

Chapter 7

Policy Proposal Points for Thai Government

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Chapter 7

Policy Proposal Points for the Thai Government

7.1 Issues in the Thai NR Industry and the Direction of Proposals for Their Resolution

Production adjustments to balance supply and demand are necessary. However, a needs gap between processors and large-scale users such as tyre makers may have emerged, in which case it will be necessary to narrow this gap. In the longer term, the development of the downstream industry is required to increase value added through domestic consumption.

Table 7-1: Issues and directions of proposals for their resolution

Problems		Direction of proposal for solution
Production	<p>Continuous overproduction</p> <ul style="list-style-type: none"> Overproduction continues because of farm development in 2000s Production change to other plants such as palm is difficult to proceed with only market mechanism Production adjustment is essentially necessary 	<p><Short term> Promote purchased rubber in infrastructure usage</p> <ul style="list-style-type: none"> Technology transfer to promote usage of 100,000-ton rubber that government purchased in Jan'16 in infrastructure sector Japanese makers have many production technologies for infrastructure
	<p>Excessive dependence on China</p> <ul style="list-style-type: none"> Export structure is easy to be influenced by Chinese demand decline Possibility that effort in QC, etc. drops in the process of increasing shipment to China and correspondence 	<p><Medium term> Solve mismatch with Japanese tire makers</p> <ul style="list-style-type: none"> Promote raw rubber production with specification/quality required by Japanese makers Quality management and transparency of TSR production process
Sales	<p>Possibility of gap expansion with tire makers</p> <ul style="list-style-type: none"> Acceleration of shift from RSS to TSR in tire makers Possibility that Thai TSR processors are inferior to Indonesian TSR processors (factors other than CESS gap (quality, etc.)) 	<p><Long term> Expand rubber application and develop industry</p> <ul style="list-style-type: none"> Develop application for non-tire sector (anti-vibration rubber, belt, etc.) for automotive that use RSS Develop infrastructure industry and expand to ASEAN Strengthen production system of value-added products such as crepe rubber, etc.
Downstream development	<p>Delay of downstream industry development</p> <ul style="list-style-type: none"> Strategic development in downstream industry has not been done comparing to Malaysia Local production volume of tire makers and anti-vibration rubber makers is expanding along with integration of automotive industry 	<p><Medium term> Introduce minimum price compensation</p> <ul style="list-style-type: none"> Price compensation other than purchase policy and income compensation policy (apply put option that is non-refundable insurance) Provide opportunity of option trade usage by TOCOM
		<p><Medium term> Promote differentiation by transparency/traceability</p> <ul style="list-style-type: none"> Introduce mechanism that certify/label NR which produced by considering of sustainability, differentiate from other countries and enclosure large users

Source: NRI.

7.2 Improvements to the Production Environment for Low-Quality Rubber in New Production Area in the Northeast

Crepe rubber is processed NR that uses a creper machine (including washing) to change coagulated cup lump into sheet form. This can add value at farmers' own farms or agricultural institutions by processing rather than selling cup lump for TSR. However, crepe rubber-making machines are expensive at around JPY10 million, so the assumption is that

most machines will be shared through institutions or community units.

Consideration could be given to reducing the cost of processing machines by promoting the shared use of machines.

Figure 7-1: Process of crepe rubber production



Source: Rubber Economics Magazine

7.3 Support for the Usage of Government-Purchased Rubber Promotion in the Infrastructure Sector

Infrastructure development, especially road transport, is one of the priority policies of the Thai government in order to attract investment and to strengthen the country's role as a logistics hub in the region. Under its Master Plan, Thailand is planning to expand its road network between the major cities and to expand regional roads to four-lane roads, as shown in Figure 7-2. The government is also planning to develop roads connecting to borders with Cambodia, Lao PDR and Myanmar, as part of the development of regional trade corridors, such as the East-West Corridor and the Southern Corridor.

In order to increase domestic consumption of NR, the Thai government plans to promote the application of NR to various fields as mentioned below, and one of the priority areas is its use in infrastructure. Countries with technology in this area should be encouraged to cooperate with Thailand to develop technology and infrastructure uses for NR, especially for road pavements, which seem to have the largest potential.

Figure 7-2: Major National Highway Development Plan under the Infrastructure Development Strategy (2015-2022)



- Four lane highway development
 - Highway No. 4 Krabi – Hoiyod
 - Highway No. 12 Kalasin– Somdej section 2
 - Highway No. 304 Kabinburi– Paktongchai
 - Highway No. 314 Bangpakong– Chachengsao section 2
 - Highway No. 3138 Banbeng– Bankai section 3
- Regional highways maintenance
 - Highway No.1 ,2 , 11 ,32 ,35 ,41 ,43, 117 , 331
- Motorway development (Pattaya - Map Ta Phut Section)
- Rural road development to support agricultural sector and tourism
- Truck Terminal Development

Source: Ministry of Transport “Thailand’s Transport Infrastructure Development Strategy 2015-2022”.

Table 7-2: The Thai government’s plan for NR utilisation

Ministry	Project	Rubber Use (Tons)	Budget (MB)	Year
Ministry of Defence	Road construction and roadworks in 3 southern border provinces	813	164	
	Macadam road (76 areas)	285		
Ministry of Public Health	Purchasing of surgical gloves, Foley Catheter and condoms		1,050	Q2 of year 2016
Ministry of Education	Sports ground improvement, road pavement in schools	N/A	25,231	
Ministry of Tourism and Sports	Road construction in 12 provinces	230	120	2016
	Football ground, rubber pavement for racetrack	763	389	
	Rubber lucky doll, welcome gift set	2,500	329	
	10 sports stadiums	108	114	
Ministry of Transportation	Tires for automobiles Mixing in asphalt (modified asphalt)	57,713 (latex)	36,503	2016-2017
Ministry of Interior	Sport stadium construction 46 projects Road construction and maintenance 2,071 projects	9,808 (latex)	13,130	2016-2017
Ministry of Agriculture and Cooperatives	Rubber pavement for footpath Road surface improvement Pond coating (water-resistant coating)	36,606	16,395	2016-2017
Ministry of Industry	Open more rubber industrial factories		N/A	

Source: Nation TV News.

For example, Japanese rubber-makers have products and technology in various fields as mentioned in Table 7-3 and could cooperate in developing technologies and applications.

Table 7.3: Infrastructure-related products of Japanese rubber makers and their applicability to Thailand

Field	Product	Use application	Applicability in Thailand and concern	Maker (★: Interview destination)
Footpath / ground pavement	Chip/elastic pavement for sports ground	Elastic pavement using rubber for impact mitigation	<ul style="list-style-type: none"> As NR is not strong enough, reinforcement material (black carbon) is required. In that case, it is high hiding power of black and difficult for coloring. NR concern is degradation. Poor heat resistance. Tires can use anti-aging agent that has stain property but it is difficult to use for infrastructure. For usage that does not appear on the surface (putting sponge sheet underground, etc.: micro foam is needed), it is possible to use NR. Construction requires technological capability for urethane binder mixing. Sumitomo Riko and 3 tire makers did experimental study at Civil Engineering Research Institute about rubber pavement for road with noise prevention purpose in the past, but does not put into practical use. 	<ul style="list-style-type: none"> ★Toyo Rubber Chip ★Sumitomo Riko Muraoka Rubber
	Elastic block	Same as above		
Road pavement	Modified asphalt	Asphalt spill prevention, road performance improvement (slip resistance)	<ul style="list-style-type: none"> If there is no performance requirement same as Japan, it is also possible to use in Thailand. However, as company uses macromolecular polymer without using NR, there is no technology reserve for NR usage in the company. 	★Nichireki
Sports facility	Coating in facility	Impact mitigation and falling prevention in facility	<ul style="list-style-type: none"> NR usage volume is limited because of thin layer coating and high usage ratio of macromolecular polymer. 	★Sumitomo Rubber
	Rubber chip for artificial grass	Tennis court Football ground	<ul style="list-style-type: none"> Use as cushion material installing under resin layer of green surface is possible consideration. However, tire scrap is more proper for cost and performance. Because rubber processing and utilization technology is not that high. 	<ul style="list-style-type: none"> ★Toyo Rubber Chip ★Sumitomo Rubber
Waterway infrastructure	Rubber dam	Flood countermeasure	<ul style="list-style-type: none"> Total volume of rubber used for bag is SR. Using NR is difficult due to weak light and heat resistance. It may not have makers that use NR. 	<ul style="list-style-type: none"> ★Bando Chemical Sumitomo Electric
	Impermeable sheet for civil engineering	Waterproof pond/reservoir Shrimp pond	<ul style="list-style-type: none"> NR had been used in the past, but now focus on SR. NR maybe difficult to use. 	<ul style="list-style-type: none"> ★Bando Chemical Maeda Kosen
Harbor	Fender	Impact absorption when ships come alongside the pier	<ul style="list-style-type: none"> There is large usage volume of NR for each product. However, they do not have continuous demand. The technology is not high comparing to tires, etc. 	<ul style="list-style-type: none"> ★Sumitomo Rubber Yokohama Rubber, Bridgestone
Earthquake resistance	Seismic isolation rubber for bridge and construction	Earthquake countermeasure	<ul style="list-style-type: none"> If there is no needs for earthquake resistance, it is difficult to diffuse 	<ul style="list-style-type: none"> 3★Sumitomo Rubber Yokohama Rubber, Bridgestone

Source: Based on Sumitomo Rubber, Sumitomo Riko, Bando Chemical, Nichireki interview.

7.4 Promotion of Value-Added through the Sustainable Natural Rubber Initiative

Discussion on Sustainable Natural Rubber Initiative (SNR-i) has been developed under the IRSG. As the NR production system in Thailand has focused on smallholders, it is likely that problems such as child labour, etc., will be relatively low. (Not verified in this study.) As a result, it may be advantageous for Thailand to take the initiative in the following areas.

- Certification standards regarding sustainable farm production and processing plant operations as a measure of NR value added.
- Expand needs by operation and the promotion of a labelling system.
- Support label diffusion in Japan among both the public and private sectors.

SNR-i criteria by IRSG

- **Criteria 1: Support improvement of farmers' productivity**
 - 1.1: Optimise planting of recommended clones
 - 1.2: Optimise planting density
 - 1.3: Optimise usage of fertiliser and pesticides
- **Criteria 2: Enhance natural rubber quality**
 - 2.1: Commitment to NR quality
 - 2.2: Comply with quality inspection and classification rules
- **Criteria 3: Support forest sustainability**
 - 3.1: Comply with related laws and regulations in the region
 - 3.2: Protect/maintain environmental conservation areas
- **Criteria 4: Water management**
 - 4.1: Comply with related laws and regulations in the region and maintain water use rights of local residents
 - 4.2: Proper treatment of industrial wastewater
- **Criteria 5: Respect for human and labour rights**
 - 5.1: Comply with the ban on child labour and the minimum working age
 - 5.2: Prohibit forced labour
 - 5.3: Secure the freedom of institutional activity and avoid curtailing agricultural institutions' businesses

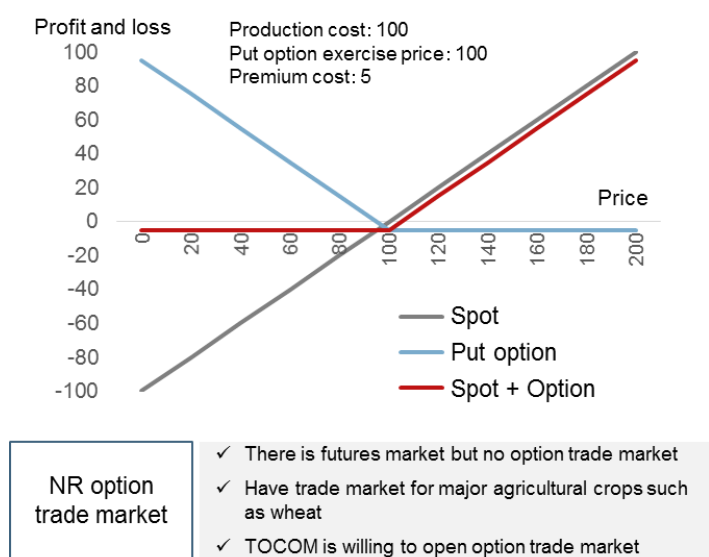
7.5 Introduction of a Minimum Price Compensation Mechanism through Options Trading, etc.

Several stakeholders in the rubber industry, such as the Ministry of Agriculture and Cooperatives, central market officials and natural rubber associations have expressed their interest in considering options trading as a means to mitigate the risks of NR price fluctuations for Thai farmers, while limiting the financial burden on the government budget compared with direct income compensation.

At the same time, the Tokyo Commodity Exchange (TOCOM) is also interested in establishing a NR options trading market.

If the establishment of options trading by the Tokyo Stock Exchange could also be linked to the form of put option usage with minimum price compensation, this should contribute to price stability support. However, further consideration is needed regarding how much the premium cost should be and whether there is PIC on the Thai government side for funding and operating the scheme.

Figure 7-3: Minimum price compensation using options trading



Source: NRI.

7.6 Proposal Outline

Table 7-4: Direction of proposals

	Problem and background	Direction of proposal for improvement
1	<p>Improvement of production environment for low-quality rubber in new production area in Northeast</p> <ul style="list-style-type: none"> • TSR production in Northeast of Thailand has expanded rapidly due to China demand since 2000, and push total production volume up. • Thailand's rubber production environment with main product of high-quality RSS has changed. • TSR in Northeast has few processing/value added process, so there is competitive disadvantage on price against Indonesia rubber. 	<ul style="list-style-type: none"> • Northeastern rubber farmers produce low value-added cup lump, and sell to processors. Therefore, promote the production change to high value-added product (crepe rubber). • Crepe rubber can be traded in spot market same as RSS, so it is expected to raise the price bargaining power of rubber farmers.
2	<p>Support for usage of government-purchased rubber promotion in infrastructure sector</p> <ul style="list-style-type: none"> • Thai government made spot purchase for 100,000-ton rubber in Jan '16, and instructed to each ministry for inventory digestion. • Plan to use in modified asphalt and sports ground, but it is possible that the utilization will not be smooth due to technological issue, etc. 	<ul style="list-style-type: none"> • Japanese rubber business coach for rubber product manufacturing technology in the infrastructure sector. • In long term, promote joint research of technology development in both countries for new applications to expand Thailand domestic processing ratio.
3	<p>Promotion of value added by Sustainable Natural Rubber Initiative</p> <ul style="list-style-type: none"> • Discussion on Sustainable Natural Rubber Initiative (SNR-i) has been developing under IRSG • As NR production system in Thailand is focusing on smallholders, it is likely that problem structure such as child labor, etc., is less. (Not verified in this study) 	<ul style="list-style-type: none"> • Set certification standards regarding sustainable farm production and processing plant operations as measure for NR value added • Expand needs by operation and promotion of labeling system • Support label diffusion in Japan among public and private sector
4	<p>Introduction of minimum price compensation mechanism by option trade, etc.</p> <ul style="list-style-type: none"> • Problems occur, for example farmers' income and living becomes unstable due to violent fluctuation in rubber price especially rapid fall in recent years, and wage payment for immigrant worker is delay, etc. • On the other hand, many farmers would like to sell at spot market when price is high, so futures trading, which is for stable income, does not progress. 	<ul style="list-style-type: none"> • Provide financial instruments trade opportunity with the purpose of minimum price compensation by establishing option trade environment. • Advise for option trade fund management and implementation in form of RAO, central market, etc. is representative of farmers.

Source: NRI.

Interview list

Organisation	Type	Name	Position
B. Right Rubber Co Ltd.	Processor / Exporter	Mr Juti Phanpipat	Assistant Manager (Factory Department)
Ministry of Agriculture and Cooperatives	Government	Mr Lertviroj Kowattana	Deputy Permanent Secretary
Nongkhai Central Rubber Market	Government	Mr Anusorn Ramlee	Director
Nongkhai Provincial Rubber Replanting Aid Fund Office	Government	Mr Suwit Srivilai	Director
		Mr Surat Suwanbutr	Head of Operation Planning Division
		Mr Udom	Head of Operation Planning Division
Rubber Authority Of Thailand	Government	Mr Prasit Meadsen	Board of Director
		Mr Sunan Nuanphromsakul	Director of Research and Planning
		Mr Surapon Funchian	Director of Replanting Development
Rubber farm (large)	Upstream	N/A	Tapper
Rubber farm (small)	Upstream	N/A	Owner
Rubber Fund Cooperatives & 108 Market (Nongkhai)	Cooperative	Mr Ngen	Director of Koodbong Cooperative, Nongkhai
		Mr Kaew	Director of Baan Pue Cooperative, Nongkhai
		N/A	Director of Prabath-Nasingha Cooperative, Nongkhai
Rubber Fund Cooperatives (Songkhla)	Cooperative	Mr Juthiang Sengsawat	Director
Songkhla Central Rubber Market	Government	Mr Somjit Sikrinmas	Director
		Mr Chakapong Amornsub	Agricultural Technical Officer

		Mr Somsak Khogsuk	Agricultural Technical Officer
Songkhla Provincial Rubber Replanting Aid Fund Office	Government	Mr Weerapan Duangpan	Assistant Director
Thai Rubber Association	Association	Mr Somboon Pruksanusak	President of TRA subcommittee (Factory Manager of Anvarparawood Co. Ltd.; Sri Trang Group)
		Mr Supadech Ongsakul	Deputy Secretary General (General Manager of Thaitech Rubber Corporation Ltd.)
		Mr Sujin Aekvanon	Executive Secretary
		Mr Prasit Petnoosed	Secretariat
T.R.I. Global Co Ltd. (The Rubber Magazine)	Private sector	Dr Sanit Samosorn	Managing Director