

NATURAL RESOURCES OF SOUTH-EAST ASIA



Corazón Morales Siddayao

THE OFF-SHORE PETROLEUM RESOURCES SOUTH-EAST ASIA

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PETROLEUM
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SOUTH-EAST ASIA**
Potential Conflict Situations
and Related Economic
Considerations

CORAZÓN MORALES SIDDAYAO

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The Institute of Southeast Asian Studies was established as an autonomous corporation in May 1968. It is a regional research centre for scholars and other specialists concerned with modern Southeast Asia. The Institute's research interest is focused on the many-faceted problems of development and modernization and social and political change in Southeast Asia.

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The opinions expressed in this publication are the responsibility of the author and not of the Institute.

A.M.D.G.

*To
R.A.B.
and
my family*

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CORAZÓN MORALES SIDDAYAO

Introduction

INTEREST in the off-shore petroleum¹ resources of South-East Asia was manifested in the 1960s when development in off-shore technology allowed oil companies to search beyond prospective land areas. The dramatic increases in oil prices in the early 1970s but more particularly the events of 1973 and 1974, when world oil prices were quadrupled by the oil exporting nations and major supply cutbacks were experienced by certain developed nations, further heightened this interest. Cost/price relationships had not only improved and made off-shore oil in hitherto less attractive areas commercially prospective; nations that were net importers and whose international exchange reserves were strained by the high import costs of foreign oil also found it prudent to begin looking for indigenous resources and to encourage such search.

The search for and discovery of petroleum in South-East Asia on the scale in which it has been conducted in the last ten years was new to the region. It was natural, therefore, for students of South-East Asia to raise questions about its progress, questions concerning international relations, social impacts, and economic policy implications. The purpose of this study is to try and answer the question: 'What are the potentials for conflicts or cooperation among nations arising from the search for petroleum resources in the seabeds of South-East Asia?'

The problem of conflicts or cooperation among nations is a topic that has many facets and may involve a multitude of issues, for example, legal, economic, technical, security, social, etc. In relation to off-shore petroleum resources, conflicts, although essentially legal in origin, have economic aspects. This study has, therefore, been oriented to the aspects more familiar to an economist, and has two major thrusts. First, the study discusses some relevant issues and identifies actual or potential conflict situations in the

search for and development of South-East Asia's petroleum resources. Second, it seeks to identify the major relevant economic variables on which conflict situations are likely to have an impact, and the policy implications of the need to achieve maximum economic benefit from the presence of these resources.

FRAMEWORK OF ANALYSIS

The problem of conflict/cooperation arising from the development of South-East Asia's off-shore petroleum resources is studied within the framework of the demand for and supply of these resources. Potential conflict (or the need for cooperation) among nations arises only if (1) petroleum has value as a commodity and therefore a demand and (2) if petroleum may be found in South-East Asia's sedimentary strata, so that there is a potential indigenous supply in certain areas to which each nation can lay a claim. Given both, disputes would then essentially arise from conflicting claims to property rights over such resources, because of (1) incompatibility in perceptions of the equity of existing or proposed legal definitions of jurisdictional boundaries among nations concerned; (2) incompatibility of jurisdictional boundaries so delineated with geological and environmental phenomena; and (3) conflicting historical ownership claims.

Given the value of petroleum to the economic growth of each nation, access to such resources is manifestly desirable. International legal disputes over ownership of such resources constitute impediments to access, and therefore to development and utilization of those resources. Thus, maximization of economic welfare—the goal of every government—requires consideration of the costs and benefits of protracted disagreements. Petroleum available in twenty years has less social value than petroleum available in five years. As in the case of all scarce resources, trade-offs are faced—to give up a little of something in order to gain more of another.

DATA AND SCOPE OF STUDY

For purposes of this study, South-East Asia is defined in the conventional manner and includes the following countries: Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines,

Singapore, Thailand and Vietnam.² The economic and resource data used are generally those published by national governments or submitted by such governments to the United Nations and similar international agencies. Where no government data are available, the usual industry sources are used, for example, crude oil production and other industry statistics in the *Oil and Gas Journal*, *Offshore* magazine, publications of the American Petroleum Institute and the U.S. National Petroleum Council, and releases by the Philippine Petroleum Association. Some of the historical data and projections have been estimated by the author.

Quantitative information will be expressed in metric units with some exceptions. Where the datum was originally reported in an imperial unit and where some loss of useful information might result from conversion, the original form will be retained and the metric equivalent will, in general, be included in parenthesis. (The exception to the latter will be 'barrels' which is still commonly used in the oil industry literature and which will therefore not be converted into metric tons where it is not necessary to do so for consistency in comparison.) Also, in the existing and proposed changes in the Law of the Sea, lengths are expressed in miles rather than in kilometres, while depths are expressed in metres. For simplicity, the use of this combined form will be retained in this study in discussing the boundary issues.

Quantitative analysis is confined to data readily available from published sources. In the absence of data on the region, the analysis of economic impacts and social costs and benefits has largely remained at theoretical levels and general discussions based on experiences in other regions. A major and longer study would be required to treat that subject in depth, and to arrive at empirical conclusions.

Chapter I discusses the relationship of energy to economic growth, the patterns of consumption of energy sources in South-East Asian countries, the import dependence of such countries, projections of future consumption, and the value of indigenous petroleum resources to these countries. Chapter II presents the potentials of petroleum production in South-East Asia. Chapters III, IV, and V analyse the three basic sources of conflict in South-East Asia that relate to

petroleum resource development. Chapter VI analyses some economic and other impacts of petroleum resource development, and explores the economic welfare implications of disagreements versus cooperation. Chapter VII suggests certain policy implications and conclusions.

This study was completed in late 1976, and the statistical tables are based on data available in mid-1976. Minor revisions were made as the book went to press, mostly to accommodate later developments in the Law of the Sea. The detailed analyses, however, reflect the date of the study's completion.

1. In this book, the term 'petroleum' will be used to refer to both oil and/or gas inasmuch as exploration drilling for petroleum may result in discovery of either oil or gas or both.

2. Where necessary, the terms 'North Vietnam' and 'South Vietnam' will be used to refer specifically to matters related to or actions taken by the governments of these political divisions prior to reunification.

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