any particular category of item but countrywise price changes appear significant. UK and India show the highest number of items with price increases falling between 25-74%. The largest number of imports during 1973 to 1980 have been from these two countries. Since the awards are made on an acceptable quality and price basis, had the purchases been from other countries, it is likely that the range of price increase would have been over 100%.

**Price Decreases**

The majority of price decreases are between 0 to 10% of the previous year's price, and amount to about one item from each country.

Row 'M' shows the number with an 0.5 — 10% price decrease, row 'N' an 11 to 20% decrease, and row 'O' a decrease of more than 21%.

The fact that the majority of price increases and decreases occurred in 1977 is because the highest number of items was imported in this year.

**Static Prices**

Static prices are seen for 30—69 items during this period and refer to purchases mainly from West Germany, Switzerland and India.

**COUNTRYWISE PRICES OF ITEMS BOUGHT FROM 'MONOPOLY' SUPPLIERS BETWEEN 1973 — 1980**

Table 3 is shown as Tables (i), (ii) and (iii) and refer to prices of Monopoly Purchases made from 5 countries between 1973 to 1980.

**United Kingdom**

In the period 1973 to 1980 the largest number of monopoly items have been bought from U.K. In 1980 a lesser number was imported than in previous years but (29 of 34 items) 85%, show a price increase over 1979. This indicates that from 1974 onwards the drugs imported from U.K. show a steady price increase.

**India**

In this period the next highest imports are from India and we

Table 3(i) NO. OF MONOPOLY ITEMS WITH PRICE INCREASES FROM 5 COUNTRIES\*

Country/Year	1974	1975	1976	1977	1978	1979	1980	80/73
United Kingdom	(36) 42	(54) 45	(48) 42	(70) 53	(63) 52	(50) 47	(31) 29	25
India	(31) 06	(29) 19	(36) 11	(32) 13	(22) 08	(25) 16	(22) 14	23
Switzerland	(23) 08	(21) 13	(19) 10	(27) 08	(16) 02	(17) 08	(11) 01	07
West Germany	(20) 06	(11) 05	(15) 05	(24) 10	(16) 05	(20) 10	(17) 11	16
U.S.A.	(15) 07	(12) 04	(18) 12	(21) 13	(17) 08	(14) 07	(12) 08	10

\* Figures within brackets show the total number of items imported.

Table 3(ii) NUMBER OF MONOPOLY ITEMS WITH PRICE DECREASES FROM 5 COUNTRIES

Country/Year	1974	1975	1976	1977	1978	1979	1980	80/73
United Kingdom	(15) 02	(52) 05	(48) 03	(70) 09	(62) 04	(57) 02	(34) 02	01
India	(31) 02	(26) 0	(34) 05	(32) 03	(22) 03	(25) 04	(22) 0	0
Switzerland	(23) 04	(21) 02	(19) 02	(27) 06	(16) 03	(17) 01	(11) 02	02
West Germany	(20) 0	(11) 0	(15) 03	(24) 06	(16) 08	(20) 05	(17) 01	0
U.S.A.	(15) 04	(12) 03	(18) 03	(21) 05	(17) 05	(14) 05	(12) 03	0

Table 3(iii) NUMBER OF MONOPOLY ITEMS WITH STATIC PRICES FOR 5 COUNTRIES

Country/Year	1974	1975	1976	1977	1978	1979	1980	80/73
United Kingdom	(16) 12	(54) 04	(48) 03	(70) 08	(62) 06	(53) 09	(34) 09	0
India	(21) 23	(20) 07	(36) 14	(32) 16	(22) 11	(25) 05	(22) 05	0
Switzerland	(23) 11	(21) 08	(19) 07	(27) 12	(16) 11	(17) 08	(11) 08	2
West Germany	(20) 14	(11) 06	(15) 07	(24) 08	(16) 06	(20) 05	(17) 05	0
U.S.A.	(15) 14	(12) 05	(18) 07	(21) 04	(17) 0	(14) 04	(12) 03	0

\* Figures within brackets show the total number of items imported.

price- and price- and price- items refer to "monopoly" items, offered mainly from subsidiaries of multi- and international companies. This table shows that prices have increased or remained static and price decreases are few.

Purchases from Switzerland refer to items bought from well known companies such as Ciba-Geigy, Sandoz, Roche, Swiss Serum etc. Their prices though high, have remained static in comparison with prices in the other countries. More price decreases are seen between the years 1975 to 1976.

Twenty Six (26) items were imported from West Germany. Prices have remained static and therefore the tendency is for some items to show a price increase.

**U.S.A.**

With regard to purchases from U.S.A., static price increases are seen throughout except in 1978, while price decreases are slightly less than static prices.

The overall picture from all countries is a tendency for price increases and is probably to be expected as for all other commodities.

This study, which showed general price increases, did not reveal any significant information on price changes of therapeutic groups. The increased prices applies to several groups, as mentioned in the prices of items purchased after world-wide tender.

TABLE 4. PERCENTAGE OF COUNTRYWISE EXPENDITURE OF FOREIGN EXCHANGE ON DRUG IMPORTS FROM 1973 TO 1981

COUNTRY	1981 PERCENTAGE POSITION	1980 PERCENTAGE POSITION	1979 PERCENTAGE POSITION	1978 PERCENTAGE POSITION	1977 PERCENTAGE POSITION	1976 PERCENTAGE POSITION	1975 PERCENTAGE POSITION	1974 PERCENTAGE POSITION	1973 PERCENTAGE POSITION
01. INDIA	40.57 (1)	28.13 (1)	20.73 (2)	24.14 (1)	23.43 (1)	25.07 (1)	16.95 (2)	20.85 (1)	21.29 (1)
02. ENGLAND	8.56 (2)	15.58 (2)	27.55 (1)	22.34 (2)	12.44 (4)	10.44 (3)	18.76 (1)	17.40 (2)	16.12 (2)
03. CHINA	7.74 (3)	3.85 (9)	3.99 (8)	3.01 (7)	0.12 (7)	0.24 (21)	1.14 (19)	0.04 (27)	0.52 (20)
04. U. S. A.	6.29 (4)	6.69 (5)	4.69 (7)	10.35 (4)	13.30 (3)	4.02 (10)	2.24 (11)	7.53 (5)	3.19 (8)
05. HONG KONG	4.77 (5)	4.03 (8)	2.67 (11)	1.55 (11)	2.61 (7)	4.21 (9)	5.28 (7)	2.87 (10)	2.88 (9)
06. CYPRUS	4.46 (6)	-	-	-	-	-	-	-	-
07. JAPAN	3.80 (7)	4.72 (7)	2.98 (10)	1.54 (12)	1.93 (9)	2.98 (12)	6.44 (5)	2.69 (9)	1.13 (17)
08. BELGIUM	3.72 (8)	6.57 (6)	5.27 (6)	2.88 (9)	1.57 (12)	6.98 (4)	1.58 (13)	1.86 (13)	0.19 (23)
09. SWITZERLAND	3.45 (9)	14.16 (3)	9.25 (3)	15.72 (3)	6.66 (5)	5.91 (6)	7.71 (4)	10.46 (3)	7.73 (5)
10. WEST GERMANY	2.70 (10)	1.72 (11)	3.49 (12)	3.43 (6)	3.45 (6)	3.69 (11)	8.73 (3)	9.38 (3)	12.85 (3)
11. AUSTRIA	2.63 (11)	0.05 (21)	0.10 (22)	0.12 (20)	1.78 (10)	4.32 (8)	0.29 (23)	0.01 (28)	3.65 (7)
12. AUSTRALIA	1.97 (12)	1.26 (12)	3.93 (9)	2.92 (8)	2.51 (8)	6.87 (5)	1.40 (16)	3.91 (7)	2.79 (10)
13. ITALY	1.89 (13)	8.42 (4)	5.88 (4)	5.22 (5)	20.27 (2)	2.59 (13)	1.26 (18)	1.15 (16)	0.82 (19)
14. SINGAPORE	1.44 (14)	2.26 (10)	5.36 (15)	2.77 (10)	1.60 (10)	1.82 (14)	1.11 (19)	1.54 (14)	1.30 (16)
15. HOLLAND	1.26 (15)	0.43 (15)	1.00 (14)	1.00 (13)	1.02 (14)	0.26 (20)	0.64 (22)	0.95 (17)	1.33 (15)
16. SPAIN	1.16 (16)	0.53 (16)	1.35 (13)	0.41 (16)	0.63 (18)	0.63 (18)	0.04 (29)	0.52 (20)	0.02 (29)
17. THAILAND	0.95 (17)	0.57 (13)	0.27 (18)	0.29 (17)	0.40 (21)	-	-	-	-
18. DENMARK	0.75 (18)	0.06 (20)	0.57 (15)	0.11 (21)	0.70 (17)	4.61 (7)	3.55 (9)	5.84 (6)	1.12 (18)
19. FRANCE	0.46 (19)	-	0.06 (24)	0.60 (15)	0.05 (29)	0.63 (18)	1.53 (14)	1.41 (15)	1.43 (14)
20. U. S. S. R.	0.29 (20)	-	-	-	0.83 (16)	-	1.11 (20)	0.59 (18)	1.85 (13)
21. IRELAND	0.21 (21)	0.49 (14)	0.05 (25)	0.09 (22)	0.55 (19)	1.24 (15)	0.71 (21)	-	0.24 (22)
22. FINLAND	0.19 (22)	0.05 (21)	0.06 (24)	-	0.18 (26)	-	-	0.30 (22)	0.07 (25)
23. PUERTO-RICO	0.16 (23)	0.03 (23)	0.07 (23)	0.18 (18)	0.03 (30)	-	0.15 (25)	0.01 (29)	0.14 (24)
24. GREECE	0.15 (24)	-	-	-	-	-	-	-	-
25. SWEDEN	0.12 (25)	0.09 (18)	0.14 (21)	-	0.25 (23)	0.16 (22)	0.25 (24)	0.39 (21)	0.30 (21)
26. SOUTH AFRICA	0.09 (26)	0.07 (19)	0.15 (20)	0.29 (17)	0.03 (30)	-	-	0.01 (28)	-
27. HUNGARY	0.07 (27)	0.16 (17)	0.05 (25)	0.05 (24)	0.83 (15)	0.01 (25)	2.16 (12)	2.79 (11)	2.67 (12)
28. EGYPT	0.05 (28)	0.04 (22)	-	-	-	-	-	-	0.02 (29)
29. PORTUGAL	0.04 (29)	-	-	-	-	-	-	-	-
30. YUGOSLAVIA	0.03 (30)	-	-	-	0.47 (20)	0.12 (23)	0.10 (27)	0.18 (23)	0.03 (28)

**PERCENTAGE OF FOREIGN EXCHANGE SPENT ON IMPORTS FROM DIFFERENT COUNTRIES**

Table 4 shows the percentage countrywise expenditure on imports for each year, between 1973 to 1981.

The observations are limited to a few countries of major significance. We cannot generalise on the pattern of imports for each country excepting perhaps for India and U.K., where the percentage of imports have remained between 17-28% and 10-27% of total imports respectively between the years 1973 to 1981.

**India**

Purchases from India are steady throughout. In 1980, the highest imports are from this country. There are two categories of suppliers in India, the traditional\* and non-traditional (or generic). The former are subsidiaries of multi and transnational companies and the others are local Indian manufacturers. Some of the latter have been collaborators of multi and transnationals previously and are well known to the Indian trade. The ratio of purchases of traditional to non-traditional sources is as 11:9. The purchase of some items are restricted virtually to a single reputable source eg. Insulin, Phenytoin Sodium, Hydrogen Peroxide and Benzathine Penicillin. Purchase from lesser known suppliers will necessarily increase in the future in order to meet a competitive local market while keeping a watch on quality.

**United Kingdom (U.K.)**

UK. was in first place in 1979 due to a large number of imports from a single generic source. These imports are now made from other cheaper, yet acceptable sources, eg. Vitamin A & D, Phenoxymethyl Penicillin. Items that have remained as confirmed purchases from U.K. are Chlorhexidine and Cetri- mone Lotion, Vitamin B & C Forte Injection and corticosteroids, though some of these have shown a 100% increase in price from 1973 to 1981.

**Switzerland**

An increase in imports has taken place since 1978. This country has remained in the third place since. Though their prices are stable they are relatively higher than those of other countries; but this country remains an established source for a few items such as vaccine, sera, immunoglobulins and Rifampicin (until recently).

Purchases made from a new generic manufacturer also contributed to the increased purchases.

\*Traditional manufacturers are the discoverers who patent their products. Non-traditional or generic manufacturers, manufacture the product after patent expiry or on local licence etc.

**Italy**

From 1973 onwards Italy gradually moved to 4th place; the maximum imports were in 1977 for suppliers from non traditional generic sources. The items imported were antibiotics, antihypertensives and infusions. A large part of the anti microbial purchases for 1977 consisted of Co-trimoxazole. The purchase of this item has now moved to other acceptable but cheaper sources. An item similar to Co-trimoxazole which is gaining popularity has also reduced the purchase of this item.

A large quantity of infusions was also purchased earlier, but competitive prices and acceptable quality of infusions from other countries has reduced the purchase from Italy.

**U.S.A**

Purchases from U.S.A. are limited to a few items of major demand such as Prednisolone, Erythromycin and eye preparations.

**China**

China has moved forward considerably after 1978. The purchases would probably be more, if they were able to meet the demand. The quality has remained good and the prices competitive.

**Singapore**

Singapore registers 5.3% of imports for 1979. This is an increase from 1.3% in 1973. Singapore has proved to be a reliable source for anti-microbials from subsidiaries of traditional manufacturers. Reliance on quality has been valued against price in view of the clinical importance of these items.

**W. Germany**

Countries which registered decreases of imports are West Germany (Table 4) which has dropped from 12.35% in 1973 to 2.49% in 1979. The decline has been steady and can be explained by the fact that radio-diagnostic substances are imported from this country and were purchased by the Corporation in 1973 in substantial quantity. Their movement in the private sector was slow and these items were either gifted or transferred to state institutions.

**TABLE 7**

**MAJOR THERAPEUTIC GROUPS OF IMPORTS OF SMS AND SPC**

	SMS	SPC
a. Antimicrobials (& Antibiotics)	30%	20% - 40%
b. Electrolyte Solutions	10% - 20%	- 1.5%
c. Vitamins & Antianaemic Drugs	3% - 5%	1% - 6%
d. Anti Cancer Drugs	3% - 5%	1%
e. Antihypertensives	3% - 5%	2%
f. Hormones	3% - 5%	1% - 6%
g. Antiseptic & Disinfectants	3% - 5%	1% - 3%
	75%	59.5%

Further the Company places a restriction on imports by insisting on minimum value orders of 5000 D.M. for items which would be totally uneconomical.

**Poland**

Another country which registers a decrease of imports is Poland. When the Corporation was established in 1972 there was a declared policy to import drugs from generic sources. In 1973, 8.35% of imports was from Poland. 1974 and 1975 shows a fall and 1976, an increase to 10.45% of the total imports. In 1977 there is a slight overflow of 0.2% from 1976 orders. After 1977, the SPC has not made imports from this country. The fall is due to trade problems which were not satisfactorily resolved.

The details pertaining to foreign exchange on imports from other countries are also given in the table.

**IMPORTS FOR THE STATE MEDICAL STORES (SMS)**

The purchase procedure for SMS has always been on World-wide tender, excepting for a few monopoly items.

The total expenditure has increased over the years as seen in Table No. 6.

**TABLE 6**

**YEARWISE VALUE OF SMS PURCHASES 1973-1981**

(Corrected for comparison to present rupee value)

		Rs. Million
1973	—	24
1974	—	33.2
1975	—	52.0
1976	—	62.4
1977	—	40.2
1978	—	104.4
1979	—	116.8
1980	—	119.1
1981	—	159.9

Table 7 shows the major therapeutic groups imported by the SMS and the SPC from 1973 to 1981 as a range of percentage. The figures are given in order of expenditure and comprise more than 70% of the total imports.

The table shows that certain items are more in demand in the state sector and these represent the needs of patients who are seriously ill requiring hospital and institutional care eg. electrolytes and anti-cancer drugs.

#### COUNTRYWISE EXPENDITURE ON SMS IMPORTS

There is an indication of variance of SMS imports for 1981 compared with 1980. It is seen in Table 6 that the total value of imports increased by 19.8% in 1981 over 1980. It is observed that 83.6% of this increase is due to price increase and 16.4% to drug volume increase.

Complaints were received on supplies made from some generic sources in 1980. The 1981 awards were therefore made to well known suppliers for items of critical clinical value, such as injectable penicillins and their derivatives. This accounts for the major portion of price increases.

Drug volume increase cannot be significantly assessed because retail quantity increases have been shown for a large range of items and analysis of this would not provide information of significant value.

#### CHANGE OF PARITY AND ITS EFFECT ON THE RETAIL PRICES OF DRUGS 1973-1981

A brief discussion on the changes of parity consequent to devaluation of the Sri Lanka rupee from November 1977 is appropriate as it has affected the retail price of drugs. The changes of parity (from 1973 to 1980) relating to the currencies of 6 countries from which most of our drugs are imported.

Pre-devaluation as reported below, relates to rates from 1973 to November 1977 and post-devaluation, to parities after November 1977. We refer mainly to the post-devaluation change as this affects the volume of imports.

The Indian Rupee shows a post-devaluation increase of 80%.

The Swiss Franc shows an 17% increase between 1973 to 1977 and a post-devaluation increase of 87%.

The Sterling Pound shows a post-devaluation increase of 83%.

The US Dollar (in which several countries make their offers) has shown a post-devaluation increase of 30% over 1977 and 116% over 1973.

The Belgian Franc shows a 105% increase post-devaluation; the Italian Lira a 91% increase immediate post devaluation and a 188% increase over 1973.

In summary, all 8 currencies have appreciated by more than 100% since 1973.

#### PRESENT PRICING POLICY OF THE CORPORATION

A note on the pricing policy of the Corporation appears appropriate at this stage. In consideration of the commodity and its use, the State decided in early 1978 that the social benefit overrides the commercial interest as far as pricing of drugs is concerned. The goal of the government was to provide optimum benefit to the patient by providing quality drugs at the most economical price.

The pricing formula which existed at the time of devaluation in November 1977 for processed drugs, permitted a retail margin of 80% on 100 CIF. The unseen effect of devaluation was that there was a doubling of the rupee profit to the Corporation, the wholesaler, and the retailer on the sale of drugs imported at pre-devaluation prices.

The Corporation was compelled from 85.7% to "wholesale" drugs at the CIF and retail, at 8% on CIF. (The SPC, therefore operating only as a service organisation to June 1978).

A second pricing formula with a two tiered structure for "essential" and "non-essential" drugs came into operation in June 1978.

From May 1978 to March 1981 the Corporation retail outlets sold "Essential" drugs at a lower retail price while the trader and SPC distributors retailed the same item at a higher price. From June 1979 the SPC retail outlets as well as the SPC distributor was permitted a higher margin of 137% on CIF on "non-essential items".

The two tiered price structure gives the impression that the Corporation earns a "contribution" of 8% and 15% on the sale of "Essential" and "Non-Essential" drugs respectively.

The real "Contribution" can be ascertained only if 3 other variable costs namely landing and clearing charges (2%) and interest on stock

\* Essential drugs are defined as those needed for critical illness and for primary health care.

holding (4.5% for 3 months) at 18% per annum are deducted from these values. With these adjustments the sale of drugs gave a net positive contribution of 2.98% on CIF.

This situation persisted to June 1981 after which date the Corporation was allowed a reasonable margin of profit. The Corporation however, charges a lower margin on drugs which are required for long term use - e.g. Insulin. In the meantime a considerable portion of the market was lost to the private sector, which has many advantages in trading over a public sector Corporation that is compelled to adhere to restrictive controls which are perhaps necessary as public funds are utilised.

#### SUMMARY

- i. The price behaviour of World Tender items bought in 1978 from different countries show that 70% of items have a price increase over that of 1973.
- ii. Virtual Monopoly Items also show that in 1978, 86% of items imported show a price increase over that of the 1973 price.
- iii. In 1978 Monopoly items also show that 84% have price increases over that of the 1973 price.
- iv. The percentage range of price variance shows that in 1978, 74 items of a total of 238 have over 100% increase in price over the 1973 price. The majority was between 0-25% increase. The price increases ranged from 0.5 to more than 100%.
- v. In 1978, the highest purchases are from generic sources in the U.K. In 1981 the highest purchases are from India.
- vi. After November 1977, despite of drastic price reductions by the Corporation the changes in parity increased from 80% to 97% for foreign currencies and affected the retail price of drugs.
- vii. In November 1977, the retail price was 80% on the CIF price. The present pricing policy allows a reasonable margin of profit to the Corporation, which has however to follow restrictive purchase procedures and compete with the free trading permitted to the private sector.

\*\* The difference between the selling price (in this case the SPC price) and the variable cost of the product is referred to as "contribution".

# AN ELECTRIC LIGHT FOR EVERY RURAL COTTAGE IN SRI LANKA: AIM OF THE PRASHAKTHI PROJECT

A. Lasantha M. Perera

The Prashakthi project, developed at Sri Lanka's NERD Centre, has as its objective the providing of an electric light for every rural home in the country. The principal Research Engineer and Head of the Techno-Economic section of the National Engineering Research and Development Centre Lasantha M. Perera argues here that conventional technology will not provide an electric light to the majority of the rural homes, even within the next 25 years. The answer, he maintains, could be found in a fluorescent light unit supported by a lead acid battery having a reasonable current capacity. An installed system, including two switches and wiring should not cost more than Rs. 750/-; and a householder would have to pay only Rs. 5 per week for illumination which is of better quality and far safer than kerosene lamps. A possible major reason for this project is that it has the potential to eliminate the need for kerosene in rural households, which now costs the country an estimated Rs. 1,188 million a year in foreign exchange.

## The Need for the Project

An estimated 12.3 million or 80.5 per cent of Sri Lanka's population live in rural areas. But, only 2.8% of rural housing units were supplied with electricity; while only 34.5 per cent of urban households had electricity, according to the 1971 Census. Recognising the crucial role of electricity supply in rural development, the government had budgeted Rs. 500 million to provide electricity to 1150 villages during the period 1980 - 1984. At most this would provide electricity to about 10,000 rural households a year whereas over 30,000 new households come into existence each year due to population increase. Thus, the number of households remaining unelectrified is increasing over time.

These households lacking electricity use kerosene (paraffin) lamps for illumination. For very many of them a small bottle containing kerosene oil, into which is dipped a cloth wick, constitutes their only lamp. The great inconvenience, the constant danger of a fire (many of them live in thatched houses which are highly inflammable), and the poor degree of lighting, is something these people accept as their lot. They have adopted themselves to this fact of life by retiring to bed shortly after sunset. Even if as a result of future government programs electricity lines are drawn along all roads, and the villager is

fortunate enough to live by the roadside, he still needs about Rs. 3,000/- for the line connection, energy meter, main switch, internal wiring and fittings. This is beyond the means of very many village households. Thus conventional technology will not provide an electric light to the majority of the rural homes even within the next twenty five years.

## Technical Feasibility

Promising technologies such as bio luminescence and liquid crystal displays would have to wait, since immediate solutions are demanded. As of now, electrical lighting is well established worldwide. Therefore, highly efficient and low power consuming electric lights fed from storage batteries seem an obvious choice. Looking at the current state of the art in electric lighting as shown in Figure (1), three technologies stand-out: high pressure sodium lamps, fluorescent lamps and metal halide lamps. Although fluorescent lamps can be considered a mature technology their ready availability and low price are important considerations in their favour. Limited availability and their generally higher prices would mean that high pressure sodium and metal halide lamps are out of reach for such a project.

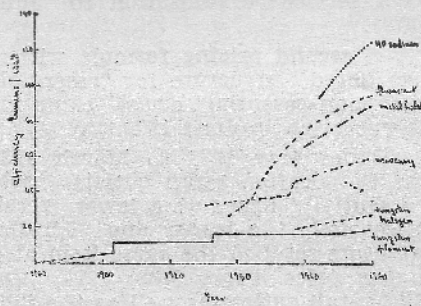


Figure 1 - Development in the efficiency of the major types of electric lamps.

A better quality kerosene lamp with glass chimney gives about the same light output as a 25 watt electric incandescent filament lamp. Generally a 6 watt fluorescent light gives a somewhat higher light output and is much easier to the eye. Since operation of fluorescent lights require a fairly high voltage alternating current (AC), power from a storage battery must be converted via an inverter. As shown in Figures 2 (a), (b) and (c), best results are obtained at a frequency of 30 to 35 Kilo Hertz. By suitable modification of known inverter circuits an optimum design was de-

veloped consistent with an acceptable level of lighting, having minimum current consumption and using readily available components at a modest cost. The current consumption for a 8 watt light was less than 400 millamps, whereas similar units sold in Europe consume almost double this current. The difference in light output is marginal considering that the local light uses a bare bulb while the imported units mostly employ diffusers that also absorb light. Trade-offs between energy consumption and aesthetic appearance for developed country markets and developing country markets are quite different.

The light unit cannot be used by itself, it must be supported by a storage battery having a reasonable current capacity. Torch light batteries although a common item in the village shop, is very costly per unit of electrical energy. Of the rechargeable batteries the lead acid battery has the lowest initial cost, has a reasonable life span and is fairly well known even in rural areas. Considering the number of tractors and lorries that operate in the rural areas, most towns and village centers, where mains electricity is available, have at least one garage where battery charging facilities are available. Further, lead acid batteries are manufactured locally by two large factories and by a number of small manufacturers.

Evaluation was not confined only to secondary cells. Development work was carried out to produce a Zinc-Carbon (Leclanche) cell and an Aluminium-Sodium hydroxide cell in kit form. The following considerations further prompted the selection of the lead acid battery:

- availability of mains electricity at very many town/village centers where battery charging facilities already exist or can easily be installed,
- fair incidence of lead acid battery ownership as they are used for starting stationary engines, vehicles and many motorcycles,
- breakthroughs achieved in complementary development programmes for battery charging generators utilizing wind mills, gasifier driven i.e. engines, and stream/mini-hydro turbines,
- the strong likelihood of photo voltaic solar panels being available at an affordable price in the near future.

Considering present lighting levels, the minimum level of lighting required for domestic purposes and the high light utilization that can be achieved by proper positioning of the light units, it was established that two six or eight watt fluorescent light units would be sufficient for an average village home. Although the average family retire to bed very early due to deficiencies of the pre-

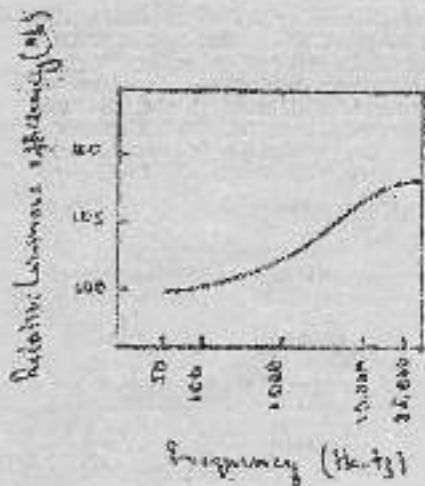


Figure 2(a). The

Luminous efficiency of a fluorescent lamp varies with supply frequency

of a fluorescent lamp. It is to be expected that they will redre later on too night if good lighting is available. On the assumption that both light units are energized for four hours each night, a 12 volt battery in our web will discharge about 24 ampere hours (AH). By reference to Figure 3 Charge / Discharge Cycle Life Characteristics, it is seen that retention capacity re-

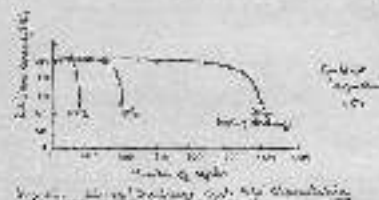


Figure 3. Charge / Discharge Cycle Life Characteristics

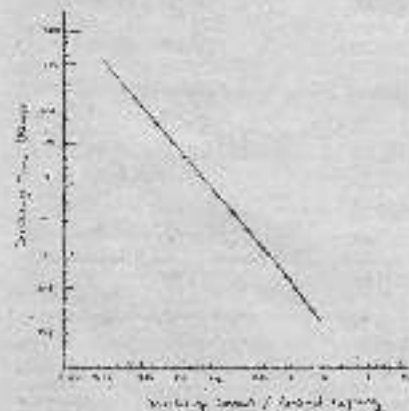


Figure 4. Discharge Time vs. Discharge Current

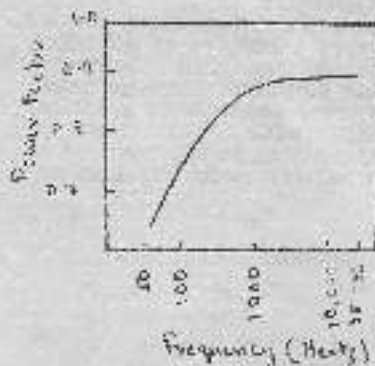


Figure 2(b). Fluorescent lamps operating at frequencies above 1 kHz have a power factor which approaches unity

duces at a faster rate with deeper discharge cycles. If discharge is allowed down to 40% of average capacity, retention capacity can be expected to drop to about 60% of original capacity after 200 cycles. On the basis of a weekly cycle this would mean a service life of about six years. The requirement then is to have a battery of capacity at least 40 AH. The fairly common 15 AH car battery would be an ideal choice. The weekly charging cycle has further advantages in that the villager is used to the weekly routine. Rural markets are held in different village centres on different days of the week. Further, the period between recharging is somewhat acceptable considering that the battery has to be transported for recharging. The battery recharging centre also can schedule their recharging work when the work day is fixed beforehand for each customer. A further important consideration is that recharging duration need not be longer than six hours, so that the villager who hands in his battery in the morning can collect the charged battery by evening, and he need not keep a spare battery. Figure 4 shows that a 45 AH battery drawing a current less than one ampere, would sustain the load for more than 45 hours. Figure 5 shows that the battery terminal voltage gives a fair indication of battery charge condition.

A necessary part of every technical feasibility study should be to assess whether the manufacturing technology can be assimilated and used in the country. Since the technology for this project was modified and further developed within the country itself, the answer was af-

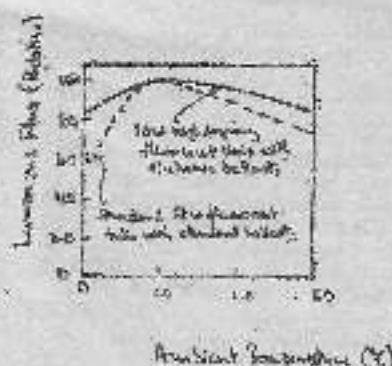


Figure 2(c). Luminous flux from a fluorescent lamp falls off with both increasing and decreasing temperature but this effect is less marked if the lamp is operating at a high frequency.

firmative. Further, in this case it was possible to emulate the strategy of multinational corporations, which normally concentrate the technical expertise at their head-quarters and distribute manufacturing facilities which rely for technical assistance upon the centre. Once the developed circuit was explained and the manufacturing process demonstrated, most of the licensees very quickly became proficient in the manufacturing process. Soon of them in 1982 introduced their own innovations to improve the product. Now there are 32 licensed manufacturers in different parts of the country and it is hoped to increase this number to one hundred within the next year.

Manufacture of lead acid batteries by the quantified envisaged (total potential market exceeding 2 million) is best done in a large factory as their production is scale sensitive and capital intensive. One of the best local manufacturers was happy to collaborate on the project, and an effective method of market segmentation was worked out.

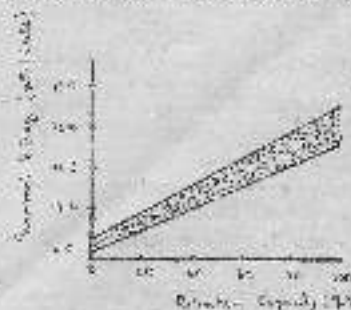


Figure 5. Open circuit voltage characteristics

## ECONOMIC VIABILITY

### Consumer Profitability

Since it was the objective of the project to provide an electric light to every rural home, a market penetration strategy was called for. Bench mark pricing technique was found satisfactory and easy to apply. Since even in developed countries calculation of net present value to consumer is often beyond the capability of the average householder, this technique was modified. Instead the evaluation of initial investment and operating cost was carried out separately and without discounting. For somebody living near subsistence level payback period beyond one to two years would be meaningless.

Initial cost of kerosene lamps is given below:

a) bottle lamp without chimney	Rs. 1.50
b) lamp with glass chimney (small)	Rs. 15.00
c) - ditto - (large)	Rs. 23.00
d) Hurricane lamp with chimney	Rs. 75.00
e) Pressure lantern with incandescent filament (cheap make)	Rs. 375.00
f) - ditto - (reputed make)	Rs. 800.00

Considering the above prices, the price for the electric light system consisting of two numbers 6 or 8 watt lights and a 45 AH re-chargeable battery, was bench mark priced to be somewhat less than Rupees 800. Technology development effort was therefore concentrated to reduce the sales price of the light unit to less than Rs. 100. Resulting from the collaborating agreement reached with the local battery manufacturer it was possible to fix the battery sales price less than Rs. 425.00. This then provided more leeway in fixing the price of the lighting unit which was given a range of Rs 100. to Rs 125. Then an installed system including two switches and wiring, should not exceed Rs 750.00.

A portable inverter operated 6 watt fluorescent light imported from a far eastern country sells at Rs. 275.00. This unit has facilities such as a spot light and a flasher utilizing separate filament bulbs.

Operation is by torch batteries which last only a few hours. An 8 watt fluorescent light imported from Europe would cost about Rs. 225.00 for the light unit only.

Operating cost for using kerosene lamps are as follows:

Case A - small cottage using 2 or 3 bottle lamps Rs. 11.20/ week

Case B - medium cottage using an extra chimney lamp Rs. 16.80/ week

Case C - larger cottage using a pressure lantern Rs. 33.60/ week

In actual practice there would be numerous variations of the above mix of lamp types and hours of usage. The minimum kerosene usage we have come across is at a cost of Rs. 10.00 per week.

The electrical energy required to charge a battery under recommend-

ed conditions is less than half kilo watt hour (KWH), the cost of which is less than Rs. 100. A locally fabricated battery charger capable of charging 10 batteries at a time will cost about Rs. 5,000. The capital charge, if investment is recovered in 2 years, is less than Rs. 1.00 and

Figure 6--SUMMARY OF CAPITAL REQUIRED (Rs)

A. Initial Investment		upto 100 units per month		100 to 250 units pre month	
Scale of production		3,429.50	11,114.00		
(a) Manufacturing plant/equipment	...	3,000.00	5,500.00		
(b) battery charging facilities	...	(single unit)	(2 units)		
Total	...	6,500.00	16,614.00		
B. Working Capital Requirement		(a)	(b)	(c)	
Scale of production/Sales					
i) 6 watt light units	...	50	100	250	
ii) 20 watt light units	...	10	10	10	
iii) batteries	...	20	20	50	
(a) components for light units in 2 batches	...	2,000.00	4,000.00	8,000.00	
b) Batteries	...	8,000.00	8,000.00	10,000.00	
			(one batch)	(2 batches)	
c) work in progress & finished goods	...	3,000.00	6,000.00	12,000.00	
		13,000.00	18,000.00	30,000.00	
C. Sources of Funds					
a) own facilities	...	---	3,500.00		
b) own money	...	---	6,000.00		
c) overdraft/loan	...	---	10,000.00		
			19,500.00		

Figure 7--MONTHLY INCOME STATEMENT

Considering the three stages of the project

Stage a) Manufacturing 50 Nos. 6/8 watt light units, 10 Nos. 20 watt light units, sale of 20 batteries and charging 5 batteries per day.

Stage b) Manufacturing 100 Nos. 6/8 watt light units, 10 Nos. 20 watt light units, sale of 20 batteries and charging 10 batteries per day.

Stage c) Manufacturing 250 Nos. 6/8 watt units, 10 Nos. 20 watt light units, sale of 50 batteries and charging 15 batteries per day.

(A) Out-of-Pocket Expenses		(a)	(b)	(c)
Stage				
i. Materials	...	3,720.00	6,622.20	13,597.00
ii. Employed Labour	...	---	600.00	1,650.00
iii. Royalty Payment	...	300.00	600.00	1,350.00
iv. Distribution & Sales	...	350.00	600.00	2,600.00
v. Loan interest	...	160.00	170.00	340.00
vi. Rent & electricity	...	200.00	400.00	1,500.00
vii. Transport	...	100.00	125.00	500.00
viii. Batteries	...	7,500.00	7,500.00	18,750.00
ix. Taxes	...	---	335.00	1,184.00
Total	...	12,330.00	16,982.30	41,470.80
(B) Sales				
i. Light units (@ 110/-) (@ 200/-)	...	7,500.00	13,000.00	29,500.00
ii. Batteries (@ 410/-)	...	8,200.00	8,200.00	20,500.00
Total	...	15,700.00	21,200.00	50,000.00
C. Contribution to own Income				
i. from sales of lights & batteries	...	3,369.20	4,552.70	9,713.20
ii. from battery charging	...	450.00	900.00	1,350.00
iii. from light hire & sale of accessories	...	500.00	500.00	500.00
Total	...	4,319.20	5,617.70	10,379.20

Say Rs. 4,300/- Say Rs. 5,000/- Say Rs. 10,000

ECONOMIC REVIEW, SEPTEMBER 1982





Significant points to be noted are:

- small industrialists in rural areas find it difficult to obtain suppliers' credit so current liabilities are nil.
- when production scale reaches 250 units per month, credit sales/retail outlets on a consignment basis would be necessary.
- much of the fixed assets are semi-consumables and are written off in three years.
- by year three the entrepreneur should review progress and plan for further expansion including separate premises. There is no point in complicating the issue at the initiation stage.
- annual withdrawals from profits is a combination of salary and dividend payout. In most cases if the entrepreneur was to find alternate employment, the annual salary he can get would not exceed Rs. 12,000.
- Net present value at 22% rate of return is Rs. 101,626.00. This rate corresponds to the alternate investment in a fixed savings deposit with the National Savings Bank.
- Internal rate of return works out to 148%.

#### National Profitability

It has been estimated that approximately 70% of Sri Lanka's total commercial energy consumption consists of petroleum products. The relatively inelastic demand for petroleum imports and the sharp price increases effected by the OPEC resulted in absorbing 47% of Sri Lanka's total export earnings in financing the country's oil bill in 1980. The price of kerosene increased by 142% in 1980 and still the selling price is heavily subsidised. The subsidy for 1982 is estimated to be Rs. 600 million. In addition to the price subsidy, the poor segments of the economy are entitled to 'Kerosene Stamps' valued at Rs. 9.50 per household per month, issued by the Government.

About 1,592,132 households received kerosene stamps at a total expenditure of Rs. 162 million in 1980. Consumption of kerosene was 52.8 million gallons in 1980. Even assuming a rural household requires only half a gallon of kerosene per week for illumination, this accounts for 75% of national kerosene consumption. Thus kerosene consumption by rural households costs the country Rs. 1,188 million, almost all of it in foreign exchange. Potential saving from government expenditure on subsidies for kerosene to the rural sector amounts to Rs. 612 million per year ( $3 \times 600 + 162$ ). This situation presents a very exciting opportunity for a project that would eliminate the need for kerosene in rural households.

Given the possibility of diverting half of recurrent government expenditure (Rs. 612 million) to providing Prashakthi fluorescent lights, storage batteries and battery charging facilities, the following items can be provided in two years:

a)	300,000 batteries @	Rs. 410/	
			Rs 328 million
b)	1,600,000 fluorescent lights @		
		Rs. 100/-	Rs. 160 million
c)	20,000 battery charges @	Rs. 5.0	
		00/-	Rs. 100 million
d)	Implementation expenses		Rs. 24 million
	<b>Total expenditure</b>		<b>Rs. 612 million</b>

A two year implementation period is considered realistic. In this period 800,000 rural families would be provided electric lighting facilities. Within four years all rural households would be provided for and the government could withdraw the kerosene stamps and the price subsidy.

Such an implementation program would generate considerable employment mostly in the rural areas itself:

- 450 fluorescent light manufacturers making 150 units per month and each employing 3 persons - would be required 1,350 persons.
  - 85 battery charging manufacturers making 10 units per month and each employing 4 persons - would be required 340 persons
  - 3 battery manufacturers making 12,000 batteries per month and each employing 50 persons - would be required 150 persons
  - 20,000 battery charging centres employing a single person - would be required 20,000 persons
- Total employment created  
21,840 persons

The local manufacture of fluorescent lights, batteries and battery charges would incur a foreign exchange penalty. In five years recycling of battery lead and the tapering off of the demand for battery chargers would reduce the value of the imported component. A conservative estimate would be 50% of sales price which is Rs. 294 million for a two year period ( $0.5 \times 588$ ). This is only 12.5% of the imported price of kerosene which would be saved as a result of this project

Looking at the increase in disposable income is also worthwhile as this will reflect not only advantages of creating employment but also take account of product/technology development. Such increase in rural purchasing power is a very important criteria of real rural development.

- wages, overheads and profit from local manufacture ( $3 \times 588$ ) Rs. mil. 147
- saving effected by rural households from cost of illumination using electric lights instead of kerosene lamps  
( $(10-5) \times 52 \times 1,600,000$ )  
Rs. mil. 416
- Net income from battery charging ( $4 \times 52 \times 1,600,000$ ) Rs. mil 332.8  
Increase in disposable income  
Rs million 895.8
- secondary manufacturing activity and increase in indirect employment will also generate more disposable income, much of it in rural hands.

There are numerous other direct benefits that are not easily quantifiable, yet are often very valid reasons for undertaking a project. Pre-occupation with numerate methods tends to be little such project benefits. Some of the direct benefits resulting from the Prashakthi project are given below:

- improvement in the quality of life for rural households,
- opportunity to engage in gainful employment eg. sewing, handicrafts, etc., in the cool comfort within one's own home free from day time tasks and cares.
- opportunity to read, study, etc., and improve one's condition.
- it is possible to use a battery for clocks, radios, cassette players and even for Television sets, with considerable cash saving on torch batteries.
- improved health, reduced eye strain, reduction in danger to life and property by fire resulting from kerosene lamp accidents.

In addition to the many direct benefits, most development projects provide many in-direct benefits. Some of the important indirect benefits from the Prashakthi project are given below:

- 100% local project from conception, R & D, demonstration and implementation; ably demonstrating advantages of technological sovereignty.
- much needed boost for local industry,
- dispersed nature of production and jobs in rural areas, thus arresting migration from rural to urban centres,
- build-up of a nucleus of technical entrepreneurs who can later take on more enterprising projects,
- having a better light, the present generation of children will have greater opportunity to study and read. With time this would mean better educated and intellectually more mature men and women in future generations.

## NATIONAL CREDIT PLAN — 1982

A credit plan covering the total commercial bank credit to the private sector has been formulated by the Central Bank for the year 1982. The Plan is an attempt to divert scarce bank credit from less important commercial purposes towards more important development purposes.

The National Credit Plan is the outcome of a series of discussions the Central Bank has had with the commercial banks operating in the country.

The National Credit Plan of 1982 envisages a growth of Rs. 8.8 billion or 54 per cent in credit to the private sector during the year. This represents a substantial growth when compared with the growth of Rs. 5.9 billion or 29 per cent experienced in 1981. Of the growth allotted for 1982, nearly half has been allocated in respect of the priority sectors, viz., agriculture, industry, exports and tourism.

Credit for agricultural purposes has been planned to increase by Rs. 502 million or 30 per cent to Rs. 1,682 million by the end of the year. Though a temporary setback is expected in tea and rubber production, the overall performance in the agricultural sector is estimated to be at a higher level during the year and the commercial banks have agreed to provide sufficient funds for this purpose.

Credit for industrial purposes has been estimated to rise by Rs. 992 million or 21 per cent during the year. Within the industrial sector, the engineering and building trade is to absorb the bulk of the industrial credit reflecting the growing credit needs of the large scale construction activities going on in the country. Manufacturing and the textile industry, too, are the major credit users in the industrial sector.

The National Credit Plan envisages a significant growth of Rs. 1,224 million or 31 per cent in credit to the export sector. In order to induce banks to achieve this target, the pre-shipment financing window of the Central Bank has been enhanced by Rs. 20 million to Rs. 570 million in February, 1982.

Available evidence indicates that 1982 will be a year of intensive hotel construction activity in Sri Lanka. In view of the development of the tourism sector as a major foreign exchange earner and the direct and indirect employment created by this vital sector, tourism has been recognised as a priority under the Central Bank. Accordingly, credit for tourism in the Credit Plan is expected to rise by Rs. 178 million or 22 per cent during 1982. The bulk of this credit is long term credit needed for hotel construction activities.

The Credit Plan is to be closely monitored by the Central Bank in order to ensure that the targets of the Plan are fully achieved.

Source: Central Bank News Review.

## Minor Irrigation in the Agricultural Development of Sri Lanka

Ariya Abeyasinghe

Development of the domestic agricultural sector is vital for the economic life of the country and provision of sufficient water is one of the crucial needs of this sector today. In achieving this objective, however, the importance of restoring and maintaining Sri Lanka's network of minor irrigation works has to be realised, argues Ariya Abeyasinghe who is an assistant secretary in the Ministry of Agriculture. In this first part of his paper he looks at the problems of minor irrigation from a historical perspective.

Sri Lanka's economy has been highly dependent on agriculture which continues to be the most important sector of the economy. It contributes a major share of the country's national product, foreign exchange earnings, government revenue, food supplies, employment and general development activities.

Agriculture contributes about 30 per cent of the Gross Domestic Product, though this sector's share of the GDP has remained virtually constant over the 1970-81 period (See table 1). In 1981, it accounted for 21 per cent of the GDP, about 50 per cent of the employed labour force and 80 per cent of total export earnings. Even much of the activity in other major sectors such as manufacturing, transport and services are connected in some way with the processing and supply of produce from the agricultural sector.

The important place accorded to agriculture in the economy may also be observed in the government budgetary allocations to this sector, which has doubled over the last decade. As seen in table 1, investment in agriculture has increased

from a level of 26-36 per cent during the 1971-78 period to 38-36 per cent during the last two years; a major part of this investment being diverted to the Mahaveli Development Project.

The general performance of the economy and growth trends in the country also bear the impact of performance of the agricultural sector. For instance, a glance of the sectoral performance in 1981 shows that the improvement in the agricultural sector, particularly in plantation exports which had an important role to play in sustaining the growth of the economy, the agricultural sector, as a whole, contributed 35.5 per cent of the growth in 1981 as compared with 10.8 per cent and 5.7 per cent in 1980 and 1979, respectively. It is evident that the performance of this sector is vital for the economy particularly when we consider the progress achieved in the domestic non-plantation sector, especially paddy, in recent years.

The agricultural sector is the only sector that can cushion the adverse effects of 'stagflation' created by the slow pace of employment creation, the oversupply of money domestically and imported inflation after liberalization. In order to meet these challenges there is a grave need to increase domestic production in all spheres, particularly in the agricultural sector. Water availability through better water use, conservation and management of irrigation works are a fundamental factor in the process of increasing productivity domestically in the agricultural sector. Irrigation Development — the Ancient System

Irrigation development has been the backbone of the development of ancient settlements from early times. The whole of the ancient Sinhalese civilisation and economic growth was centred round the development of water and land, and the maintenance and growth of village tanks. Sinhalese water laws are among the oldest in human civilisation and over the years customary

Table 1. PERCENTAGE SHARE OF THE AGRICULTURE SECTOR IN THE ECONOMY AND IN GOVERNMENT EXPENDITURE AND REVENUE

	1971	1976	1979	1980	1981
G. D. P. from Agriculture	27	28	29	28	29
Agricultural Employment	54	53	51	50	50
Agricultural Exports	91	78	71	73	69
Total Expenditure	10	10	16	20	23
Current Expenditure	6	5	7	9	10
Capital Expenditure	36	25	29	35	36
Agricultural Export Taxes	12	14	20	29	26

Source: Public Investment, 1982-1986, Ministry of Finance and Planning, May 1982.

practices and laws have been evolved for conserving water in the village tanks. Village tank development was linked to development of the villages where the Buddhist temple was the centre of activity. The temple generally was established on the bank or in proximity to it. The Buddhist monk in the village temple gave leadership in that he fixed auspicious times for cultivation, first issue of water and cultivation of the paddy on a fixed day after the Kanna meeting. Also, the flooding of paddy fields for weed control, last date of water issue, cleaning of field channels, cleaning of banks of jungle growth and cut hills, the time of cutting the paddy, threshing of paddy in a common *kannatha* maintained commonly by the farmers in the paya, the presentation of the first quantity of rice to the *Saaha* and *Goda* before human consumption, in a colourful pageant known as the "Abuth *Sahal Mangalya*" were common features of rural Sri Lanka in which the temple was also associated. The Kanna meeting was a community gathering of *yaya* farmers and they met in the temple. Once decisions were arrived at they were generally followed to the letter. Water issues were made democratically beginning with first issues to the *ARAVA* (or *Tal Kadu*) and gradually issues were made to the tanks in proximity to the tanks on a *Rathna* system. The farmers in the *yaya* decided on one variety of paddy to enable water management, pest control, weed control and crop protection. Though farmers owned their own paddy fields they followed common decisions without deviations.

When water in the tank was limited they decided together on a method of cultivation. Drought animals were held on an individual ownership basis but were kept in the homestead as a right part and never allowed to roam about despoiling channels or banks of crop. There were ponds in the *yaya* where cattle could cross the channels.

This system of tank-village relationship was destroyed gradually with the influx of foreign domination into the low country first with the Portuguese and then the Dutch and then followed by the British who conquered the Kandyan country. The irrigation traditions received in Sinhalese villages in the *Rata Rata*, *Ruhuna Rata* and *Uda Rata* with discrimination based on capital accumulation, politics and modern capital goods introduced into the agricultural sector. The *Vel Vidana*, who was an elder farmer in the *yaya*, elected democratically and paid in kind by the farmers in the *yaya* for his service in water regulation, water issue, water control and management, was replaced by elected formal officials who were paid in cash for their

services. A political taint was given to farmer leaders. Local politics and caste distinctions began to be an important factor. Officials took the place of the Buddhist priest as the village leader. The farmers' relationship with the temple disintegrated. The village *pirivena* which was the source of education, taught and managed by the monks, was gradually replaced by Government schools where the teaching was done by paid, lay professionals who had no permanent interest in the villages. The "Push Gals" of the temple, which was the common library of the village was ignored and kept closed to the village and the people began to be influenced by the popular printed media. The draught animal was gradually replaced by mechanical devices. Draught animals found their way more to the urban centres where beef was in great demand. Green plants grown in the "Goda-Idam" and used as organic fertilizer began to be replaced by imported chemical fertilizers. These were some features of the decay that set into the traditional life of the tank-villages and these tanks fell into neglect over time.

Ancient history records irrigation development from the earliest times in various inscriptions. There is evidence as early as the *Dovagala* and *Na-Upota* inscription of *Tanulissa* (119-109 B.C.) recording the grant of tracts of land and of an irrigation reservoir for a monastery (*Vida*: *Ceylon Antiquary and Literary Register* Vol. III Pt. 3, 1918 pp. 204-5; *EP* Vol. I p. 148).

Accepted traditions and cultivation practices, including cultivation time tables were built up over centuries and these had to be adhered to. The whole village had a common democratic way in the decision making process. These traditions and practices which were followed for the common welfare gradually deteriorated after the time of *Parakramabahu I* (1133-1186) when conservation and development was the keynote in the path of plenty. The three centuries that followed saw the beginning of the decay. Development activity was probably confined to the maintenance work in proximity to capital cities of *Dambadeniya*, *Yapahuwa*, *Kurunegala* and *Gampola*.

The position did not change with the arrival of the Portuguese (1505-1800) whose interest in Sri Lanka's agriculture was limited only to cinnamon. The Dutch, who were in Sri Lanka for 150 years from 1658 AD, unlike their predecessors paid much attention to domestic agricultural development. Grants of lands were freely made for agriculture and regulations passed in 1688 prohibited owner cultivators/tenants of paddy fields from leaving them uncultivated. Another order

in 1744 announced seizure of such uncultivated lands which were to be given to more diligent cultivators. The Dutch found it worth their while encouraging agriculture in the low country areas and assisted this with costly undertakings by constructing and restoring of engineering works.

#### Minor Irrigation Under the British

The British, who took command of the Maritime areas by 1798, extended their domain to the entire island in 1815. Progress in the development of water resources during the one and half centuries of British domination took place on the initiative of some Governors of the time, the efforts of the Central Irrigation Board and the Provincial Boards, and the Irrigation Department. One of the important changes that affected the communal machinery of tank maintenance of ancient times was the removal of the *Rajakariya* system in 1832. No alternative system was introduced for maintenance and repair of tanks by the community. Maintenance and upkeep of conserved water and conservation work was no longer the responsibility of any individual or group and the minor and major irrigation works only fell into neglect and general decay. This was possibly another factor in the destruction of the traditional system of village tanks.

The Governor, Sir Hercules Robinson (1845-1879) embarked on a large scale development activity on a large scale. He passed a famous Paddy Cultivation Ordinance. The period under Robinson saw the reconstruction and restoration of four schemes (*Kelandana Tank*, *Hali Ela Tank*, *Thamsharwana Tank* and *Edubittawa*). In the Southern Province, four schemes in North Western Province (*Dadura Oya Scheme*, *Koskata Oya Scheme*, *Thampiliwewa* and *Wennewewa*) three schemes in East (*Horchorawewa*, *Puttala Ela*, *Kudawewa*) and three schemes in the Eastern Province (*Pedyakulam*, *Rigum Tank*, *Puluzunavakulam*). There were twenty five other village works undertaken. The total expenditure was Rs. 1,030,000. His successor, Sir William Gregory, was equally keen and the tempo of development was nearly doubled and a large number of minor irrigation works were restored. He wanted "at least 100 village tanks be properly repaired each year".

Sir Arthur Gordon revitalized irrigation development and kindled enthusiasm which had worn out with the departure of Gregory. In six years he caused 42 tanks and 164 sluices to be repaired at a cost of Rs. 3 million. Of the major irrigation works restored *Kalawewa* stands out and it cost Rs. 405,000 to restore. The restoration of *Kalawewa Yoda Ela* (Old Jaya Ganga) was undertaken in 1889 at a cost of Rs.

304,484. Simultaneously, village tanks in the city of Anuradhapura, Nuwara Eliya, Ussa Wewa and Esawakkiyama were also restored.

In 1887 an Ordinance was passed creating a Central Irrigation Board with the Governor as President for the general management and planning of irrigation. Provincial Boards were established with the respective Government Agents of the area as Presidents and they were entrusted with the execution of all works in their areas. By 1889, 59 large tanks, 2,350 minor tanks, 245 canals, and 700 miles of channels were restored. A new irrigation manual published on March 18 1889 defined responsibility for the maintenance of irrigation works.

May 13, 1906 marks the birth of a separate Irrigation Department under H. T. S. Ward, as its first Director. All surveys and construction of new works, restoration and maintenance of major schemes were the responsibility of this Department. New Government Agents (after the abolition of Provincial Boards) were given the function of maintenance of minor works called out by the villagers themselves.

The period which spotlighted the potential of the minor irrigation works begins in 1923. The railway disaster of 1923 forcibly directed attention to the potential danger of floods from every village tank lying above the railway. Hence, it was decided that the Irrigation Department should fully investigate the safety of every village tank between Polgahawela, Manuar and Jaffna. 354 village tanks were investigated by a British firm, namely Messrs Emerson and Hidel; this work was subsequently completed by Mr. S. S. Kennedy who later became Director of Irrigation. The investigation spotlighted the great potential of the development of minor irrigation works. Hence, the scope of the investigation was accordingly extended and for the first time data on village minor irrigation works were collected and collated on a scientific basis and the foundation for a systematic study for their scientific development was established.

A new emphasis came to be placed on development of settlements, based on restored irrigation works in the Dry Zone, after the malaria epidemic in the 1930's. Consultants were resorted to who were called major colonization schemes. A new irrigation policy was also enunciated by the then Minister of Agriculture and Lands Mr. D. S. Senanayake in 1932, whereby the function of improvements to minor irrigation works was transferred back again to the Irrigation Department from the Government Agents. The policy of the Minister

was summed up in the following words, "For the producing of paddy and the development of the rice industry the country should look more to the latent possibilities of the innumerable village works throughout the island". A sum of Rs. 200,000 was voted for the improvement of village irrigation works and a special village works division was set up in the Irrigation Department.

Programmes implemented by the Irrigation Department centered around the proper utilization of minor irrigation works through systematic maintenance and water losses; and also on flood protection. The Irrigation Department launched a programme towards minor flood protection which prevented Kelani Ganga flood waters inundating low lying adjoining basins upto a predetermined flood height called the 'level of flood protection'. Irrigation policy was not exclusively directed for the benefit of the Dry Zone, where water shortage was the main constraint to the growth of paddy cultivation. This drew attention to the need for minor irrigation work development if an extensive improvement and extension of paddy cultivation was to take place.

In 1933, rules and procedures for the execution of irrigation work were adopted which defined village irrigation work as "those works under which the land holders do not as a general rule, pay any rate but carry out the earth work and jungle clearing, necessary for their construction and maintenance, in part or whole". World War II did not in any way affect the development of irrigation work. The sources of imported food were cut off during the war and this provided an impetus to achieve self-sufficiency in food. The emphasis, however, was on the cultivation of a variety of subsidiary food crops, including non-irrigated grain crops like maize and many types of yams. The new land policy was considered insufficient for construction of tanks and channel systems though land colonisation was taking place. July 1945 saw the birth of the food production drive which also hastened the need to maintain and restore village tanks and use irrigation works better.

#### Post Independence Period

With the grant of political independence in 1948 there appeared to be a pre-occupation of Government with economic emancipation; and the land and agricultural policies of the Ministry of Agriculture and Lands seemed to be directed to this end.

Around 1947 work was started on the Gal Oya Multi Purpose Development Project, modelled on the Tennessee Valley Authority project in the USA. The ultimate folly and neglect of resources in a massive project of US nature was brought out by an evaluation committee

which was appointed by the Ministry of Land, Irrigation and Power in 1966. This project had its origins in the mid 30's when the then Director of Irrigation, Kennedy, influenced by the TVA Valley Project in the USA, identified a site for a large reservoir on the Gal Oya river at Inginiyapala in the Eastern Province. This was a major departure from the earlier practice of irrigation development which was largely based on restoration of ancient irrigation systems in the Dry Zone, ranging from small village tanks to large reservoirs.

The Gal Oya multipurpose major irrigation scheme inaugurated on 18th August, 1949 got far more attention than all other schemes and the issues that have been raised as a result of this policy have proved that the existing irrigation systems and works were the type best suited to the country.

The maintenance of minor irrigation works became the responsibility of the Ministry of Agriculture and Food. The first six year programme drawn up for irrigation development between the years 1947/48 and 1952/53 was part of the post war programme of work which concentrated on 16 major schemes and gave an increment acreage of 81,942 acres of new land for cultivation. With the completion of the first six year programme 113 miles of tank bunds, 54 miles of flood bunds, 1,287 miles of channels, 363 miles of irrigation access roads, and 634 buildings were completed. These in turn gave an effective irrigation acreage of 271,433 under major schemes and 412,350 acres under minor irrigation schemes.

#### Minor Irrigation

With the change of government in 1956 the Minister of Irrigation and Lands Mr. C. P. de Silva showed special interest in Dry Zone irrigation and took steps to develop mostly major schemes. His predecessor Mr. P. Rulankuluma Disawa as the Minister of Agriculture and Lands had concentrated on tank development in the Rajarata. The tragic floods of 1957 breached a large number of major ancient reservoirs in the country, when serious damage was caused to 35 major and 1,300 minor tanks in Sri Lanka. With the passage of the Paddy Lands Act of 1958 under late Mr. Phillip Gunawardene and the establishment of the Agrarian Services Department, Minor Irrigation once again became important. The Paddy Lands Act of 1958 was introduced to provide security of tenure to the tenant cultivator who otherwise was reluctant to improve the land or adopt cultural practices which would bring in higher yields. The new Act made tenancy a heritable right and established about 4,000 cultivation committees at village level. These cultivation committees were

elected by farmers from among themselves. The new act enforced in six districts in 1958 was extended to 22 districts by 1963. This village level Planning and Implementation body had amongst several duties such functions as preparation and maintenance of registers of paddy lands, fixing of wage rates of agricultural labour, adopting steps for the development and maintenance of irrigation works, efficient cultivation of paddy lands and the maintenance of their fertility. The Agrarian Services Department was vested with construction, surveying, investigation as well as maintenance of minor village works. They had adequate technical staff and annually spent about Rs. 4 million in effecting such repairs and improvements to minor irrigation works. In the agricultural development proposals of the Ministry of Agriculture and Food for 1968-1970, the Agrarian Services Department had an annual expenditure programme of Rs. 10 million for minor irrigation works. With the passage of the Agricultural Productivity Laws and the Agricultural Lands Laws the construction, investigation and surveying was given back to the Irrigation Department and maintenance of village tanks were once again neglected.

The Agricultural Productivity Law, No. 2 of 1972 provided powers to Agricultural Productivity Committees to set standards of good management under section 3 (1) and (2) of this Act. According to this Act the owner or occupier of any agricultural land had to ensure "irrigation water is efficiently managed" and that "maintenance and repair work is carried out". Moreover, the owner or occupier of any agricultural land had to take necessary steps to ensure "the proper timing of agricultural operations", the "efficient management of irrigation water", and "water conservation and drainage". Section 5 provided for the occupier of agricultural land not owned by him, to undertake any work of maintenance or repair which the owner was responsible to carry out. The period when minor irrigation work was under agricultural productivity committees, under the Irrigation Department, saw certain neglect of the works. The reasons for this were:

- (a) The replacement of cultivation committees with Agricultural Productivity Committees. The Cultivation Committees were elected by the farmers at village level and the APCs were elected for a larger area — agricultural productivity area — hence, the close link between cultivators and their planning and implementation body were disrupted;

- (b) Appointment of members to APCs on political grounds and not elected by the farmers. These were therefore, bodies representatives of the farmers;
- (c) Political patronage;
- (d) Lack of a proper policy regarding water use and water management;
- (e) The scrapping of the traditional water manager of the *yava*, "Wai Yalam" who had command over the *yava* farmers;
- (f) The winding up of the Agrarian Services Department's divisions connected with minor irrigation;
- (g) The non-utilisation of funds from the decentralised budgets from 1974;

The Agrarian Services Act No. 59 of 1979 revised the Agrarian Services Department and once again maintenance of minor irrigation work was vested in the Department. The Government decided that:

- (a) Investigation, design and construction of all minor irrigation work with a command area below 200 acres should continue to be the responsibility of the Irrigation Department;
- (b) Maintenance of all minor irrigation work to be the responsibility of the Agrarian Services Department;
- (c) Minor irrigation works are those where the irrigated extent is below 200 acres. Minor irrigation works exclude the irrigation projects as well as special projects and salt water exclusion schemes.

Under the Agrarian Services Act 4,500 cultivation officers and an elected *wai yalam* for each *yava* were appointed. Nearly 500 Agrarian Services centres were to be manned by a divisional officer and each centre to have a Rural Bank, agricultural personnel from various departments; while agro-chemicals, planting material and seeds, agro-instruments including sprayers were to be stocked at a Centre. The Agrarian Services Committee to have 8 local officials connected with agricultural development and 8 elected farmer representatives from the A.S.C. area of authority. At present there are nearly 14,175 such elected representatives nominated to ABC Centres.

The Agrarian Services Act No. 59 of 1979 contains provisions for water administration and management. Water management under the Act (Section 42 (1)) covers the following functions:

- a. Holding of *Kanna* meetings in time;
- b. Proper timing of paddy cultivation;
- c. Enforcement of such established customs affecting wastage and pro-

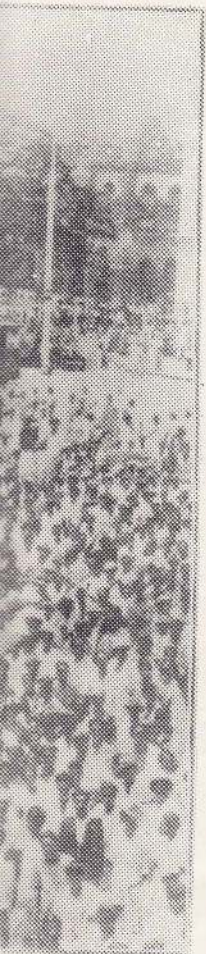
- per timing of agricultural operations;
- d. Efficient management of irrigation;
- e. Joint measures for conservation of soil;
- f. Protection against pest and diseases;
- g. Prevention of trespass by animals;
- h. Any other responsibility imposed on cultivators on the agricultural lands for the use of such lands and the improvement of productivity.

In 1979 the Agrarian Services Department spent Rs. 9.8 million and in 1980 Rs. 25 million on maintenance work of minor irrigation. In 1981 Rs. 21 million was spent on minor irrigation and in 1982 about Rs. 30 million was been allocated for minor irrigation. A National Committee on Rehabilitation of Village Tanks in Sri Lanka has also been appointed for:

- a. Co-ordination of all other similar programmes;
- b. Rationalising the resources used in the planning and implementation of such programmes;
- c. Preparation of a medium term programme for 1983/84;
- d. Procuring local and foreign funds.

Analysis of the growth and development of minor irrigation in Sri Lanka makes it evident that there has not been a consistency in the policy towards minor irrigation schemes. Responsibility has shifted from one institution to another. Their importance has been felt only when the need to increase food production has arisen. Various measures by the formulation and the implementation of formal laws has disrupted the democratic relationships that brought together the farmers in the *yava*. The water manager in the *yava*, a position that evolved with years of experience, has been eliminated and attempts at various alternatives have not been successful. Traditions and customs connected with the ancient water laws have been destroyed or allowed to die to be replaced by new imported water laws which either take time to get accepted or which need regular review due to their being unsuited to the socio-political framework of rural Sri Lanka. Another reason for the present condition has been frequent changes in agrarian laws in Sri Lanka. Between 1947 to date there have been four Agrarian Laws, leading to confusion among the peasantry. As a result of all these factors, minor irrigation and water administration and management has been allowed to fall into neglect.

To be continued.



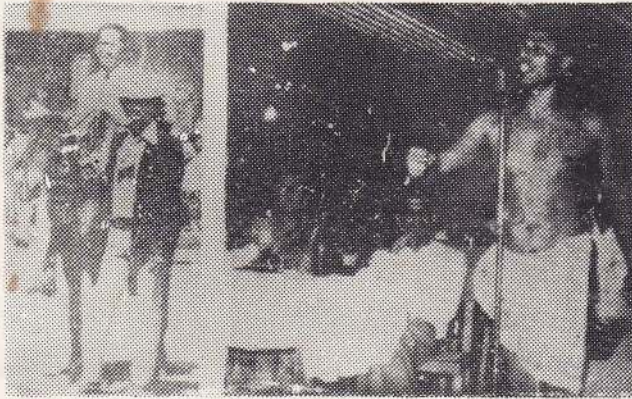
ected outside the Registrar  
e polling in the Colombo  
ion picture. Page 7).



Supporters on their way to an election meeting.



IN ANRUDE THEY CAME TO VOTE



He came on the back of a  
mule on N. Day

An Independent candidate who went on the platform in  
an 'Amude'



EVEN THE BEDRIDDEN.....



Typical of this situation was the coverage by the media at the first general elections 35 years ago. As shown on these pages the leading morning English daily, "Ceylon Daily News", for its election coverage had only these pictures at two counting centres and of two of major individual victories. The display, however, was not very prominent. By 1977 the picture had changed completely.



AND IN SUBURBAN AREAS

The media in turn reflects closely the heightened political awareness and discussion that is now so closely knit into Sri Lankan society. In influencing and expressing this tendency it makes an election the main issue for coverage several weeks before and after the event. The scene has changed as the pictures on these two pages reveal.



# ECONOMIC REVIEW

PEOPLE'S BANK RESEARCH  
STUDIES

## *Bibliography on the Mahaweli*

The Research Department of the People's Bank has brought out a very comprehensive bibliography of the Mahaweli which has brought together 410 items of both unpublished and published documents on the Mahaweli. Each significant document is also summarised in the bibliography indicating its contents. This bibliography therefore becomes the most comprehensive so far on the Mahaweli project.

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