

# SUPPLY-DEMAND PROSPECTS AND PRICES OF NATURAL RUBBER IN THE WORLD FROM 2001 TO 2010

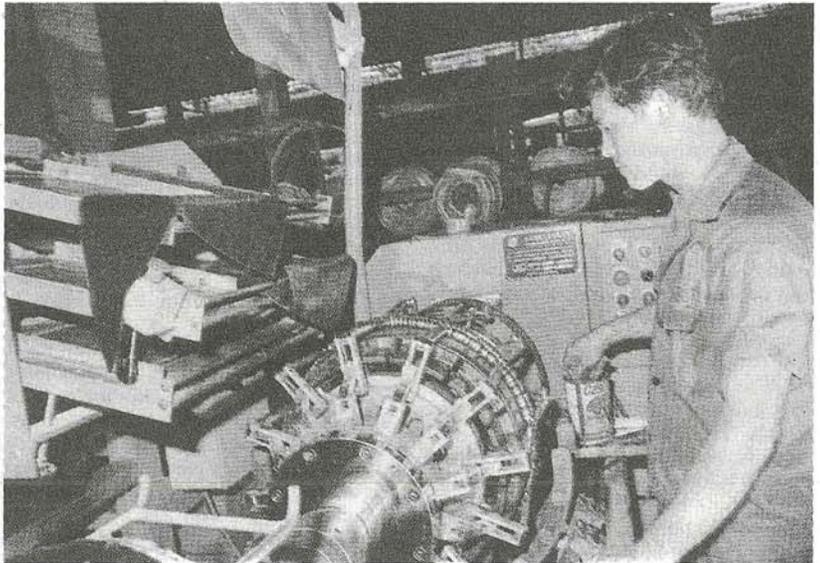
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There are a lot of complicated upheavals in supply-demand and prices of natural rubber in the 1990s. In the years of 1995 and 1996, the rubber price rocketed to a peak (some US\$1,500 per tonne). The major cause is the global economy grew firmly, especially Asian countries; on the other hand because China took over Hong Kong, its rubber import increased sharply from 350,000 to 502,000 tonnes. However, in 1998 and 1999, the rubber price fell to the bottom in the past 30 years, some US\$570-680/tonne for 3L category (FOB price). The event was attributed to the East Asian monetary meltdown and the members' delay in contribution to the warehouses of INRO. These upheavals made the world's as well as Vietnamese rubber producers confused. It was argued that the development of rubber trees in Vietnam should be re-considered and whether the cultivation area would be increased. The investment strategy for rubber development needs restructuring. Although the rubber market showed many good signs in the last six months of 2000, the development of Vietnamese rubber trees still leave a lot of worries.

To shed light on the above matter, we would like to present the following analysis about the trend of supply-demand and prices of natural rubber in the world.

## I. PROSPECTS OF NATURAL RUBBER SUPPLY IN THE 2001-2010 PERIOD

The natural rubber supply depends on many factors such as the trend of increasing area and productivity, and the natural disaster of the world's major rubber producing countries. However, if the extraordinary events are excluded, the rubber supply is based on the trend of increasing area and productivity of the world's major rubber producing countries.



### 1. The trend of increasing rubber area

- Thailand and Indonesia: their growing area has to be earmarked for many non-rubber plants on the one hand, on the other hand because of increasing speed of urbanization and lack of labor, there is no significant change in rubber growing area in the time to come.

- Malaysia: the rubber growing area and output has been declining in the past years due to the shift to palm tree cultivation and lack of labor. At present, it tends to replant rubber trees not to tap latex but heveawood. Therefore, although the rubber growing area increases in the time to come, there may be no rise in its rubber output.

- Sri Lanka and Cambodia: their rubber growing area will not change because their governments pay no attention to this industrial plant.

- China, India, and Vietnam: there will be a rise in their rubber growing area in future, it is estimated that their combined area will

soar by 400,000-500,000 hectares in the 2001-2010 period.

- African countries: their ability to increase the rubber area will be constrained to natural conditions and political instabilities.

- American countries: their rubber area will jump by 1.5% to 2% in the next 10 years.

Conclusion: The world's rubber growing area may climb by 5 to 6% in the next 10 years.

### 2. Productivity trend

The rise in rubber output depends on many factors such as strains, tapping techniques, aging of gardens. According to the Association of Natural Rubber Producing Countries' (ANRPC) experts, the world's growth rate of rubber output is sustained at 2% in the next 10 years.

### 3. Forecast of the world's natural rubber output in the 2001-2010 period

Based on the trends of growing area and productivity, we can forecast that the world's rubber output may increase by 10-12% in the next

10 years, or an average rise of 1% per year. The production is estimated at 7,300,000 to 7,500,000 tonnes by 2010.

## II. PROSPECTS OF DEMAND

The rubber demand depends mainly on the world's economic growth, especially in the automobile industry, synthetic rubber substitution and trend of rubber consumption in rubber producing countries.

### 1. The world's economic growth in the 2001-2010 period

The world economy usually moves from a running-down to a state of stability and growth and then upward to a boom period. The Asian monetary meltdown in 1998 and 1999 strongly affected the global economy. This may be seen as the global economic crisis. Nevertheless, the evidence showed these countries' economies began recovery from mid 1999. The situation is now much improved, especially in South Korea, Japan, Malaysia and Thailand. They have succeeded in revitalizing their economies. According to economists' analysis, the world economy will grow firmly in the following 5-10 years. This will spur the development of many industries on the whole, and auto industry in particular. As such, the demand for rubber

- Consumption of natural rubber and synthetic rubber in the past years:

The consumption facts of natural rubber and synthetic rubber from 1993 to 1999 indicate their trends of growth and decline are quite similar, however, the average growth rate of natural rubber is higher than that of synthetic rubber. The following tables will prove this:

**Table 1: CONSUMPTION OF NATURAL RUBBER AND SYNTHETIC RUBBER FROM 1993 TO 1999**  
(thousand tonnes)

Year	Consumption of natural rubber	Growth rate (%)	Consumption of synthetic rubber	Growth rate (%)
1993	5,410	0.000	8,620	0.000
1994	5,650	4.436	8,820	2.320
1995	5,950	5.310	9,250	4.875
1996	6,100	2.521	9,580	3.568
1997	6,460	5.902	10,000	4.384
1998	6,560	1.548	9,850	-1.500
1999	6,680	1.829	9,990	1.421

Average growth rate from 1993 to 1999: 3.078 %

2,153%

Source: International Rubber Study Group, *Rubber Statistical Bulletin*. No.1. October 2000

Examining the prices of RSS1 (natural rubber) and SBR (styrene-butadiene rubber) on the New York market, we have the following table:

**Table 2: CHANGES IN PRICES OF NATURAL AND SYNTHETIC RUBBER IN NEW YORK FROM 1993 TO 2000**

Year	Unit	Price of RSS1	Up or down	Price of SBR	Up or down
1993	US\$/tonne	992.9	0%	949	0%
1994	US\$/tonne	1,361.9	32%	1,002	5%
1995	US\$/tonne	1,815.0	37%	1,331	32%
1996	US\$/tonne	1,606.0	-12%	1,286	-4%
1997	US\$/tonne	1,222.9	24%	1,245	-4%
1998	US\$/tonne	894.4	-27%	1,193	-5%
1999	US\$/tonne	808.2	-10%	1,017	-15%
2000 (est.)	US\$/tonne	835.0	3%	1,100	8%

Source: IRSG; *Rubber Statistical Bulletin*, Vol. 55, No.1, October 2000 and Vol.54, No.7, April 2000.

will soar in the next years.

### 2. Synthetic rubber substitutability

The consumption of natural rubber also depends on the synthetic rubber substitute for natural rubber. To specify the substitutability of synthetic rubber, we should analyze the facts of production and consumption of the two kinds of rubber in the past years and compare their physical and chemical properties.

Conclusion: The price trend of the two kinds is the same although the rate (both increasing and falling) of natural rubber is always higher. Because the synthetic rubber is manufactured entirely by technical method, so the output is easily adjusted when there are upheavals in supply-demand and prices. As a result, a rational ratio between supply and demand is always secured and the prices are almost kept stable. In the meantime, the rectification of

natural rubber output is extremely difficult in the short run.

- Comparison of physical and chemical properties of natural and synthetic rubber: According to experts of the Vietnam Rubber Corporation, natural and synthetic rubber have very different physical and chemical characteristics, however, they are good supplements, especially in the industry manufacturing

tires. (See table3 next page)

From the above analysis on the physical and chemical properties of natural and synthetic rubber, we see their properties are not substitutes but complements needed in the manufacturing industries, especially tire production.

Conclusion:

- Each kind of rubber has different properties which are complementary to each other. So they have their own markets. The price fluctuation of synthetic rubber essentially does not affect the supply-demand relation and prices of natural rubber.

- The two kinds have changed in the same trend because they serve the same industry, especially auto industry (accounting for 75% of rubber market shares). Their demand volatility is thus the same.

- The general trend is the markets of both natural and synthetic rubber will develop because the auto industry and others will see a robust growth in future.

### 3. The trend of natural rubber consumption in rubber producing countries

Because the industries processing rubber products in rubber producing countries is experiencing a boom, the demand for natural rubber will increase sharply in the world market. According to the ANRPC's forecast

**Table 3: COMPARISON OF PHYSICAL AND CHEMICAL PROPERTIES OF NATURAL AND SYNTHETIC RUBBER**

Property	Natural rubber	Synthetic rubber	
Adhesiveness	High	Low	Application in industry natural rubber is used to make the inner surface of a tire
Heat resistance	Low	High	Synthetic rubber is used to make the outer surface of a tire
Abrasion resistance	Low	High	Synthetic rubber is used to make the outer surface of tire to reduce friction
Cold resistance	High	Low	Natural rubber is used to make tires for cold regions
Elasticity	High	Low	Natural rubber is used to make high grade products such as condoms, medical equipment..and tire canvas
Local heating	Low	High	An appropriate mixing ratio of natural and synthetic rubber is needed in producing tires

**Table 4: THE NARURAL RUBBER GROWTH RATE, DEMAND AND SUPPLY IN THE 2000-2010 PERIOD**

	Production (supply)	Consumption (demand)
Average growth rate in the 1980-1990 period	15.63%/year	36.91%/year
Average growth rate in the 1990-2000 period	5.65%/year	5.95%/year
Estimated average growth rate in the 2000-2010 period	1%/year	2%/year
Estimated output by 2010 (1,000 tonnes)	7,381	8,544

Source: The Vietnam Rubber Corporation's Draft of Development Strategy by 2010. May 2000. P 27-28.

on the IRGS Digest in August 1999, the rubber consumption of ANRPC's members including India, Indonesia, Malaysia, New Guinea, Sri Lanka, Thailand, and Vietnam will soar from 1.4 million (in 1999) to 1.9 million tonnes by 2010. In particular,

the demand of India will climb from 630,000 in 1999 to 1.15 million tonnes by 2005; Malaysia from 350,000 in 1999 to 410,000 by 2005; and as for Thailand and Indonesia, each will need above 200,000 tonnes.

Conclusion: With effects of the three above factors, the world demand for natural rubber will rise 2% at least per year in the 2000-2010 period. According to Dr. Hidde P. Smith at the third Conference on the Asian Rubber Market, the market demand for both natural and synthetic rubber will rise about 22% in the next 10 years, an average growth of 2.2%/year (some 19,210,000 tonnes by 2010).

Forecast of natural rubber prices in the 2000-2001 period: The analysis on the world's supply and demand trend of natural rubber in the 2000-2001 period reveals that the demand will exceed the supply, the shortage will occur from 2002. Moreover, the lack of labor and high labor costs in natural rubber producing countries will surely boost the product price of natural rubber in the 2000-2010 period. According to the World Bank's forecast, the rubber price will rise in the next years from US\$620/tonne to US\$700 in 2000; US\$948 in 2005 and US\$1,036/tonne in 2006. However, the Burger & Smith office says more optimistically that the price is Sing\$3,000/tonne (some US\$1,800) from 2010.

Conclusion:

The above analysis about the trend of supply, demand and prices of natural rubber in the world in the 2001-2010 period indicates the general trend has many advantages, especially the shortage of rubber may happen from 2001. As a result, if Vietnam makes the best use of this opportunity, its rubber industry can expand the growing area, increase output and gain firm market shares for its products. ■

