
NATURAL RUBBER:

**a detailed examination of aspects of
the International Natural Rubber Agreement
and its wider implications**

AN EIU COMMODITY MONOGRAPH



**The Economist
Intelligence Unit Limited**

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the International Natural Rubber Agreement
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Featuring

BACKGROUND TO THE AGREEMENT

THE NATURAL RUBBER ECONOMY

THE TRADING OF NATURAL RUBBER
incorporating full details of all major exchanges
and of non-exchange transactions

OPERATION OF THE AGREEMENT'S STABILISATION MECHANISMS

IMPLICATIONS OF THE AGREEMENT

Plus

Review of recent forecasts of future demand for rubber

Detailed account of marketing and distribution systems in producing countries

The nature and economics of natural rubber storage

AN EIU COMMODITY MONOGRAPH



**The Economist
Intelligence Unit Limited**

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PREFACE

Rationale

This Commodity Monograph originates from two studies undertaken by The Economist Intelligence Unit Ltd on behalf of the US Department of State as part of the Department's external research programme. External research projects are designed to supplement the research capabilities of the Department and provide independent expert views to policy officers and analysts on key questions with important policy implications.

In view of the successful negotiation of the first International Natural Rubber Agreement and the EIU's intimate knowledge of and close involvement in the question of price stabilisation in natural rubber, the EIU has felt the time to be appropriate to issue a wide-ranging and up-to-date evaluation of the key aspects of the world natural rubber economy which bear upon the design and operation of the Agreement's operational mechanisms. The primary objective, therefore, is upon natural rubber in the context of price stabilisation rather than upon the structure of the world natural rubber economy as a whole; a further objective is to bring under one cover the maximum possible pertinent information and analysis to enhance the reference value of this publication.

Background

The first of the two studies by the EIU on behalf of the US Department of State was undertaken during 1977 and the final report was submitted to the Department in August of that year. This study represented a preliminary review of the essential features of the world market for natural rubber, including such factors as production costs of natural and synthetic rubber, pricing, the overall structure and functions of organised markets in natural rubber, the relationship between natural rubber prices and producer export earnings, the extent to which price and/or revenue fluctuations affect the flow of natural rubber supplies, the competitive and complementary relationships between natural and synthetic rubber, the internal rubber policies of producing countries, an evaluation of previous market regulation schemes in natural rubber, and so forth.

The objective of this study was thus to isolate the key issues and factors which appeared, at that time, to bear most critically upon the possible establishment of international price stabilisation measures.

On the basis of this preliminary review the EIU was commissioned to undertake further investigations, and the second study took the form of an in-depth analysis of selected key aspects of the world rubber economy with a view to suggesting effective international price stabilisation mechanisms. Its aim was to assist US officials to prepare for the Third UNCTAD Preparatory Meeting on Natural Rubber and subsequent negotiations by supplementing their own information and analysis with that of independent experts in the field.

The idea for this in-depth study was proposed by the Bureau of Economic and Business Affairs of the Department of State and the project was also supported by the US Departments of Treasury and Commerce under the auspices of Contract No. 1722-720227. The EIU's Terms of Reference were drawn up on the basis of a Work Statement itself developed in discussions with officers in the appropriate bureaux of the Departments of State, Treasury and Commerce. Warren H. Reynolds, Senior Program Officer in the Office of External Research of the Department of State, chaired an interagency group consisting of representatives from the three sponsoring agencies and the Central Intelligence Agency. This group undertook the overall monitoring of the project.

The EIU's final report, submitted to the Department of State in October 1978, provided information and analysis on various aspects of the world natural rubber market especially as they related to the formulation of effective price stabilisation measures. Where appropriate, each section of the study contained identification and analysis of obstacles that might arise regarding the designing of mechanisms to stabilise prices. To each of these possible obstacles, appropriate solutions were proposed with a delineation of the advantages and disadvantages of each solution in terms of the economic interests of producer and consumer countries and the probable effects on the elastomer market.

The major features of the world market to be examined were the following.

1. Trading of natural rubber, including a description and analysis of the structure and functions of the organised markets and of non-exchange mechanisms and possible stabilisation mechanisms and their operation.
2. Stockpiling of natural rubber, including a review of the main motivations and practices of stockholding and stockpiling, the availability and costs of storage, the technical issues involved and the possible mechanisms of buffer stocking.
3. Competitive relationships between natural and synthetic rubber on cost, end-use and availability grounds and the overall status of the world synthetic rubber industry.
4. Internal marketing and distribution systems in the major producing countries, including the main areas and nature of government involvement, possible improvements to these systems, the nature of investment in the industry and the relationship of internal systems to the potential operation of export/production controls.

Following preliminary desk research, extensive fieldwork was conducted during the early part of 1978 in the major areas of production (South-East Asia) and of consumption (Western Europe and North America). Fieldwork entailed detailed discussions with the following organisations and individuals: officials of government ministries and other public agencies involved in natural rubber development programmes in producing countries, representatives of leading estate companies, traders of natural rubber on the world's leading exchanges, senior personnel in manufacturer-consumer organisations, representatives of various national and international trade and manufacturing associations, officials of port authorities, representatives of private storage and warehousing companies, officials of relevant international agencies such as UNCTAD, FAO, IBRD, ESCAP and so forth, and individual delegates to the various UNCTAD meetings and conferences on natural rubber.

Although this Monograph draws extensively and expands upon the two studies previously described, it must be emphasised that the views and conclusions contained in this study should not be interpreted as representing the official opinion or policy of the United States government.

Data presentation

The four main chapters of this Monograph cover respectively the following aspects: the broad political-economic background to the conclusion of the International Natural Rubber Agreement; an outline of the major features of the world natural rubber economy; a detailed description and analysis of the methods by which natural rubber is traded internationally; and an analysis of the agreed stabilisation mechanisms and the likely implications of the Agreement.

The first chapter is designed to familiarise those readers who may be rather less aware of the overall political-economic significance of, and background to, the Agreement with these issues by outlining the nature of international discussion of the commodity issue and of the question of price stabilisation generally. The key international developments during the 1970s which bear on this discussion are briefly outlined. In addition, the development of discussions on price stabilisation in natural rubber specifically are also described.

The second chapter outlines the key factors of world rubber industry which bear upon the issue of the stabilisation of natural rubber prices. This chapter is recognised as representing a more brief and superficial version of more exhaustive and comprehensive studies of the world rubber economy though, once again, it must be emphasised that this Monograph focusses upon the question of natural rubber price stabilisation.

The purpose of the third chapter therefore is to describe the structure and functions of rubber exchanges, to examine the extent to which they and their participants perform either a positive or negative role, to assess the weaknesses and strengths of the exchanges, and to offer some brief recommendations as to possible improvements in trading mechanisms. The chapter is particularly lengthy, but this is felt to be justified for three main reasons. First, much of the information presented is based upon original research conducted on the world's four major natural rubber exchanges, each of which has unique organisational features though their basic functions are similar. Second, the EIU feels that, to many of those interested in or concerned with the natural rubber economy but who are not directly involved in the actual trading of natural rubber, the structure and operations of these organised markets often appear to be confusing, unnecessarily complex and even secretive. This has often led to the widespread impression that the exchanges are unnecessarily susceptible to deliberate manipulation by market operators who, by their actions and through such practices as speculation and so forth, create or exacerbate price instability and uncertainty. This chapter is intended to illustrate the likely factors which might assist or obstruct the Agreement's buffer stock personnel in the conduct of their specified tasks, since these officials will operate on the basis of and using existing systems and channels of organised trading.

The final chapter focusses more specifically upon the Agreement itself; in particular, the rationale for the design of the Agreement's major instruments of price stabilisation, assessing their suitability and practicability in the light of some of the possible alternative mechanisms. In addition, the main likely implications of the Agreement are discussed.

The Monograph's appendices expand upon issues raised in the main text. These appendices cover the following questions: recent forecasts of future demand for natural and synthetic rubber; internal marketing and distribution systems in the leading producing countries; a descriptive note on the Hamburg, Tokyo and Kobe exchanges; and the main issues bearing upon the commercial and public storage of natural rubber.

The first appendix supplements the discussion of the competitive relationships between natural and synthetic rubber which was presented in the second chapter. This represents a restatement of existing forecasts by prominent agencies and serves to highlight the opportunities open to and the challenges facing natural rubber producers today and in the years to come.

The second appendix is again lengthy.

Based on a considerable amount of original field research, the appendix expands upon discussions earlier presented in the second chapter regarding the role of governments in producing countries. Information is presented upon the scope of government programmes in the domestic natural rubber sector of the national economy, including programmes in planting, processing and marketing, research and development, and other activities. Possible improvements to these systems are discussed, as are the effects of government programmes and rubber policies upon current and future levels of investment, particularly in increased output. The appendix also serves to illustrate the extent to which national rubber policies might assist in the achievement of international price stabilisation measures.

The third appendix presents factual information on other organised markets in natural rubber which are of lesser importance in the context of international trading but which are of some interest to note.

The fourth appendix expands upon issues raised in the main text with regard to the stocking and storage of natural rubber. Here, the availability of suitable storage facilities, the technical issues involved and the associated costs are discussed. Each of these questions bears directly upon the policies and practices of the Agreement's buffer stock authorities.

The implications of the Agreement

In the opinion of the EIU, the successful negotiation of the International Natural Rubber Agreement represents an important development in the political-economic relations between less developed producing countries

and developed consuming countries, with implications which go beyond those for the natural rubber industry alone. Developing countries as a group (whether or not individual or groups of such countries are themselves producers either of internationally traded commodities generally or of natural rubber specifically) regard reforms and improvements in the prevailing system of international commodity trade to be a major test of the developed countries' commitment to development generally and towards the establishment of a New International Economic Order.

In this sense, the International Natural Rubber Agreement represents a positive step in the eyes of the less developed countries. To what extent the Agreement will hasten the conclusion of further agreements in other commodities or, indeed, other proposals on the overall development agenda, is less certain. Nevertheless, the conclusion of the Natural Rubber Agreement re-emphasises these questions. For these reasons, the EIU feels that this report is of relevance to those involved in other commodity industries, either in a public policy-making or private commercial capacity.

Furthermore, the EIU is also of the opinion that the Agreement will bear (if only incidentally in certain circumstances) upon the activities and interests of all the major participants in the world rubber economy - growers of natural rubber, producers of synthetic rubber, manufacturer-consumers of elastomers generally, traders in natural rubber throughout the world, and governments of both producing and consuming countries, and so forth. Once again, therefore, the Agreement represents a significant new development with important political and economic implications for policy and practice of several groups involved in the rubber industry as a whole. The performance and effects of the Agreement may be expected to be keenly observed and monitored by such groups.

It is hoped, therefore, that this report by the EIU may be of interest and use to those public and private individuals and organisations who are concerned with all or certain aspects of the current situation and future development of the natural rubber industry, as well as to those involved in other commodity industries.

Acknowledgements

Throughout the preparation of both the two studies, mentioned earlier, which were originally undertaken on behalf of the US Department of State, and the present report, the EIU has received the kind and patient assistance of numerous organisations and individuals throughout the world. To all those sources the EIU wishes to express its most grateful thanks. Not least, thanks go to the US Department of State whose Office of External Research has an enlightened policy of approving, where at all possible, the publication, in whole or in part, of studies which were originally undertaken under its auspices and on its behalf.

GLOSSARY

| | | |
|---------|---|--------------------------------------------------------------------|
| ANRPC | - | Association of Natural Rubber Producing Countries |
| ARP | - | Assisted Replanting Programme (Indonesia) |
| Baht | - | Thai currency |
| BR | - | Polybutadiene rubber |
| CFTC | - | Commodities Futures Trading Commission (USA) |
| CIEC | - | Conference on International Economic Co-operation |
| COMEX | - | New York Commodity Exchange |
| CPEC | - | Centrally Planned Economy Countries |
| DAES | - | Department of Agricultural Extension Services (Thailand) |
| DC | - | Developed countries |
| drc | - | Dry rubber content |
| EEC | - | European Economic Community |
| ESCAP | - | Economic and Social Commission for Asia and the Pacific (UN) |
| FAO | - | Food and Agricultural Organisation (UN) |
| FELCRA | - | Federal Land Consolidation and Rehabilitation Authority (Malaysia) |
| FELDA | - | Federal Land Development Authority (Malaysia) |
| FELMA | - | FELDA Marketing Corporation (Malaysia) |
| FIDA | - | Federal Industrial Development Authority (Malaysia) |
| GAKKA | - | Gabungan Koperasi Karet (Indonesia) |
| GCC | - | Group Coagulating Centre (Indonesia) |
| GMO | - | Group Marketing Organisation (Thailand) |
| Godowns | - | Warehouses |
| GPC | - | Group Processing Centre (Malaysia) |
| GSA | - | General Services Administration (USA) |
| ha | - | hectare (= 2.47105 acres) |
| IBRD | - | International Bank for Reconstruction and Development |
| ICA | - | International Commodity Agreement |
| ICCH | - | International Commodity Clearing House Ltd |
| IISRP | - | International Institute of Synthetic Rubber Producers |
| IPC | - | Integrated Programme for Commodities |
| IR | - | Polyisoprene rubber |
| IRQPC | - | International Rubber Quality & Packing Conference |

| | | |
|---------|---|--------------------------------------------------------------------|
| IRSG | - | International Rubber Study Group |
| JMO | - | Joint Marketing Organisation (Indonesia) |
| Kampung | - | Village (Malaysia) |
| LDC | - | Less developed country |
| LRTMA | - | London Rubber Terminal Market Association |
| LPK | - | Lembaga Pelabuhan Kelang (Kelang Port Authority - Malaysia) |
| MARDEC | - | Malaysian Rubber Development Corporation |
| MRB | - | Malaysian Rubber Bureau |
| MRE | - | Malaysian Rubber Exchange |
| MRELB | - | Malaysian Rubber Exchange & Licensing Board |
| MRPRA | - | Malaysian Rubber Producers Research Association |
| MRRDB | - | Malaysian Rubber Research and Development Board |
| NES | - | Nuclus Estate Scheme (Indonesia) |
| NR | - | Natural Rubber |
| NSSDP | - | North Sumatra Smallholder Development Project (Indonesia) |
| NYCE | - | New York Cocoa Exchange |
| OAPEC | - | Organisation of Arab Petroleum Exporting Countries |
| OECD | - | Organisation for Economic Co-operation and Development |
| OPEC | - | Organisation of Petroleum Exporting Countries |
| Pelita | - | Five Year Development Plan (Indonesia) |
| PMU | - | Project Management Unit (Indonesia) |
| PNP | - | Perusahaan Negara Perkebunan (State-owned Plantation - Indonesia) |
| PPC | - | Penang Port Commission (Malaysia) |
| PRC | - | People's Republic of China |
| PSA | - | Port of Singapore Authority |
| PTP | - | Perseroan Terbatas Perkebunan (State-owned Plantation - Indonesia) |
| R & D | - | Research and Development |
| Rai | - | Thai area of measurement = 0.4 acre or 0.16 hectare |
| RAS | - | Rubber Association of Singapore |
| Ringgit | - | Malaysian dollar |
| RISDA | - | Rubber Industry Smallholders Development Authority (Malaysia) |
| RMA | - | Rubber Manufacturers Association (US) |
| Rp | - | Rupiah (Indonesian currency) |
| RRAFB | - | Rubber Replanting Aid Fund Board (Thailand) |
| RRC | - | Rubber Research Centre (Thailand) |
| RRIM | - | Rubber Research Institute of Malaysia |

| | | |
|--------|---|---------------------------------------------------------|
| RRP | - | Rubber Replanting Project (Indonesia) |
| RSS | - | Ribbed Smoked Sheet |
| RTAL | - | Rubber Trade Association of London |
| RTANY | - | Rubber Trade Association of New York |
| SBR | - | Styrene butadiene rubber |
| SIR | - | Standard Indonesian Rubber |
| SMR | - | Standard Malaysian Rubber |
| SR | - | Synthetic Rubber |
| STABEX | - | The EEC's Export Earnings Stabilisation Scheme |
| TMP | - | Third Malaysia Plan (1976-80) |
| TSR | - | Technically Specified Rubber |
| TTR | - | Thai Tested Rubber |
| UNCTAD | - | United Nations Conference on Trade and Development |
| USS | - | Unsmoked Sheet |
| WSSRP | - | West Sumatra Smallholder Replanting Project (Indonesia) |

Note: Tons - refers to metric tons unless otherwise specified.

NATURAL RUBBER: A DETAILED EXAMINATION OF SOME ASPECTS
OF THE INTERNATIONAL NATURAL RUBBER AGREEMENT AND ITS WIDER IMPLICATIONS

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