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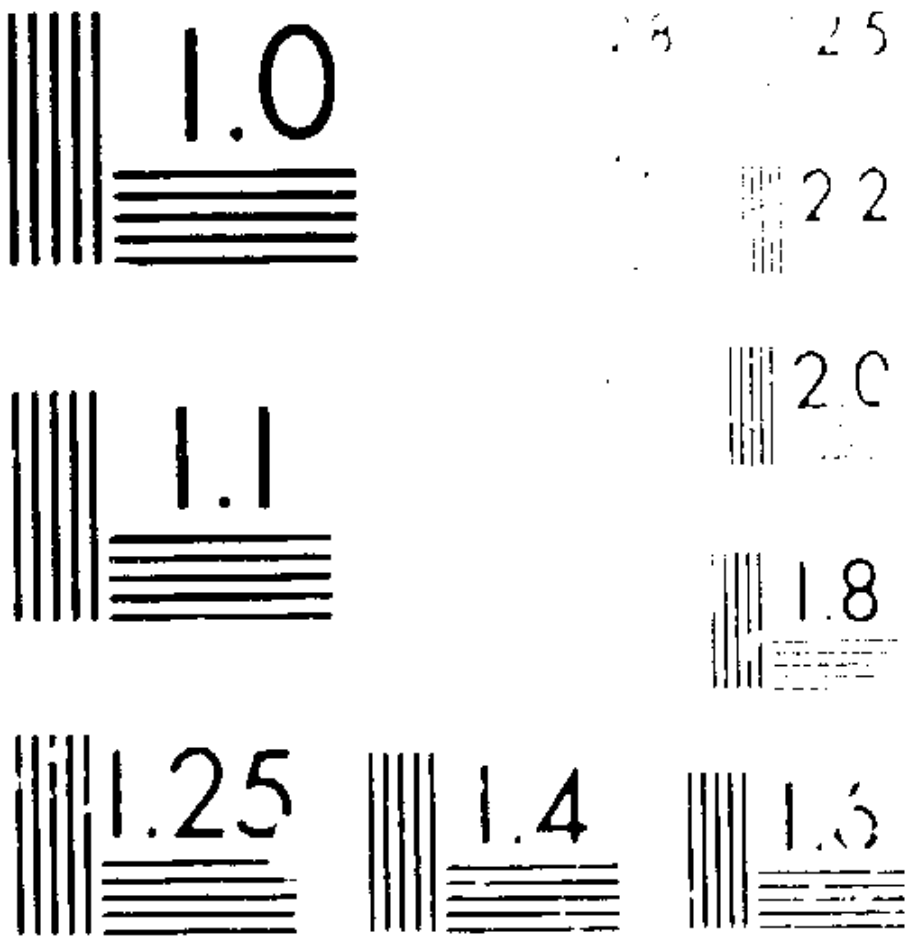
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THE SITUATION OF THE SYNTHETIC FIBRE INDUSTRY IN INDONESIA*

by

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I. INTRODUCTION.

This paper is submitted to the "International Conference on Man-made Fiber" as a country paper , conserning the situation of synthetic fiber industry in Indonesia. This country paper will become a subject of discussion and exchange of idea among the participants.

This Man-made Fiber Conference is sponsored by SASMIRA representing the Government of India, UNIDO from UNDP and GTZ from the Federal Republic of Germany. This conference will be held at SASMIRA Premises in Bombay (India) from 29th March 1982 to 1st April 1982.

To cope with the present situation of synthetic fiber industry in Indonesia, this paper is compased of five parts.

Population growth and the increase of per capita income serve as a back ground of the increase of textile consumption year by year. The increasing consumption speed up the development of textile industry in 1970's.

Along with the development of the textile industry, raw material supply has become a big problem due to inadequate production of fiber in Indonesia. The problem becomes more serious with the tendency of using man-made fiber in larger and larger proportions. For this reason, a synthetic fiber industry in Indonesia is a feasible opportunity from the viewpoint of the supply of textile raw material.

II. DEVELOPMENT OF TEXTILE INDUSTRY AND CONSUMPTION IN INDONESIA.

Three main factors that stimulate the development of textile consumption in Indonesia are :

1. Demand for textiles occupies the second place in pricrity after food.
2. Population growth.
3. Increase of per capita income.

Indonesia population is estimated 151 millions in 1981 and will be increased to 167 millions in 1985. This population factor is one of the quantitative factors. Qualitative factors like development of culture are also dominant in detemining the demand of textiles.

The increase of per capita income as shown in Table II-1 indicates per capita income of Rp 59.500,- in 1975 and it is estimated at Rp 105.000,- in 1985 (US$ = Rp 625,-). This tendency goes parallel with the economic development in Indonesia.

TABLE II-1

INCOME PER CAPITA AND POPULATION (1975 - 1985).

YEAR	INCOME PER CAPITA (Rp)	POPULATION (1.000 (PERSON)
1975	59,500,-	132
1980	77,700,-	148
1985	105,100,-	167

1 US$ = Rp 625,--

This increase of per capita income has direct relationship with per capita consumption of textiles ; so it is estimated at 12,49 m in 1981 and up to 14,36 m in 1985 as shown in Table II-2.

TABLE II-2

ESTIMATED TEXTILES CONSUMPTION PER CAPITA (1977 - 1985).

YEAR	G R A M S	M E T E R S
1977	1396.88	11.8
1978	1431.25	11.45
1979	1468.75	11.75
1980	1510.00	12.08
1981	1561.25	12.49
1982	1615.00	12.92
1983	1672.50	13.38
1984	1732.50	13.86
1985	1795.00	14.36

If we observe closely we will find out that the influence of population growth on the increase of textile consumption is not so sensitive. The increase of per capita income from 1981 to 1985 amounting to 35% will effect an increase of per capita textile consumption of 15%. The reasons for this are more or less as follows :

1. The income level is still relatively low.
2. The demand for textile is not so diversified because Indonesia is a tropical region.
3. The demand for goods is more diversified with the cultural background.

Based on the above factors and results of several surveys conducted in the past it is estimated that the textile consumption in Indonesia figured out in Table II-3. Those estimates don't include quantities for export of textiles and garments in relation to the transfer of textile production pattern from developed to developing countries.

The overal development of textile consumption has stimulated the development of textile industry in Indonesia. In 1970's the development of textile industry is very rapid although at that time the textile production still did not fulfill the entire requirement.

TABLE II-3

ESTIMATED TEXTILES CONSUMPTION (1977 - 1985)

YEAR	POPULATION (1.000.000 PERSON)	TEXTILE CONS'N (1.000.000 METER)
1977	138	1,542.84
1978	141	1,614.45
1979	145	1,703.75
1980	148	1,787.84
1981	151	1,885.99
1982	155	2,002.60
1983	159	2,127.42
1984	163	2,259.18
1985	167	2,398.12

The rapid development is obvious in the spinning sector. The development in the weaving sector is not so well as spinning, because this sector should adjust itselft with the development of textile consumption and it should wait until the balance of production is reached in the spinning sector.

III. THE DEVELOPMENT OF SYNTHETIC FIBER REQUIREMENT

1. BACKGROUND

As aforementioned the development of textile consumption has stimulated the development of textile industry resulting in the decrease of textile import.
The growth of the textile sector so far is aimed the following objectives :

1. To fulfill the domestic requirements and improving the balance of supply and demand.
2. To create the balance of production between upstream and downstream industries in the textile sector.
3. To reduce dependency on foreign sources.
4. To develop export capacities.
5. Transfer of textile technology.

Those objectives have positioned textile industry at an important place in the arena of industries in Indonesia.
This success has raised another problem, namely the supply of fiber especially synthetic fiber. The fiber consumption in Indonesia in the last 8 years shows a relatively high increase, 28% , and its contribution to the total fiber consumption has exceeded 50%.

Factors in the background are :

1. The increase of synthetic fiber consumtpion.
2. The domestic production of synthetic fiber has started and developed.
3. Quotas of textile imports.
4. Limited sources of natural fiber in Indonesia.

2. DEVELOPMENT OF CONSUMPTION

The synthetic fiber consumption will increase substantially in the future be in line with the increase of textile consumption due to the change of consumer's taste and scarcity of natural fiber supply in Indonesia.

From the prospact of textile consumption development it could be estimated that the per capita synthetic fiber consumption of 1,4kgs in 1977 will raise to 1,7 kgs in 1983 and in 1994 the figure could be projected to 2,52 kgs per capita. If we include the population growth rate factor we will find that the total synthetic fiber requirement in 1983 is 270 million kgs, in 1988 around 382 million kgs and in 1994 about 515 million kgs. These result in an average annual increase of about 6%.

The synthetic fiber as a substitute of the natural fiber will be increasingly consumed as aforementioned. This increase is not only effected by the increase of total textile fiber consumption but also effected by the increase of synthetic fiber contribution to to the total textile fiber consumption.

The tendency of the increasing centribution of synthetic fiber as described by "Textile Organon" in Table III-1.

TABLE III-1

CONTRIBUTION OF SYNTHETIC FIBRE TO THE TOTAL FIBRE CONSUMED (WORLD)

YEAR	TOTAL FIBRE (1000 TON)	SYNT'C FIBRE (1000 TON)	CONTRIBUTION (%)
1960	14,916	702	4.7
1965	18,445	1,976	10.7
1970	21,561	4,700	21.8
1974	26,587	7,485	28,2
1977	27,879	9,047	32,5

RESOURCE : TEXTILE ORGANON

TABLE III-2

CONTRIBUTION OF SYNTHETIC FIBRE TO THE TOTAL FIBRE CONSUMED
(INDONESIA)

YEAR	TOTAL FIBRE (1000 TON)	SYNT'C FIBRE (1000 TON)	CONTRIBUTION (%)
1972	142.3	32.8	23
1973	151.2	46.0	30.4
1974	149.9	57.0	38
1975	163.3	73.9	45.3
1976	190.0	98.0	51.6
1977	203.0	110.0	54.1

Table III-2 shows synthetic fiber consumption situation in Indonesia where the contribution is higher than the world situation. In 1977 the contribution level is 54,1%. It is estimated thet the contribution will be levelling off at 63% in 1988.
Table III-3 shows that polyester fiber is the largest component. The consumption of nylon and acrylic in the textile sector tends to decline and using of nylon and acrylic outside the textile sector is relatively small.

TABLE III-3

SYNTHETIC FIBRE CONSUMPTION (INDONESIA)

YEAR	NYLON	ACRYLIC	POLYESTER	
			T O N	%
1972	10,000	2,100	20,700	63.1
1973	13,400	2,700	29,900	65
1974	14,500	2,600	39,900	70
1975	16,200	3,400	54,300	73.5
1976	18,000	5,000	75,000	76.5
1977	19,000	5,000	86,000	78.2

IV. THE SYNTHETIC FIBER INDUSTRY

The consumption of synthetic fiber was started in 1968. Fiber types used were polyester, nylon filament and textured nylon. All requirements were imported until 1973.

The production of dometic synthetic fiber was started in 1973 with nylon filament. The production of polyester fiber and filament was started in the following years.

The present production capacities are as follows :

Nylon filament	33	tons / day
Polyester filament (flat & poy)	180	tons / day
Polyester fiber	136	tons / day
Rayon (under construction)	34,7	tons / day

Nylon fiber, Rayon filament, Acrylic and others are not yet product.

Nylon filament is produced by two mills with a capacity of 10 tons / day in 1974 and 33 tons/day at the present time. Since the consumption development is not so promising, for the fine being , it was not necessary to increase nylon production.

In the polyester sector there are 6 mills operating, of which 2 mills exclusively produce polyester SF (staple fiber), one mill produces polyester SF and YF (filament yarn), and the other three produce FY.

The capacity of the two rayon fiber plant is 34,7 tons/day, which is too small (under economic unit), but it fulfills the present requirement.

From the development of production pattern we may conclude that polyester production plays an important role.

V. THE BALANCE OF SUPPLY AND DEMAND FOR POLYESTER FIBER.

From the discussion of the development of synthetic fiber consumption and industrial capacities it could be concluded that in Indonesia the consumption is larger than the domestic production. In order to fulfill the requirement the balance should be reached by import of synthetic fiber especially polyester.

TABLE V-1

ESTIMATED MARKET CONDITION OF POLYESTER FIBRE (SF)

YEAR	DOMESTIC PRODIN	DEMAND	TON / YEAR NOT CONSUMED	
			T O N	%
1977	44,880	5 ,600	6,800	13
1980	44,880	6 ,800	21,920	32,8
1983	54,780	80,100	25,220	31.6
1988	54,780	114,600	59,820	52.2
1994	54,780	171,900	117,120	68.1

Table V-1 shows a conservative picture of the balance situation for polyester SF exclusively. This balance situation is based on the assumption that the domestic production capacity remains constant from 1983 while the demand for polyester SF develops.

Prospective demand for total polyester (SF and FY) from 1983 to 1994 is picturized on Table V-2. The increase of demand up to 1988 is estimated at 7,5% annually and in the superceeding period around 7 % annually.

From the situation described in Table V-2 we could notice that the gap between the domestic production and the domestic demand (especially for polyester SF) becomes larger and larger. For this reason capital investment in this industrial sector would a fairly good opportunity.

TABLE V-2

ESTIMATED POLYESTER FIBRE CONSUMPTION (1983 - 1994)

YEAR	SF (TON)	FF (TON)	TOTAL (TON)
1983	80,000	53,400	133,500
1984	86,100	57,400	143,500
1985	92,600	61,700	154,300
1986	99,500	66,300	165,800
1987	107,000	71,000	178,300
1988	114,600	76,400	191,000
1989	122,600	81,800	204,400
1990	131,200	87,500	218,700
1991	140,400	93,600	234,000
1992	150,300	100,100	250,400
1993	160,800	107,100	267,900
1994	171,900	114,600	286,500