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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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THE PRESENT STATUS AND FUTURE PLANS FOR DEVELOPMENT OF THE PLASTICS INDUSTRY IN SRI LANKA AND TECHNICAL ASSISTANCE REQUIRED 1/

by

Gardiyewasan K. Amaradasa
Ceylon Institute of Scientific and Industrial Research
Colombo, Sri Lanka

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THE PLASTICS INDUSTRY IN [illegible]

1. (a) **Past Trends** :

The first plant to process plastics in this country was set up in the late 1940's to produce [illegible] moulded articles like combs, ash trays and powder boxes. Footwear manufacturers were soon making their shoe uppers of plastic materials. Polyethylene films for packaging quickly became popular and led to the establishment of a plant to make polyethylene film in the mid 1950's. With un-restricted imports coming in, however, the expansion of plastics goods manufacture was stalled. Active steps to promote investment in industry were first taken by the Government about 1961. The result was that a number of concerns that had been importing plastics products switched over to manufacturing them, sometimes in collaborating with their principals. The shortage of foreign exchange in the country made the government to stipulate that one of the criteria to be followed in the system of licencing industry would be the saving to the country in foreign exchange achieved by the establishment of the industry. Protection against foreign competition was afforded by tariff barriers or banning of imports. The early 1960's saw the establishment of plant to extrude rigid PVC pipes for water supply and sewerage, manufacture of PVC covered-cables, polyethylene pipes and a variety of products ranging from emulsion paints to PVC coated fabrics, blow moulded articles and a wide range of toys. The severe crisis in foreign exchange that has progressively deepened during the past few years has led to increasingly tight restrictions on the imports of machinery and moulds as well as of raw materials.

It can be said that almost all the raw materials used in plastics industry in Sri Lanka are imported. This has often resulted in restricting the growth of the plastics industry particularly where the plastics industry came into competition with the rubber industry. The difficult foreign exchange situation the country today finds itself in has led the Ministry of Industries to classify industrial products as 'vital', 'essential', 'semi essential' and 'non essential'. In the first category are electrical accessories, cables and polyethylene film, tooth brushes, spectacle frames and mathematical instruments. Electrical accessories like lamp shades fall into the non essential category.

Since almost all the raw materials are imported the values of the annual imports since regulation of industries, over the period of 1965 to 1969 would indicate the growth of the industry.

Table 1. Annual Imports of Plastics Raw Materials into Sri Lanka

Year	Weigh	Value
	Tons	U.S. Dollars
1960	800	600.00
1961	700	500.00
1962	2000	1,630.00
1963	1800	980.00
1964	1900	1,000.00
1965	2000	1,090.00
1966	3200	1,620.00
1967	4700	1,900.00
1968	4500	2,440.00
1969	6070	3,540.00

The customs returns for 1970 and later years have not been published.

(b) Current Position of the Industry :

There are at present 174 units (excluding the very small ones) registered with the Ministry of Industries for the processing of plastics. The Industry provides employment for about 5000 persons in production. The annual imports of raw materials during 1971 was 2.6 million dollars approximately. The curtailment of raw material imports caused by the country's severe shortage of foreign exchange has led to plants operating far below capacity. It is estimated that apart from those industries classified as 'vital', the other plastics goods manufacturing units are operating at about a third of the

installed capacity.

Range of Products :

Plastic pipes, polyethylene film and electrical cables form the bulk of the plastics products manufactured locally. Of the three firms engaged in the manufacture of plastics pipes, two make rigid PVC pipes and fittings while the other makes polyethylene pipes. Eight firms are engaged in making polyethylene film. All three firms engaged in cable manufacture use PVC for cable covers. PVC coated fabric (artificial leather cloth) is made by two firms.

Table II gives a summary of the range and size of the plastics processing industry of Sri Lanka.

Table II.

Range and size of the Plastics processing industries :

	No. of Industries	Persons employed 1971	Foreign exchange allocated $
1. Cables and wires (Plastic component)	3	190	264,000
2. Electrical accessories (Plastic component)	3	180	63,000
3. Electrical fittings (Plastic component)	17	1500	5,200
4. Plastic pipes	3	140	600,000
5. Miscellaneous plastic goods	19	1000	260,000
6. Polyethylene film	8	210	600,000
7. Plastic goods from sheets	2	180	25,000
8. Plastic raincoats	8	70	14,000
9. Tooth brushes	2	90	85,000
10. Plastic coated fabric	2	220	112,000
11. Spectacle frames	11	270	81,000
12. Fountain Pens	3	160	50,000
13. Ball point pens	5	190	37,000
14. Mathematical Instruments	2	50	72,000
15. Button Industry	2	60	30,000

Fibreglass boats are built by four companies which employ about 400 persons [illegible] polyester resin. Footwear industry is composed of 29 large and medium units and a large number of smaller units (less than 10 employees) scattered throughout the country and this industry utilizes ₹ 220,000 worth of PVC coated fabrics. Resin based paint industry is controlled by three manufacturers who use ₹ 31,000 worth of different imported resins.

Range of raw materials :

Polyethylene is the raw material for two major products, namely polyethylene film and pipe for agricultural use. Rigid PVC is used for pipes for domestic and industrial use. PVC resin forms the basis of the bulk of miscellaneous moulded articles while plasticised PVC is used for the coated fabrics. Imported coated fabrics are used for children's shoe uppers nylon webbing is also used to some extent in ladies' shoe manufacture. Acrylic and PVC sheets are mainly used for turning out electrical fittings. Boat building industry uses polyester resin. Paint industry imports for its use vinyl resins, silicone resins and alkyd resin, though lately a major part of the alkyd resins are being manufactured locally. The tyre factory uses nylon cord for the manufacture of tyres. Expanded polystyrene, mainly used for refrigeration is formed in Sri Lanka from imported resin granules

Projections of Future Growth :

Normal growth of the plastics industry is stalled by the restrictions imposed on the import of plastic raw materials. Goods classified as 'vital' or 'essential' e.g. rigid PVC pipes and polyethylene film get preference over 'semi essential' goods like lamp shades and ball point pens. Considering these restrictions a safe rate of growth for PVC is about 15%, polyethylene 10%, polystyrene 5% and for specialty plastics 10%.

The demand for PVC resins and compounds is expected to rise sharply in the remaining years of this decade both by increasing production capacities of present lines of manufacture and by the addition of new lines. The following table summarises the estimated demand for PVC for the years 1973, 1976 and 1980.

Table III. [illegible] for PVC for the years

	1973	1976	1980
1. Water pipes	[illegible]	[illegible]	6140
2. Insulated Cables	[illegible]	1335	2100
3. Leather cloth (coated fabric packaging materials footwear)	[illegible]	270	330
4. Other products	150	250	350
Total	4200	7000	10600

The demand for nylon filaments for textile manufacture and for industrial uses as in tyre cord, fishing nets, tarpaulins and mail bags has been studied. It has been estimated that the demand for nylon textile by 1975 will be of the order of 38 million meters needing 2,400 tons of nylon filament for manufacture. On this basis the construction of a plant with an annual capacity to manufacture 2000 tons of textile filament and fish nets has been recommended.

Machinery and Moulds :

The main items of machinery for the plastics industry have been bought from Japan, United Kingdom and Germany. Simpler items of machinery have also been imported from Hong Kong and Singapore. The manufacture of only the simpler types of moulds for the rubber and plastics industry is done locally. Most of the moulds are

Know-how :

The technology of the manufacture of products now turned out locally is straightforward. The know-how in most cases was obtained from the suppliers of machinery and the suppliers of raw materials. In some cases local technicians were sent for training abroad in the fields of work they are engaged. Sometimes foreign technicians have helped to train local technicians and operatives in these factories.

Plans for future expansion :

A proposal is under consideration to set up a plant to manufacture PVC as a part of the petrochemical complex on the basis of an estimated demand of 7000 tons of PVC resin by 1977. A plant with annual capacity of 12,000 tons is recommended.

The total import of synthetic yarn to Sri Lanka was around 900 tons in 1969; about 80% of the above imports were nylon yarn. Textile manufacturers are of the opinion that nylon 6 will not decline in popularity for another 10 years, and it is proposed to set up a Nylon 6 plant with a capacity of 2000 tons per annum, using imported caprolactam for the production of monofilament and multifilaments.

Problems facing the industry :

The major problems facing the growth of the plastics industry in Sri Lanka are :

(a) that all the raw materials and machinery are imported and the country is facing a severe shortage of foreign exchange.

(b) the local market is small to set up economically profitable resin manufacturing units

(c) Sri Lanka being a rubber producing country does not encourage plastics products competing with rubber products.

(d) the petrochemical industry which is the basis of manufacture of most raw materials is in its infancy. At present it produces aviation fuel, motor fuels, kerosine for domestic consumption, naptha and bitumen.

HISTORY

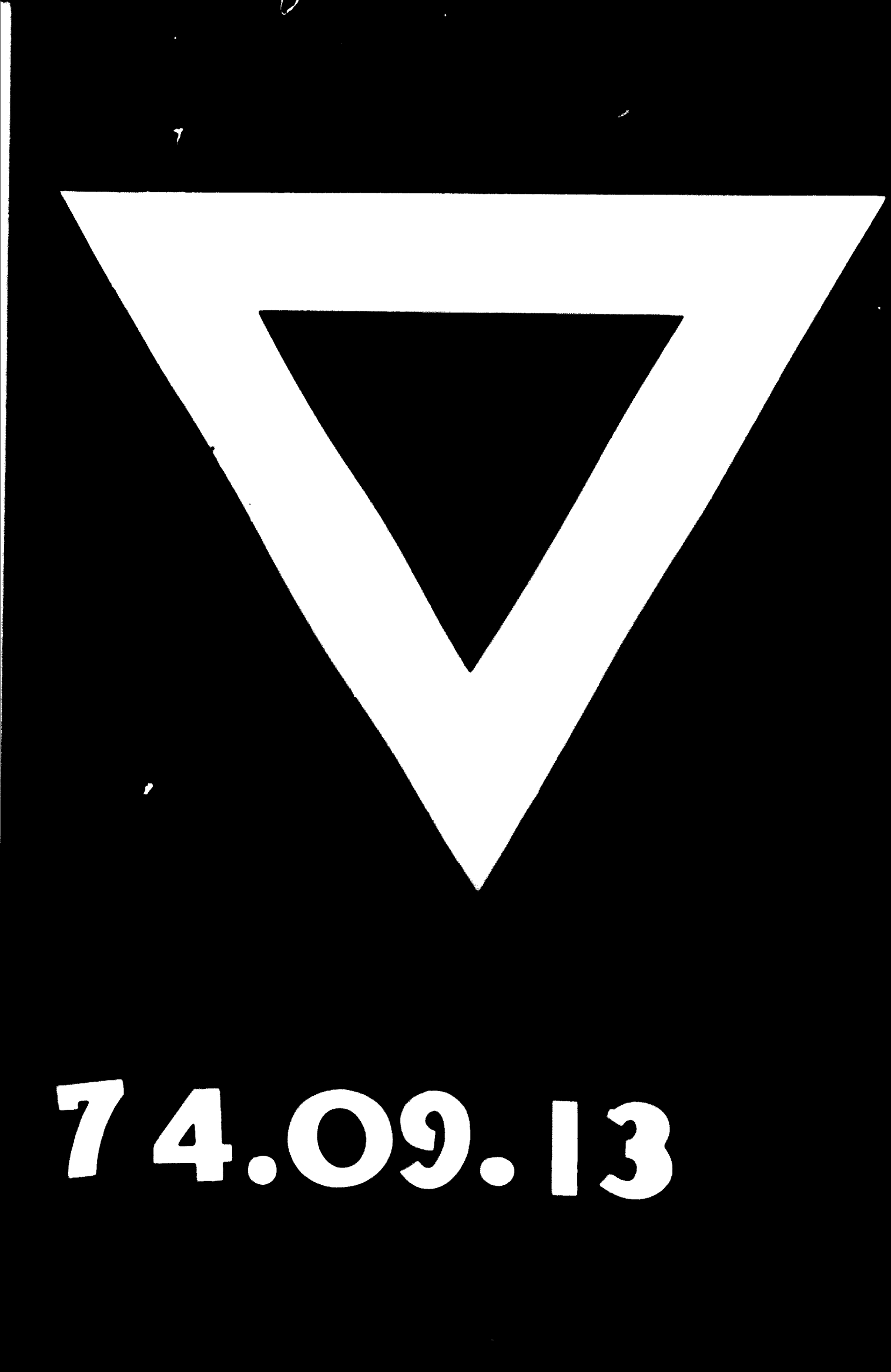
The plastics industry in Sri Lanka started in the late 1940's with simple moulded goods. The growth of the industry has however been hampered by three main factors. These are the un-restricted import of plastic goods into the country in the early years, the fear that plastics would compete with rubber in this rubber growing country and since 1960 the steadily deepening foreign exchange problem. The 1950's saw the establishment of a plant to make polyethylene film. In the 1960's began the manufacture of rigid and flexible pipes, coated fabrics and cables, among the main items.

The current position is that 174 units are registered with the Ministry of Industries for the processing of plastics. The industry employs about 5000 persons in production and in 1971 imported raw materials worth approximately 2.6 million dollars. The increasing severity of the foreign exchange shortage led to classification of industries on the basis of how essential each one is to the national economy. Raw materials are now allocated on a quota basis. The range of products include the three most important items, plastic pipes (both rigid and flexible), polyethylene film and electric cables. Other industries include PVC-coated fabric, spectacle frames, pens, electrical accessories and fittings and a variety of moulded items including toys. The

fibre glass boats, resin based paints and footwear also consume a fair quantity of plastics. Of the raw materials, PVC of various types and polyethylene are the most widely used plastics. Used in smaller quantities are acrylic sheets in electrical fittings, polyester resin in boat building, polystyrene in moulded goods and heat insulation products, nylon cord in tyre manufacture and alkyd and vinyl resins in paints.

It has been estimated that Sri Lanka would require about 7000 tons of PVC annually by 1977. The establishment of a PVC plant with a capacity of 12,000 tons has been recommended. Also under consideration is the setting up of a plant capable of producing 2000 tons of nylon textile filament and fish nets. This is expected to be the level of demand by 1980.

The major problem facing the industry is the severe shortage of foreign exchange necessitating the curtailment of import of raw material and machinery. The small size of the market restricts the number and capacity of resin manufacturing plants that can profitably be set up. The use of plastics is discouraged in areas where rubber could be used. Production of plastic raw materials is part of the petrochemical complex of a country. In Sri Lanka, the petrochemical industry is in the early stages of development. Though the prospects for rapid development of the plastics industry are not bright at present, hope lies in the improvement of the country's economy.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