

maturity, this type of investment also constitutes a drain on national finance as long-term debt has to be serviced.

In contrast, Thailand did not embark on similar adventures. According to the authors, a fairly effective national bureaucracy stimulated peasant-owners to diversify their agricultural produce, as well as downstream industries to manufacture for domestic and foreign markets. A build-up similar to the one observed for Taiwan took place. Eventually, Japan and others would have electrical appliances assembled in Thailand and re-exported to world markets, but the Thai Government has no comparable long-term debt, which elsewhere is a substantial burden on national budgets.

Such are the main conclusions emerging from this book, quite revealing as it were to the European visitor (and admirer of Southeast Asian efficiency). However, it remains to be seen whether the authors' formula for employment-led growth will apply equally under different circumstances, notably those of Africa or Latin America, regions more poverty-stricken than Southeast Asia, where up to three crops per year may be harvested. Yet, one might visualize that it would help in cases such as Brazil, where massive investment in Amazonia (iron-ore in Carajas) threatens the environment and tribal communities. But the new "economic corridors" in Malaysia should be carefully scrutinized for environmental damage, as the public uproar over the negative aspects of the Trans-Amazonian Highway and road-induced misdevelopment along the Bolivian border would suggest.

One may also sympathize with the authors' view that threshold countries should not seek to introduce, at any cost, automobile assembly on their territory, while one would not exclude entirely that market-driven forces (rising wages in Japan) may prompt Japanese manufacturers to assemble in larger markets like Brazil or Indonesia. It has happened between the United States and Canada, when part of Detroit's production was eventually assembled north of the border.

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***Energy Systems and the Environment: Approaches to Impact Assessment in Asian Developing Countries.*** Edited by Peter Hills and K.V. Ramani. Kuala Lumpur: Asian and Pacific Development Centre, 1990.

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The overall objective of Peter Hills and K.V. Ramani's work is to provide "a (better) foundation for future regional and national training efforts directed to facilitating the integration of environmental considerations into the national energy planning process".<sup>1</sup> In this, the editors have set themselves a very timely and important, but also a very ambitious task.<sup>2</sup>

Like in other parts of the world, some of the Asian and Pacific governments have started to react to the increasing public concern for the environment. In some countries, the pertinent legislation has come under review. Some of the responsible authorities in the region are now also requesting Environmental Impact Assessment (EIA) Studies to be carried out by developers of environmentally controversial projects. According to the EIA philosophy and concept, final project approval is conditional on government and public acceptance of the anticipated environmental effects.<sup>3</sup> EIA studies may at the same time also be used by governments to determine feasible environmental protection measures.

All energy projects, including the exploration of resources, primary energy production as well as all electric power projects have significant environmental impact. International organizations and governments in the region, therefore, see the need to introduce and improve environmental impact assessments as part of the decision making process for energy projects. The overall governmental objective of enhancing sustainable development would actually suggest conducting even more comprehensive environmental impact assessments, not only for individual projects, but also for the national energy programmes as a whole. This would also include aspects of fuel end-use [in]efficiency. In theory, cost-benefit analysis as well as EIA studies offer themselves

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as tools for a more rational decision making process.

The national legislation for the protection of the environment as well as the degree of sophistication and the requirements concerning contents, structure and methodology of EIA studies obviously vary from country to country, and from project to project. Similarly, the procedures pertaining to the decision making and approval process also vary to a great extent, especially with regard to participation of the general public. So far, there have not yet been many attempts to systematically review the situation and to offer proposals for improvement of cost-benefit and EIA studies.<sup>4</sup> This publication makes an important step in this direction.

With their recent publication, the Asian and Pacific Development Centre (APDC) and the editors present a collection of 12 case studies which have been contributed by independent authors from different energy research institutes and universities. These case studies relate to different kinds of energy projects, including hydro, thermal, nuclear and geothermal power projects, oil and gas production, open cast and underground coal mining, as well as to the use of forest and biomass resources. All case studies refer to comparatively recent projects, investment decisions and energy issues. They offer insight and information on the actual decision making process in public utilities and other responsible energy planning authorities in the region. However, at the same time, this compendium of case studies presents a rather frightening collection of examples which demonstrates the still widespread lack of any adequate consideration of environmental "external effects" in the political-cum-economic decision making process. In Asia, and perhaps not only here, environmental impact assessment is still in its infancy.

The editors draw the reader's attention to the many persistent deficiencies in the actual implementation of EIA studies. In the scope of a more recent presentation,<sup>5</sup> Peter Hills lists, *inter alia*, the following aspects in which most EIA studies require improvements:

1. Most EIA studies offer only a partial analysis of selected aspects.
2. There is frequently an over-emphasis on physical environmental factors. Socio-economic aspects are often neglected.
3. There is no adequate treatment of secondary and tertiary effects.
4. Many EIA studies have problems in specifying the time stream of environmental costs and benefits and the cumulative impact associated with environmental change.
5. Most EIA studies do not consider technical alternatives.
6. There is no adequate provision for public consultation or participation in the assessment process.
7. In many studies the linkages between environmental assessment and economic and technical feasibility studies are still very weak.

The research work for this project is being carried out under the auspices of the Asian and Pacific Development Centre, with additional support of the United Nations Development Programme (UNDP) and other multilateral organizations. The research is essentially done in two phases and the findings are planned to be published in two subsequent companion volumes. *Energy Systems and the Environment: Approaches to Impact Assessment in Asian Developing Countries* is only the first of the two publications. The focus of this initial work is on the empirical review and the related case studies which, indeed, offer many interesting aspects for further thought and critique.

However, what the reader is now waiting for is a systematic evaluation and a thorough theoretical analysis of the collected empirical material. The companion publication, which should perhaps have come together with the reviewed book, is presently under preparation. It is expected that the companion volume focuses more on theoretical and conceptual aspects. It is also expected that the second publication will provide practical guidelines on how to conduct improved environmental impact assessment (EIA) studies. Certainly, the

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editors still have a lot of work ahead of them before their objective is achieved.

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*The Malaysian Economy: Spatial Perspectives.* By George Cho. London: Routledge, 1990. Pp. 314.

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#### NOTES

1. Quoted from the Foreword to the reviewed publication by Suk Bum Yoon, Director, APDC.
2. The views expressed in this review are those of the author and do not necessarily reflect those of the United Nations.
3. EIA studies will normally cover the following *basic features*:
  - description of main characteristics of project;
  - estimation of emissions, residues, wastes etc.;
  - description of proposed measures to reduce harmful effects;
  - assessment of compatibility of project with environmental regulations and land-use plans;
  - non-technical summary of the total assessment.The *main procedural elements* of the EIA will normally include the following:
  - the developer (often with assistance from consultants, regulatory bodies and other organizations) prepares an environmental impact study which is submitted along with his application for project authorization to the competent authority;
  - the study is published and is used as a basis for consultation involving both statutory authorities possessing relevant environmental responsibilities, and the general public;
  - the findings of the consultation process are presented to the competent authority;
  - the assessment study and consultation findings accompany the proposed project through the remainder of the competent authority's authorization procedure.
4. For a good, comprehensive and systematic study, see M.P. MacDonald, "Methodology for Integrating Environmental Considerations into Energy Development", in *Environmental Considerations in Energy Development* (Manila: Asian Development Bank, May 1991), pp. 185-230.
5. Peter Hills, "EIA and the Energy Sector: Possibilities and Constraints", paper presented to the Conference on Environmental Strategies for Asia Pacific Oil and Gas, Kuala Lumpur, 26-27 August 1991.

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This book describes the impact of economic development on the land and its people and addresses important geographical issues by examining the record since independence in the late 1950s. Central to the discussion is the contention that the interaction of socio-economic groups is determined as much by their ethnicity as by their socio-economic status.

There are six chapters plus a postscript. The first comprises a wide-ranging but, in any particular instance, a rather brief assessment of each of the ingredients Cho identifies as essential to the socio-economic background of the Malaysian economy. The components discussed include the political history, regional context in the Association of South East Asian Nations (ASEAN), composition of the population, the New Economic Policy (NEP), sectoral output, spatial distribution of gross domestic product (GDP), labour force and unemployment, balance of trade, colonial legacy, government policy on poverty and inequity, and national development.

The second chapter focuses on development planning and the major shifts in policy as the infrastructure preoccupation of the colonial heritage was gradually replaced by the issues of poverty and equity. Cho indicates how from 1971, with the NEP in place, formal development plans became more than a collection of development projects and discusses in some detail the main features of each of the four plans which preceded and the four plans which followed the introduction of the NEP through to the termination of the NEP and the Fifth Malaysia Plan in 1990. This is a very useful analysis and demonstrates the fundamental shift which occurred in the government's goals and priorities over the period of the eight plans.

The main concession to the "spatial perspectives" of the title comes in chapters three and four which discuss planning in the context of the rural and urban sectors respectively. The importance of

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regional programmes is elaborated upon by discussion of the administrative framework and regional development authorities, as well as the Federal Land Development Authority, which have constituted the major vehicle for systematic rural development and an evaluation of some rural development authority projects. The author notes the project orientation of land and rural regional development as a product of the adopted strategy of growth with redistribution, and questions whether in the absence of substantial economic growth the goals of reduced poverty and niche ethnic occupations can be achieved.

Following a general description of urbanization and urban population growth (much of it based on pre-1980 sources), Cho provides a comparison of GDP, broad sectoral distribution of GDP and urban share of population for each state. Selected correlation coefficients are cited and confirm, for example, the positive correlation between urbanization and GDP. Ethnicity, rural-urban migration and unemployment comprise central issues discussed, with brief mentions of housing problems, squatters and sundry other social issues and a concluding section on urban management and planning.

Another chapter is devoted to the issues related to the promotion of industrial growth and the strategies adopted under the various development plans. This is followed by an evaluation of industrial location especially in terms of free trade zones, licensed manufacturing warehouses and export processing zones and the conflict between the evident benefits of the dispersal of manufacturing and the deficiencies of some peripheral industrial centres which proved to be uncompetitive and had limited success in achieving technological transfer. The inherent export-domestic dualism in the industrial structure, and future prospects for industrialization are also examined.

The final substantive chapter examines a series of issues considered central to Malaysia's socio-political economy. Ethnic diversity is again addressed for its political and economic significance, with particular reference to Malay politics,

the role of UMNO and of Islam, and the rights, privileges and role of the hereditary rulers.

In a short postscript, the author (writing before announcement of the post-NEP National Development Policy) questions the appropriateness of carrying forward the central principles of the NEP unless economic growth is still the essential underlying requirement for any effective restructuring and redistribution. He observes that there is evidence that mass attitudes are supportive of the growing trend towards authoritarian rule in Malaysia. This could entrench the danger of transferring wealth to and further enriching Malay élites (including, perhaps, a new wealthy class) rather than realizing the redistributive goals benefiting the masses.

This is a useful book which deals mainly with structures and issues: it is not data driven, does not analyse sectoral growth or balance in any detail, does not have a large number of maps and diagrams illustrating spatial variations, and is not particularly concerned with differential progress between states. More surprising, perhaps, is that even in the discussion of industrial location, spatial elements are couched in the broadest terms and there are no maps of distributions at either the national or local scales. What it does provide is a systematic review of the widely discussed issues of ethnicity, rural and urban change, and how government and government policies have modified structures to achieve development plan goals. Although many of these elements have spatial manifestations most, like the book, transcend the regional and are essentially national in their significance and management.

The author is to be congratulated for the inclusion of extensive discussion, where appropriate, on East Malaysia which is often excluded from such volumes (ostensibly on Malaysia) because of the difficulty of including it within a framework of discussion more appropriate to Peninsular Malaysia alone.

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