

**Developing Economies and the Environment: The Southeast Asian Experience**, edited by Colin MacAndrews and Chia Lin Sien. Singapore: McGraw-Hill, 1979. Pp. viii, 299, Preface. Index. Hardcover S\$14.50.

Industrialization, agricultural expansion, and resource exploitation are proceeding apace in Southeast Asia, in keeping with the aspirations of its people to a higher quality of life. Frequently these developments occur ahead of any effort to control their adverse effects on the environment, thus counteracting the beneficial effects. The editors of this book have both been involved in environment management in the region, and they have brought together this volume of papers by several concerned and experienced workers to produce an up-to-date and authoritative account of the way in which the environment is, or should be, considered in relation to development. The stated aim is to present a cross-section of articles from various types of expertise, covering a range of topics, from as many countries in the region as is feasible in the contemporary political situation. The result is something of a mixed bag of papers both in terms of depth and the degree of success in implementation which they report. But as the editors themselves acknowledge, this reflects the current state of affairs in the region, and it does not detract greatly from the value of the compilation.

Chia and MacAndrews write a good scene-setter. Populations move into areas of high exploitation faster than they can be properly absorbed, bringing about social and economic disparity which is disruptive and dangerous. Their suggestion that it is reasonable to relate the effort devoted towards the preservation of environmental integrity to the current state of development seems debatable. It may give encouragement to the prevalent attitude of wreck now, pay later. Later, is often too late and the urge is usually lost. The desecration from haphazard and unconcerned land clearing alone, as described in the text, surely attest to this. The recent increase in concern that they describe, to restrain ignorant or cynical exploitation, is surely more desirable. The authors take a balanced view, and do not allow the conflict between development and conservation to become emotional.

Restraint cannot be left to the individual, because the greatest exploiter will, in the short term, be the most successful. An early need is for law enforcement, and Shane indicates that although this requires a common aim, it must be adapted to fit the local situation and the existing legal framework. Enforcement is easily weakened by a conflict of systems. Environmental effects increasingly must be considered at an early stage in the approval procedure for new projects. This author's conclusions are particularly apposite and encouraging to the environmentally concerned.

Hamzah writes comprehensively about the way in which governmental authority has influenced environmental management in Malaysia, in the

effort to maintain the quality of life during the growth process. An outstanding example of success is in the control of pollution of rivers by the agro-industries. Despite the early outcry concerning the impossibility of achieving the targets demanded, solutions were found, that not only have brought several important rivers back to life, but which have also led to use of wastes in a positively advantageous manner in some cases. Other aspects being looked at are the cleanness of the air, marine contamination, and the effects of insensitive land clearance. It remains to be seen whether these problems can be tackled with the same resolve and effectiveness as was that of water pollution. In the Philippines, Lesaca points out that despite the existence of an adequate structure of law, achievement of control of pollution has not been so effective.

An outstanding feature of the book for me is the first half of Furtado's chapter on diminishing forests. This no doubt reflects a personal prejudice, but certainly the major resource of the region is its climax vegetation. The imposing majestic, and seemingly indestructible forest is a far more fragile system than would at first appear likely. Thirty-eight per cent has already been quite lost. Clearance is necessary to provide an environment for civilized man, but in train are problems of soil loss, change in rainfall pattern, and, if it goes too far, the loss of as yet unexploited resources from the forest's near-infinite variety. Is there a sustainable compromise? Selective logging may help in some aspects, e.g., soil and water balance; but the ecological complexities of tropical forest, still little understood, are such that a train of degradation is commenced, with continuing loss of species diversity. It is not made apparent what proportion of the remaining 62 per cent of the forest has been affected in this way, but it must be very much the majority. Despite some positive talk, no one has yet demonstrated that regeneration can occur at all, never mind within a time scale bearing any relationship to man's generation. Representative forest must be left in all types of environment, and areas must be large enough to sustain the complicated interactions required for continuity. Also, they must be inviolable to pressure for short-term gain – the fast buck will never buy back what has been destroyed. One hopes the author is correct in seeing the threat of total loss of undisturbed forest as less than real – but his exposition gives no ground for optimism.

Hassan and Koesobino describe a specific instance where an unpromising environment, namely, a coastal swampland in Sumatra, may be utilized to sustain a community. Technical imponderables and sociological complexities pose problems for the longer term. Disappointments arise, after apparently successful beginnings, from several causes such as

fertility decline, pestilence, disease, and wasteful exploitation. These combine in such a formidable manner that current developments only manage to give a breathing-space in the vast problem of providing a decent life for Indonesia's millions.

Pescod shows how developments in rural Thailand can be self-defeating. He emphasizes the need for carefully thought-out preliminary surveys to consider the likely consequences, with interesting case histories. We now have enough information to allow such surveys to be interpreted to improve decision-making, though it is essential that flexibility is maintained.

Singapore's handling of its industrialization and rehousing programmes has been in many ways a model, as Chia points out. We must bear in mind that it is a compact, easily controlled area, totally dependent on outside resources, to which it adds value. It could hardly become self-sustaining without these inputs. In such circumstances, industrial health too can be tightly controlled, and Chew describes how this is being achieved – though he does not lose sight of the fact that outside investment (another essential input) is attracted by lower (and hence cheaper) standards than might be found in already developed areas. A two-level standard, distinguishing between bigger and smaller concerns, seems not an unlikely occurrence here.

In a world in which the prime minister of the largest democracy can say, if we are to believe our newspapers, that "power comes before flora and fauna" (regarding a dam that would cause flooding and destruction of unique forms) as if the two, and thus indeed economy and ecology in general were separable and required a choice, one or the other, it is good that a body of practical men has gone on record with the thinking expressed in this book.

This is a thoughtful and thought-provoking volume and is attractively produced. The papers are well written and well edited. The method of presenting the references is clear and I found only a few misprints. It is excellent value and should be on the shelves of all professionals and politicians who may have to deal with matters of development or the environment. It has much to interest econuts and economists, as well as farmers, legislators, civil engineers, etc., and all would profit from the broader awareness of the background into which their activities must fit. The editors note the dilemma of politicians who, notwithstanding their own views, need to win votes. It is to be hoped that they can convince their constituents that the most immediately profitable step is not always the best.

The editors, in their opening chapter, state that the green revolution has not proved an answer to the Malthusian problem. The idea that agriculture is permanently sustainable only with continuing input of non-renewable resource or recycling is not further taken up, which represents a major gap in the coverage, as we face the run down in availability of fossil fuel and other resources. The question what ultimately could realistically be sustained remains to be considered.

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