

ENVIRONMENTAL GOVERNANCE: A THAI PERSPECTIVE

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1. Introduction

It is the thrust of this paper to suggest that, in the interests of environmental governance in Thailand, institutional reform construed in the widest possible sense be attempted. This boils down to restoring indigenous green ideology as well as effecting a complete overhaul of public-sector machinery. Fortunately, one can bear witness to resurgence of the green ideology and its hesitating realisation in the form of grassroots-level green power exerted in practice in contemporary Thailand. This is exemplified by a plain housewife's spearheading a four-year-old protest against the two proposed multi-billion-*baht* power plants in her southern home town of Prachuab Khiri Khan, since the plants are seen as representing a threat not only to sustainable ecology but also to the traditional, simple way of life and the social solidarity of a fisherman's community. Her unwavering protest has already had its knock-on effect on other flashpoints ranging from the Eastern Seaboard industrial estates to the northern Mae Moh power plant and another southern city of Songkhla (where construction of a gas refinery is being debated) (*Bangkok Post*, Outlook Section, "Fight the Power," 15 March 2001: 1). Her exploit cannot help but fill one with nostalgia for the past, in which the law reform process of 1805 under Rama I stood out. It was, one may recall, triggered off by an adultery case where a badly-bruised husband could not bear the thought of seeing his delinquent wife get away scot-free. It was followed, in quick succession, by two other cases, one involving a woman forced to marry someone whom she did not particularly fancy and the other concerning a wife who had been sold by her husband into slavery without her prior consent having been secured (Chomchai in Prachoom Chomchai (ed.), *Development of Legal Systems in Asia: Experiences of Japan and Thailand*, Bangkok: Thammasat University, 1999: 73). Each of these cases is a salient instance of the *cavalier seul*, irrespective of the gender involved, making himself or herself heard and doggedly fighting, for a good cause, the powers that be and against all the odds.

The seemingly abrupt resurgence of the green climate from below is, at first sight, surprising in view of the apparent absence of general public awareness of the pressing need for environmental governance in the past, against the backdrop of decades of wanton environmental destruction in the country. Of course, it could be a delayed reaction, in a fresh atmosphere of openness ushered in by the new Constitution of 1997, to long-tolerated suffering, and, in any case, a sea of change in the climate of thinking from time-hallowed deference to authority or mere fatalism to open opposition to projects imposed on the man in the street can only be expected to require a period of gestation.

The resurgent green ideology may be said to be permeated with a certain civic-mindedness comparable to the French's *civisme* or the ancient Romans' *pietas*. This encouraged the French to mobilise themselves behind the official effort to reafforest the Versailles garden devastated by violent storms of December 1999 (Jacqueline Schalit, "Editorial," *Reader's Digest Selection*, janvier 2001: 3 and Stephane Calmeyn, "Versailles: les jardiniers de la renaissance," *ibid*: 33-42) and, in a similar vein, egged the ancient Romans on selflessly to serve their country in public offices.

In the reinvented green ideology, environmental governance may be said to be seen, from a public finance standpoint, as a "public good" from which, at any rate on paper, a potentially infinite number of people could benefit simultaneously, but which, because of the notorious "market failure," could not be left to the market mechanism to provide. Of course, the free riders' quality of life cannot but benefit from governance, though each of these culprits persists in being the odd man out by continuing to ravage such key elements of the environment as the forest or wildlife for his or her own private gain.

Such renewed focus on environmental governance may also be seen, again from the standpoint of public finance, to be a "merit good," such as insurance, to which people tend to attribute insufficient merit. It may, however, be said to represent a new breed of merit goods, since in contradistinction to such classical

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cases as housing, the “merit want” it is destined to meet is imposed not from above but from below, the very livelihood of common people threatened by absence of environmental governance being the order of the day.

Apparently, with the government lacking the political will to tackle environmental deterioration and the workings of its machinery being thwarted by institutional failure and what is known in public finance as “government failure,” the man in the street can be seen to be playing an avant-gardist role in environmental governance. Yet, in a new openness made possible by the promulgation of the “People’s Constitution” of 1997, the normally lethargic government bureaucracy could be seen to be prepared to try out such novelties as the green tax to further cope with environmental ills. In view of the apparent renewal of confidence of government bureaucrats in their ability to make all the difference, one could reasonably expect a great deal of *tatonnements*, with hiccups here and there, towards governance, although it is hoped that this is not another case of “too little, too late.”

It must be admitted that much of what is recounted in this paper may be said to be part of contemporary history. Like the study of the *lex ferenda* (soft law) as distinguished from to *lex lata* (hard law), the writing of “soft” history as opposed to “hard” history is fraught with difficulties and pitfalls. Eyewitnesses to history in the making are inevitably deprived of the *recul* later to bless professional historians who will come, at their leisure, to pore over such material as constitutes grist to “soft” historians’ mill. Again, being swamped with so much contemporary material, a “soft” historian may be unable to see the wood for the trees. The only consolation the latter would have, however, consists in the sentiment that he or she is providing helpful pointers in a timely manner and the expectation that “hard” historians will judge him or her fairly.

2. Constitutional Provisions and the Environment

As the political process may be said to provide an indispensable framework for environmental governance, it is appropriate to start the ball rolling with a sketch of Thailand’s political development, especially since the promulgation of the Constitution of 1997.

A turning point in Thailand’s modern political history may be said to be the abrupt, albeit practically bloodless, transformation in 1932 of its form of government from that of absolute to one of limited or constitutional monarchy. After tumultuous decades that bore witness to what was perceived by the public as a widespread abuse of the constitutional process and political power, in 1997 a new constitution, the 16th in the series that had its inception in 1932, was adopted in the hope that it would lead the country on to the path of participatory government and sustainable development. Adoption of the new constitution was in itself not extraordinary; but it was the first constitution to emerge from a process of “public” consultation rather than because, as in preceding instances, the predecessor had been torn up after a coup d’état (Victor Mallet, *The Trouble With Tigers: The Rise and Fall of Southeast Asia*, 1999, London: Harper Collins: 230).

Unfortunately, the 1997 Constitution is a mixed bag, if one agrees with Pasuk Phongpaichit and Chris Baker (*Thailand’s Crisis*, Chiang Mai, Thailand: Silkorm Books, 2000, ch.5), representing, as it does, a subtle compromise or an unholy alliance between two strands of thought—liberalism and conservatism. The former, particularly advocated by NGOs and liberal lobbies, is said to be militating for undermining old monopolies in the media, eliminating vestiges of dictatorial power and opening up opportunities for greater access to decision-making, while the latter focuses more on restricting the freedom of members of parliament (MPs) elected by the rural electorate and breaking the provincial bosses’ domination of parliamentary politics. At a less practical and more philosophical level, the former is seen to seek to roll back the role of the state so as to leave more room for manoeuvre for the individual and communities, while the latter is believed to envisage a strong state under the influence of good people wielding national leadership. Although the people’s main concerns may have been well captured in the approach adopted by the two authors, the alleged polarisation, which seems to be too academic and static to be true, is unlikely to be a faithful reflection of the actual alignment of the diverse supporters of the 1997 Constitution. Nor does the crude and inaccurate labeling of positions by the two authors contribute to a better understanding of Thai politics, which has been very much in a state of flux.

It is important to point to what is new in the Constitution of 1997. Disenchantment with the past political history led the architects of the new constitution to introduce a number of revolutionary features constituting checks and balances through a decentralisation of some key functions from the central government to independent state institutions (John Laird, *Money Politics, Globalisation, and Crisis*, 2000, Singapore: Graham Brash, Chapter 6; Mallet, 1999: 230). These include the National Election Commission, the National Counter Corruption Commission, the National Human Rights Commission, the Public Finance Audit Commission, the Constitutional Court, the Administrative Court, and the Parliamentary Ombudsmen. These are all novelties except that the National Counter-Corruption Commission represents a reinforced reincarnation of its former self. An elaborate system has been designed to place all of these bodies beyond the control or influence of politicians and political parties.

Of course, constitutional provisions alone may not be able to do the trick, since they have to be enforced—sometimes with the help of by-laws. For instance, public hearings prescribed for public-sector projects are also governed by a Prime Minister's regulation. Thus there is, *inter alia*, a formal limit to what these new autonomous institutions created by the Constitution can do.

The anti-corruption campaign arising out of new autonomous state institutions is of crucial importance to environmental governance. This is to prevent corrupt bureaucrats, particularly those responsible for law enforcement, from conspiring with businessmen and corrupt politicians to plunder forests and other elements of the environment for their private interest. The revamped National Counter Corruption Commission is, however, painfully conscious of its limitations and would certainly like to see the relevant law amended to confine its task to chasing corrupt politicians at the national level only. Bound by existing legal requirements, it has to accept all corruption cases (of which there have so far been some 1,700) for investigation, even if they are merely minor matters, and verify the declared assets of politicians (of whom there have so far been some 3,000 at the local as well as the national level). It appears that the Commission would be more effective if it could confine itself to overseeing corruption cases involving politicians at the national level, leaving lower-rank corruption cases to be tackled by the Civil Service Commission or civil service committees at the ministerial or departmental level. Creation of a support network among the public and private sectors and its own intelligence unit to gather corruption information would also boost the investigative capacity of the National Counter Corruption Commission.

Apart from the constitutional checks and balances destined to steer the country clear of what is known in South-East Asia as “money politics” (Mallet, 1999: 62), stamp out corruption, and break the hold of money barons on Thai politics (*Economist*, 9 December 2000: 35), civil rights and civil liberties are augmented under the Constitution so that they may come to life with popular participation. They include, *inter alia*, access to information—spelt out in the Information Act of 1997—that is in the public domain and is in a government entity's keeping. In particular, the Constitution guarantees local participation in environmental protection in such a way that indigenous communities are blessed with the right to take part in the maintenance and management of natural resources and the environment and to demand information, clarification, and justification from a government entity before it proceeds to approve, license, or carry out a project that has an impact on the environment or their health and hygiene. What is more, any activity or project that can seriously affect the quality of the environment is prohibited unless an environmental study is undertaken with a view to its endorsement by independent agencies including representatives from environmental NGOs and university academics.

The Constitution's prime focus on the environment is a manifest carry-over from the Enhancement and Conservation of National Environmental Quality Act (NEQA) of 1992. The Act brought into being, within the remodelled Ministry of Science, Technology and the Environment, the National Environmental Board (NEB), as successor to the Office of the National Environment Board, inaugurated in 1975 as part of a department within the Prime Minister's Office. The reinforced Board has three departments (instead of one in its 1975 edition) tackling pollution control, environmental policy and planning, and environmental promotion. As is implied by the nature of its constituent elements, the new-look, political-level and decision-making NEB, unlike its previous incarnation, is now invested with countrywide authority in budgeting as well as in planning.

3. Political Process and the Environment

While the spirit of the Constitution of 1997, as followers of Montesquieu would maintain on the basis of his *De l'esprit des lois* of 1748, could be seen to look favourably upon the environment, the actual political process does seem to indicate that implementation of its provisions has been a mixed blessing.

There is first the 2001 general election, the first to take place after the promulgation of the Constitution of 1997. Certain observers have been so overwhelmed by its outcome as to proclaim that one of its consequences is the redrawing of the country's political map (*Nation*, 22 January 2001, A5). Apparently to the detriment of money politics and corruption, the old baronial families were "massacred" possibly as a result of adoption of new electoral rules. First, many voters knew the new vote-counting system meant that their choice was genuinely secret. Secondly, ballot stuffing was made more difficult. Thirdly, splitting the constituencies from multi- to single-member ones also split up the old gangs. Of course, some of the barons, especially those that had delivered gigantic budget funds into their political backyards for a number of years, managed to survive, partly out of the people's sentiment of gratitude and partly because of their risk aversion.

The new political map is said to be characterised by three salient features. First, there is an extended Greater Bangkok, consisting, as it does, of the city proper and five surrounding provinces. For the first time ever, this centre voted the same way as the provinces. The division of seats between Thai Rak Thai (TRT), the Democrats and the others roughly copied the national pattern. Secondly, there are seven islands largely monopolised by the surviving baronies. Thirdly, the remainder of the country is said to have been divided starkly at the Bangkok Fault. This is an arc drawn through Bangkok and sloping away to the east and the west. South of this line, the Democrats are seen to have won around 57 and lost only five; to the north, the TRT (an amalgam of old parties and defectors) is believed to have won around 165 and lost around 40 (the islands being dominated by surviving barons). Of course, while in southern Thailand the Democrats have held sway for the past 25 years and other parties have in the past been similarly regionally-biased, never has the electoral map been sliced quite so starkly. Moreover, the Bangkok Fault divides the old from the new: below it the Democrats, the old guard of Thai politics whose average age is about 50, fielded rather few new candidates, while above it, with the exceptions of the islands and rather elderly defectors, over half of MPs are new and youngish.

Not too much, however, should be read into this, as the bandwagon effect and the shell-shock impact of the TRT's bold populist policies—a novelty in Thai politics—in tandem with its lavish use of high-pressure marketing techniques have largely been main factors at work, a sizeable number of voters being held captive. It remains to be seen whether their hold will wear out in the long run. In any case, the emerging pattern looks too neat and tidy to be true.

What gives cause for concern is that, contrary to expectations, the current government's policies may lack an environmental focus. It is thus claimed by some academics that, despite its landslide victory in the January 2001 general election, the ruling Thai Rak Thai party has little interest in the environment and has failed to fill environmental portfolios with qualified people. While the said party may have done a significant amount of homework with "populist" policies to combat poverty among farmers and the economic crisis, its environmental policies are said to consist of beautiful ideas without any action plan. There may thus be broad statements encouraging the use of appropriate technology to solve environmental problems, advocating the principle of sustainable development, promising to combat air and water pollution and containing chemical accidents and hazardous waste. But, it is argued, it is not clear how these lofty goals are to be realised (*Bangkok Post*, 14 February 2001: 4). While people who take charge of the environment are said to need to have a compatible attitude towards ecology and the people's livelihood, ministers with close ties to commercial and industrial sectors or influential businessmen may have a hard time trying to understand the link between the environment and local villagers' way of life.

What may be said to be more assuring, from the viewpoint of environmental governance, however, is the emergence, in parallel with the ongoing reform of Thailand's representative politics, of what may be called "people's politics," "direct democracy," or "participatory democracy" (Pravit Rojanaphruk and Nantiya Tangwisutijit, *Nation*, 31 December 2000, A1-A2). One after another of grassroots community groups

has been seen to rise in discontent against government projects, challenging the “classical” development model that appears to have put sectional interests above the long-term well-being of the people as a whole. More and more people are seen no longer to be willing to abandon their political rights the day after they cast their votes. Instead, they are seen to be monitoring, criticizing, and even intervening, if necessary, whenever politicians and bureaucrats are seen to abuse their power. What is novel in this is said to be not just the unanimous sense of alienation from representative or electoral politics but a common conviction that active and direct democracy—as opposed to passive and unquestioning reception of government initiatives—is called for. This conviction is seen to become more widespread, and, once entrenched, is expected definitively to redefine the face of Thai politics and society.

An abridged history of such discontent and rebelliousness would trace their origin to the military coup of 1991, ousting a democratically elected but conspicuously corrupt government. While the military intervention was generally accepted, by May of the following year the sense of expectation had turned into total disillusion and frustration, and the people, with the growing middle class behind them, launched a “people-power” revolution and sidelined the military. The people were soon to learn, however, how thin the line is between good and corrupt politicians, as one administration after another revealed its “true colours.” Promulgation of the “People’s Constitution” of 1997 and the unprecedented economic crisis of 1997 gravely affecting not only the wealth but also the psyche of the nation swiftly led to the perception that politics as usual had failed to deliver in a fast-changing world. Citizen groups, from grassroots organisations to the business community, from technocrats to academics, are seen to have raised their voices against an IMF-led raft of crisis management measures.

It is believed that the year 2000 witnessed the emergence of four groups as major forces to be reckoned with in the arena of people’s politics. These are said to be 1) an alliance between various grassroots organisations and developmental and environmental NGOs, 2) a coalition of middle-class civic groups, 3) the academics taken as a body, and 4) a cluster of independent entities established under the Constitution of 1997 and already treated above.

The first group said to be seeking a change in the way the bureaucracy charts the country’s development path is represented by opponents of the Thai-Malaysian gas pipeline and the Assembly of the Poor. Newspaper headlines have been dominated by the former’s breaking up public hearings on the proposed project, and the latter’s attempting to invade the grounds of Government House in the teeth of the authorities’ firm opposition and participating in a public debate on the plight of the poor, thereby leading to a new culture of public participation from the very inception of a state-run project. The second batch is said to have been inspired by the Bangkok Forum, which has evolved into a network called “Civicnet” working in conjunction with other civic groups in major provinces all over the country. Its drive towards local determination has resulted in the revival of such communities as the historic ones along Phra Arthit Road in Bangkok as part of its effort to hold in check the mass conversion of small local shops into faceless 24-hour convenience stores and malls. The third bunch is said to be a minority of university academics who have largely abandoned their ivory-tower concerns to venture to criticise the country’s system of representative democracy.

On the other hand, it is common knowledge that in developing “democracies” aspiring leaders frequently rely on the infamous “rent-a-mob” device by paying poor people to protest (Richard S. Ehrlich, “The MTV generation,” *Bangkok Post*, 27 January 2000: 8). It is believed by some, for instance, that the persistence of protest in front of Government House is accounted for by this element. In a similar vein, it is feared that all groups are subject to manipulation by interest groups, all of which have an axe to grind. Time will tell whether these groupings, with the exception of those set up under the Constitution of 1997, which has given the public especially in Bangkok a keen sense of instability, are actually *bona fide*, credible, and durable. As it is, despite or because of their nuisance value, they are tolerated and are, like traditional state institutions, subject to the test of public scrutiny.

As a society Thailand is said to be open and under close scrutiny by a free mass media that has played a critical watchdog role as part of the foregoing civic organisations and grassroots groups. Such organisations and groups are believed to have become a formidable force to ensure that political leaders put the public interest before anything else (Kavi Chongkittavorn, *Nation*, 12 February 2001: 4).

Unfortunately the Chuan Leekpai government, considered to be one of the cleanest in Thai political history, learned to its cost that, by ignoring the civil society movement and grassroots groups out of deference to dealings through regular bureaucratic channels, it managed to alienate the former, thereby contributing to its own eventual downfall. Of course, media scrutiny is heavily focused on exposing scandals and corruption on the part of politicians. Admittedly, without strong democratic institutional support, an emerging democracy such as Thailand may be said to be fragile and extremely prone to manipulation by old power brokers and various special interest groups. While daily media exposure is destined to keep the government on an even keel, it could, as has been demonstrated in the case of the Chuan Leekpai government, gradually erode the popularity and legitimacy of elected leaders as though they have been put on trial by the media. Of course, the media themselves have to be transparent: they must assure the public that they have no axe to grind.

Whether and to what extent all such extra-parliamentary channels could be relied upon to bring about environmental governance on a more or less permanent basis remains to be seen, as things appear to be in state of flux. As a matter of fact, the general public is baffled by street protests, which are daily occurrences, especially in Bangkok, and the series of scandals spread by the mass media at regular intervals.

4. Urban and Rural Environment

A cursory glance at Thailand's environment, a focus of interest of the new Constitution of 1997 and civic groups, could well begin with an impressionistic *tour d'horizon*.

Air quality may be said to be closely intertwined with other aspects of the urban environment. While the advent of the skytrain has made getting around Bangkok easier for many and may have adversely Bangkok's air quality, it may spell the end of a long association with the city for at least one neglected group (*Thai Rath*, 29 January 2001: 12). For decades, electricity cables slung along either side of the road used to provide a winter home for hundreds of thousands of barn swallows which migrated annually to Thailand from China and Russia, particularly northern Siberia with its acutely severe winter.

Veterinarians claim that auks from the same source have also followed suit, though their sightings have not been reported in the press. Several years ago, however, the birds' temporary lodgings were uprooted to make way for construction work on the skytrain project and underground cables have been installed in their place, causing the number of birds passing the winter on Silom Road to fall from year to year.

While the birds' presence has been something of a nuisance for many, not least because of their droppings, they have provided human beings with the much-needed biological control of the swarming population of mosquitoes and other insects—no less a nuisance. What is more significant from the public policy viewpoint is, however, that the birds' disappearance has sounded the alarm about the drastic deterioration of the environment of such urban centres as Bangkok.

According to the Silom Road Tagging project, jointly sponsored by Telecom Asia Cooperation Co, the Royal Forestry Department and the Bird Conservation Society of Thailand, the number of migratory barn swallows living along the road dropped from 270,000 in 1992 to 71,000 in 1993, which saw the removal of the first cables. It dropped dramatically to 48,000 in 1996 when skytrain construction began. In 2000 the tagging project only sighted 38,000 birds living in replacement habitats—the remaining trees and buildings along the road.

Apart from the introduction of the skytrain the entire environment along the road is said to have changed drastically. Absence of wires, disappearance of big trees and flying insects, erection of buildings, development of public utilities, and the appearance of the skytrain and the noise associated with it are said to have conspired to transform what used to be an ideal habitat into a hostile environment for the migrant barn swallows. It is worth recalling that the road, with its diverse amenities as well as lights attracting flying insects, the birds' major food source, used to be their paradise. Every year in October, the first group arrives and stays for as long as six months, flying home each March and leaving stragglers to hang on until May.

It is intriguing to pinpoint the factors determining the gradual disappearance of the migratory barn swallows. It is rightly said that the hurly-burly of the main thoroughfare of Bangkok has not deterred their presence in the past and that the noise of traffic including that coming from the skytrain cannot be the culprit. Indeed, the birds seem to have thrived on the hustle and bustle of the business centre, where food is easy to come by (*Matichon*, 1 February 2001:7). There is thus no escaping the conclusion that appearance of high-rise structures blocking the birds' flight path as well as removal of the wires and trees to make way for the skytrain is to blame.

It is known that many countries lying along the birds' migratory route, including Japan and Malaysia are, in an effort to keep track of the birds, also conducting parallel tagging projects, since the birds do not recognise borders. Researchers use large nets to catch them for release once their legs have been tagged with a coded band identifying when and where they are found. While nobody can say for sure where the birds are heading once they decide not to stay in Silom Road in Bangkok, there is speculation that their destinations may be Pattani and Yala in southern Thailand and Malaysia.

Whether the migrant barn swallows are being driven away by increasing pollution arising out of motorised urban traffic has never been a matter for debate. Be that as it may, human residents of big cities like Bangkok are said to be slowly choking to death in a sea of pollution largely engendered by traffic fumes, despite the introduction of lead-free petrol and the temporary breathing space brought by the economic crisis and the doubling of the cost of petrol. Much of the blame has rightly be put on smoke-belching two-stroke motor vehicles, accounting for almost half of the vehicles registered in Bangkok and other big cities (*Bangkok Post*, 3 February 2001: 8). While it is clear that these must be phased out in favour of more efficient and less polluting four-stroke motorcycles, there has been much foot-dragging on this issue, a planned tax increase from 5 percent to 30 percent on two-stroke motor vehicles having been put off in the course of 2001 for fear of its negative impact on vehicle demand. In a fresh effort to use taxation to protect the environment, excise taxes on four-stroke motorcycles are likely to go down from 3 percent to 1 percent—a welcome introduction of “green” fiscal devices. There is no doubt that, apart from fiscal measures, there is an urgent need for adoption of tougher emission control devices including regular inspection with the help of the latest technologies, as well as more and improved public transport including far greater use of the skytrain, cycling, walking, and such restricted traffic zones as have been tried in such countries as Singapore. Above all, this calls for a change of people's lifestyles, where their insistence on driving poison-spewing vehicles everywhere, even over short distances, must be given up.

There is no doubt that, with burgeoning urbanisation, a crucial aspect of the environment is the urban one where air quality is of the utmost importance. Unfortunately, here as well as elsewhere institutional failure may be said to be the main culprit. For instance, in Bangkok no single agency is said to be formally responsible for air quality management. It is true that the Bangkok City Administration's Environment Quality Control and Management Division has recently been set up to provide the city's administrators with information on its environment and to conduct such activities as air quality monitoring; but it has not specifically focused its attention on air quality control and needs to be given more clear-cut responsibility with regard to this crucial aspect of governance. There are also said to be problems of overlapping responsibility among the Bangkok Administration's older divisions overseeing environmental affairs. Thus two other divisions entrusted with public utility and environmental planning and environmental health are also responsible for air quality management, while the Public Cleansing Department is responsible for solid-waste management, leaving dealing with Public Utility and Environmental Planning to tackle designing and evaluating environmental plans. Fortunately, the new division is said *de facto* to be concentrating its attention on urban air quality, simply because no other division is doing so. It has, for instance, co-operated with the police and the national-level Pollution Control Department in action against vehicle pollution in Bangkok (*Bangkok Post*, 14 February 2001: 4).

If the urban environment has been adversely affected by the changing lifestyle, the rural one has not been left intact either. Environmental disruption caused by dams is exemplified by that resulting from the Nam Prom (Chulabhorn) multipurpose dam, completed in the northeastern province of Chaiyaphum in 1973. It was designed not only to generate hydropower but also to avert flooding and moisture deficiency, bearing in mind that farmers both on Nam Prom and Nam Chern, sub-tributaries of the

Mekong, need sufficient water for their livelihood. Water drawn from Nam Prom is used first for generating power and is then released into Nam Chern on the other side of the mountain ridge, taking advantage of the 375-metre drop in elevation. Herein lies the genesis of grievances of the farming inhabitants of the 200 km downstream reach of Nam Prom: irregular release of water from the dam has resulted in shortage of water for farming, extinction of aquatic life in the river, and ecological devastation on both banks downstream from the dam. Since impoundment of the dam in 1973, despite a tacit understanding, something in the nature of a social contract, with the farming population, the dam has not been able to provide sufficient water, shortage of which was completely unknown prior to the river's damming. Moreover, towards the end of 2000 the community suffered from very serious inundation allegedly owing to unannounced releases of stored dam water. While the Electricity Generating Authority of Thailand (EGAT) running the dam contends that such inundation has been due to an unusually heavy rainfall downstream and that the dam has managed to avert a much more devastating disaster, it has given relief to those affected not as compensation but as "humanitarian" aid. It is clear, however, that 28 years after impoundment the much-maligned EGAT is still unable to meet its social commitment of providing sufficient water for farming on a long-term basis, and controversy over the possible negative impact of the dam is unlikely to be solved to the satisfaction of both parties (*Daily Manager*, 24 January 2001: 13).

Away from the Mekong system, the sudden outbreak of amoebic infection, a rare water-borne disease, early in February 2001 in Thailand caused quite a panic, since the two patients afflicted with it died after a short illness (*Bangkok Post*, 7 February 2001: 1-2). The free-living amoeboflagellate, of which the dominant and most dangerous strand is *Naegleria fowleri*, causing primary amoebic meningo encephalitis (PAM), is said to invade the brain and meninges via the nasal mucosa and the olfactory nerve. The other strain, *acanthamoeba*, which is more diverse but less dangerous in nature, can enter the human body through the skin and the eye, causing injury to the brain, the skin, or eyesight. It is not clear whether the incidence of the disease is confined to the rural environment alone, but the interface between the winter and the dry season is believed to favour their growth. The 17 year-old female victim from Suphanburi in central Thailand is believed to have been infected with the second amoebic strand through bathing in a neighbouring Kanchanaburi Dam reservoir. The other patient, a 27 year-old man from Bangkok, appears to have been exposed to rural temple water contaminated with the first strand (*Matichon*, Bangkok, 7 February 2001: 1&24). All amoebae-infected patients in Thailand since 1996 are said to have contracted the disease through open wounds or cuts (*Nation*, 8 February 2001, A3). While the amoebae are said to thrive in natural water bodies, especially high-temperature, stagnant ones, policymakers are faced with something of a dilemma: destroying them in their natural habitat would amount to destabilising the natural ecological balance, but leaving them intact would leave human beings vulnerable (*Krungtheprakit*, Bangkok, 8 February 2001: 11&14). On the other hand, one is tempted to regard the incidence of the disease as related to environmental deterioration. If prevention is better than cure, the public and the industrial sector have been urged not to create a suitable habitat for the amoebae by turning stagnant pools of water into waste dumping ground (*Thairat*, 8 February 2001: 12). Consumption of the amoebae-contaminated water, with the help of filtering or chlorination, is, however, said to be safe.

In the southern province of Rayong, which borders Myanmar, much concern has been raised over diseases transmitted and pollution associated with immigrants. These immigrant laborers, often with tentative legal status, do not necessarily enjoy the same standards of access to sanitation and waste disposal facilities. Moreover, it is extremely difficult for Thai authorities to monitor this mobile population, which may reach 100,000 in Rayong Province alone. This transboundary issue is linked to both environmental and social concerns, which existing institutions have not been able to deal with effectively.

Industrial pollution in rural as well as urban areas certainly gives cause for concern. A recent study by the Ministry of Industry has shown an alarmingly high level of toxic substances in the soil around factories located in three potentially polluted industrial areas: tanning factories in Samut Prakan, battery-recycling units in Ratchaburi, and lubricant-oil recycling plants in Bangkok (Kamol Sukin, "Effort to make owners pay for toxic clean-up," *Sunday Nation*, 4 February 2001, A1-A2). Chromium contamination is said to be as high as 2,300 milligrams per kilogram, the maximum level of 8,400 mg/kg being attained near the sludge storage sites of their wastewater treatment plants. The contamination level is set at 100 mg/kg. Again, lead contamination at the battery recycling factories and hydrocarbon contamination at the used

lubrication plants is said to be at least 10 times higher than their normal levels in soil. In order to ensure that the environmental and ecological damage is brought under control, it has been proposed that the 1992 Industrial Works Act be revised to specify that the culprit factories themselves will shoulder the cost of the enforced cleanup. Of course, one major problem is that the Industry Ministry has no standard for soil contamination. It is hoped that the new regulation will automatically force industrialists to prevent such contamination since it will be cheaper than cleaning it up later, even though the plots of land at issue are privately-owned. It is, however, doubtful whether the regulation can be effectively enforced, the biggest obstacle being the high cost of cleanup. The revised law will cover all industries and contamination by every type of toxic substance. Elsewhere, in view of the high cost, there is selectivity. For instance, in districts that are not agricultural zones or underground water consumption areas, it is argued that it may not be worth cleaning the contamination up despite the fact that contamination recognises no border. A “superfund” for the cleanup may, of course, sweeten the pill. Otherwise, apart from prevention, less costly alternatives exist in the form of incineration and secure storage of waste with close monitoring and public participation.

5. Environmental Degradation: A Macroscopic View

While the foregoing evidence from urban and rural areas in the country is, at best, anecdotal, it does give clear indications of the country’s environmental malaise. To be sure, the enormity of the environmental governance task confronting the state and society as a whole should in no way be made light of.

In the past century and a half or so an unholy alliance between export-led growth, population increase coupled with its movement, industrialisation, and urbanisation could be seen to have conspired to wreak havoc on the country’s apparently robust environment. It has been found in a recent research project, for instance, that 15-year old mangroves in Thai forests have had to absorb up to an equivalent of 15.04 tons of carbon per *rai*—three tons higher than in Japan (*Bangkok Post*, 7 October 2000). The economic growth phenomenon, which might aptly be termed Schumpeterian “creative destruction” since it has generated an illusion of being creative, started off in the mid-nineteenth century when the country was, *manu militari*, compelled to open up. In the initial stages of economic *laissez faire*, such demands as were made on the environment in the interest of promoting export of primary products from the farms and the mines were not too exacting: the country’s economy took time to transform itself from a closed, subsistence into an open, exchange one. However, with the adoption of partial planning in 1961, when the first six-year development plan was launched, such demands, propelled as they have been from above, have gone beyond the carrying capacity of the environment, no matter how robust the environment may appear to have been at first. Of course, problems faced by the country with hazardous waste disposal, soil degradation, water quality deterioration, chemical and radioactive poisoning, coastal and marine degradation, and loss of biodiversity are in no way unique to it and are shared by most of other developing countries.

Detractors would put the blame for environmental destruction on the adoption of a “copycat” or “subservient” pattern of growth. Indeed, within academic circles, there is no dearth of disciplinary explanations. Some natural scientists argue that massive environmental destruction is inevitable when the human population is expanding exponentially. This explanation is quite relevant to the Thai predicament since population explosion has been a clear concomitant of economic growth. This was true particularly of the period between 1988 and 1997, prior to the onset of the Asian economic crisis, when double-digit growth placed the country in the league of the world’s fastest-growing economies. Others emphasise that far too many new substances have been introduced into the environment before their impacts on other species let alone ourselves have been ascertained. Economists tend to argue that people are generally too greedy and short-sighted, while Marxists, viewing things from an interdisciplinary perspective, concentrate their attention on a subset of the human race, the capitalists, and agree with moralists in arguing that this class of people is particularly avaricious and myopic. Various disciplines in isolation or in combination do boast their preferred explanation of the environmental crises consistent with their pattern of thinking, and there is no particular reason, at the intellectual level at any rate, to take issue with any of these explanations rooted in individual disciplines of thought. Admittedly, each explanation does provide useful insights (Richard B. Norgaard, *Development Betrayed: The End of Progress and Co-evolutionary Revisioning of the Future*, 1994, London: Routledge: 65).

Academic explanations are certainly useful for clarity of thought. Yet it may be argued that the crux of the environmental crisis rests on how the man in the street perceives the inner workings of practical politics considered to be the means by which the government carries out its mandate of maximising popular welfare. It is asserted that, in the last three decades, a substantial proportion of the impressive economic growth in Southeast Asia, of which Thailand constitutes part and parcel, can be attributed to a “one-off fire-sale of natural resources,” which means that it may be harder to grow so fast when the trees, the fish, and the soil are depleted. For the individual Thai there are said to be more personal concerns: he or she remembers fishing in a river or drinking from a stream as a child and regrets what has been lost when poisonous waters are seen today (Mallet, 1999: 20-21). Again, a series of articles in the *Daily Manager* (e.g., 16 October 2000) purporting to represent such a viewpoint lament the fact that planned development in the country has resulted in pauperisation of the masses whose fate has been sacrificed at the altar of “development.” It is claimed, in particular, that since the inauguration of the trend-setting first development plan of 1960, first priority has invariably been given to promotion of and assistance to the industrial and business sectors, in which politicians have obvious vested interests, at the expense of agriculture. In particular, it has been claimed that industrialisation, be it in rural or urban areas, reflects conspiracy on the part of politicians and business interests to ruin the farming class and turn it into an impoverished, landless proletariat. Again, at a *Bangkok Post* seminar on the People’s Agenda held in October 2000, a number of academics and activists committed to acting as the man in the street’s spokesmen have pronounced upon the government’s performance record. From this viewpoint most of the damage to the environment and rural communities has been inflicted by the government itself. In public-sector projects in a typical top-down “development” programme, the government, itself a product of electoral politics mired with money and power, is said to have acted as an independent interest group unaccountable to people at the grassroots level. Such projects are said to have typically allocated resources, without consulting localities concerned, to one group of people to the detriment of another. The rural sector is thus said to have been robbed of resources necessary to sustain its livelihood. Experience with “promoted” private-sector projects in monoculture is said to be equally dismal. They are said to run counter to traditional norms in that they have been chemical-intensive in nature and to have destroyed the soil and polluted the water and have landed farmers in a mountain of debts. Degradation of natural resources and the resulting poverty stemming from both public-sector and “promoted” private-sector projects are predicted to eventually lead to the collapse of the countryside. In the meantime, lost in dire poverty and hardship, some villagers have been observed to resort to endless, frustrating protests, while others, particularly young ones, have been seen to migrate to the cities in search of better lives. For their part, the ruling elite is said to have suffered from “intellectual bankruptcy,” indiscriminately jumping on the corporate-led globalisation bandwagon without realising how this could harm the economy and the communities of the country. In sum, the government policies of industrialisation—whether import-substituting or export-promoting—and export-led agriculture are believed to have resulted in a rapid growth of the urban sector while leaving the farming, rural one bankrupt.

The charge levelled at the government is, admittedly, grave, and there appears to be damning evidence in abundance to support it. How well-founded it is, however, is difficult to say at this point in time. Intellectual integrity militates against taking sides in this raging controversy. Indeed, a completely impartial record of the government’s “development” performance may never be written, the matter at issue being highly politicised and emotive. No doubt, there are people who have benefited greatly from the government’s projects in the rural sector, as is evident from visible improvements; but, naturally, the gainers have no incentives to be as vociferous and conspicuous as the losers whose violent protests are all too familiar to residents of and visitors to Bangkok.

Simple public finance analysis could tell what has gone wrong with public policies. Apart from obvious sins of omission, “government failure” as opposed to the well known “market failure” met with in the literature of public finance is said to be rife in the Thai government’s management of resources. It is first and foremost “failure of preference,” since without local consultation the government is unlikely to produce the mix of public services that is socially desirable. It is also “failure of production,” as resources are squandered in producing things not usable to the bulk of the rural masses. Finally, it is “failure of delivery,” since the target beneficiaries fail to reap the benefits of public-sector projects (Howard W.

Tuckman, "Social Efficiency and the Provision of Collective Services," *American Journal of Economics and Sociology*, vol. 43, no.3, July 1984).

If the Thai government's management of natural resources has dismally failed the public finance test, it is also not likely to perform much better in such other tests as those of accountability, transparency, coherence, and sustainability.

"Government failure" may also be said to have arisen out of the government's ineffectiveness in the face of industrial pollution. In typical public-finance cases of "market failure," industries minimise their private costs and impose negative externalities in the form of social costs on society at large.

Fortunately, as far as public-sector projects are concerned, changes wrought in the environment have not always been irreversible. Seven years of impoundment behind the Rasi Salai Dam, one of the most controversial public-sector projects on the Mun, a major tributary of the Mekong, is said to have left nothing but devastation in its wake while irrigation water distribution, the chief benefit claimed for it, has not been effective (Sanan Chuskul, "Opening of Rasi Salai Dam—Return of Communal Life, Man, Fish and Wetlands," *Weekend Matichon*, vol. 21, no. 1064, 8 January 2001: 15). Opening of the seven Rasi Salai Dam gates in July 2000 to alleviate the negative environmental and social impact of impoundment and to allow land rights survey and stock-taking of the situation to begin is said to reveal the spectre of submerged wetlands (*pa tam*) filled with decomposed flora, paddy fields cluttered up with waste and eroded river banks.

In its former natural, pristine state, every nook and corner of the Mun riverbed and the wetlands served as an ideal habitat for fish in the flood season (especially from May to June), when fish migrated upstream for spawning, and groups of inhabitants in the area were in the habit of trapping big fish weighing eight to ten kilograms each, allowing the rest to go free. In fact, each wet season catch used to be so copious as to allow the trappers to distribute it among relatives and sell the leftovers or preserve them with locally-mined salt for subsequent bartering for rice. Similarly, in the dry season (especially from November to December), "hibernating" fish would return from cracks in the river bed and wetlands to the river mainstream in search of a safe haven, and this would permit another large-scale fishing expedition. Resources were also invested in the purchase of fishing gear, in deepening and widening cracks in the river bed, and in excavating small streams linking the river and the wetlands. In fact, claims to "ancestral" rights to fish-trapping areas and possessory rights to man-made structures were so generally recognised in an atmosphere of communal solidarity and give-and-take that they are known to have been bought and sold openly.

In addition to fishing, rice farming could be practised on the banks of the Mun even in the dry season owing to the ubiquity of water, but was particularly favoured by the advent of rainfall from April onwards. Equally, dry-season vegetable horticulture took place on both banks of the Mun, where all manner of insects and reptiles which thrive there would later become food for fish in the wet season.

Such delicate ecological balance is said to have been ravaged by the impoundment of the Rasi Salai Dam. In the wet season of 2000, after the opening of the dam gates in response to popular demand, people reported sightings of big fish (70 to 80 kg each) and even the much larger giant catfish, migrating upstream from the Mekong and "spectacular" catches after seven years of interruption. In one case the reporter of the sighting could only stand idly by and watch, since he no longer had the right gear with him to catch big fish with. Witnessing the fish's homecoming, inhabitants of the area hold high hopes for the return of the good old times and the restoration of the natural ecological balance. Of course, the quoted article's author, who paid a visit to the area in December 2000, could see nothing except visible traces of the devastated wetlands. It remains to be seen whether the long-term impact of opening the dam gates will vindicate local inhabitants' optimism.

Of course, there is no such thing as a free lunch, and the other side of the coin also has to be looked at. Besides Rasi Salai the Government has also authorised the opening, during the four months of the flood season, of the gates of the Pak Mun Dam situated quite close to the Mun's confluence with the Mekong. The Pak Mun project has been even more controversial than Rasi Salai. Opening of the dam gates has

been done for very much the same reason as Rasi Salai upstream of the Mun, and it remains to be seen whether the ecological balance can similarly be restored. It is, however, claimed by the Lao authorities across the Mekong that opening of the Pak Mun Dam gates has caused erosion on its bank of the Mekong, thereby adversely affecting farming in the downstream Lao province of Champassak (*Bangkok Post*, 17 February 2001: 2). This needs to be further investigated.

6. Indigenous Management Regimes for Natural Resources: A Microscopic View

If the general state of the environment leaves much to be desired, the presence of pockets of indigenous governance which have been left largely intact here and there is encouraging.

A social impact assessment (SIA) of the planned Kaeng Sua Ten Dam in the northern province of Phrae reveals much that is invaluable in the indigenous system of natural resources management: people use natural resources not only for subsistence but also for recreation and spiritual and cultural activities. Unfortunately, this fact has all too frequently been taken for granted. The villagers' desire to protect the forest in the proposed dam area is said to be in the interest of strengthening community ties, and the erosion of such ties consequential upon the loss of the forest would inflict immeasurable damage on them. Thus, left to their own devices, villagers claim to have set up their own community rules prohibiting members from felling even a single tree, and have even helped to catch poachers and illegal loggers in the Mae Yom National Park in the projected dam area. The natural environment being indispensable for the community's cohesion, way of life, and identity, post-construction resettlement of the dam area's inhabitants would thus, it is alleged in the study, entail disintegration of the community, as they would not be able to survive on forest products as before. They would, it is argued, live in dire straits, since they would not be able to adjust to a new way of life. Moreover, the villagers' age-old, tradition-hallowed knowledge about the forest and its biodiversity would, it is feared, be lost for good. The authors of the SIA for the dam maintain that experience from the notorious north-eastern Pak Mun Dam has taught villagers a lesson: fishermen in the Pak Mun area have been robbed of the means of their livelihood as a result of the dam's construction. Moreover, the community's traditional affinity with the Mun river—a major tributary of the Mekong—has been severed, and relationships among community members have changed for the worse (*Bangkok Post*, 15 October 2000).

For centuries the mountains of Thailand have been dotted with small irrigation systems, called "*muang faai*," built and managed by farmers. Traditionally, streams are dammed with a sturdy lattice-work of materials from the forest: rocks, hardwood, bamboo, and earth. The dams raise the stream level just enough to allow diversion into an irrigation channel that flows by gravity down to the fields. Any silt flows over and through the structure or is carried into the diversion channel and onto the fields. The *muang faai* has always been accompanied by a strict set of rules maintained by *muang faai* leaders, to ensure that the surrounding forest is safeguarded and the water distributed fairly to all members of the irrigation group. Since many of the forests have been logged over the past decades, construction materials needed for annual repair are no longer readily available and free of charge. In the rainy seasons mountain streams become wilder and damage structures more frequently, while soil washed from bare slopes clogs the channels. Unfortunately, to eliminate the need for repairs, many farmers have replaced the traditional structures with steel and concrete dams. These have the disadvantage that they are not as adjustable as the traditional dams, a problem especially where the forests have been cut down. Eroding soil and faster run-off can also cause erratic changes in streams and channels, demanding adjustments in dam height and channel maintenance. But whatever the material used, both modern and traditional dams require the forests as nature's structure.

Another example of rational natural resources management by the indigenous people is provided by Mae Chaem District, Chiang Mai Province. Surrounded as they are by the formidable fortress of the Thanon Thongchai mountain range, the Mae Chaem forests had been well preserved and untouched by outsiders for many decades until the 1980s, when they were exposed to large-scale cash-crop planting sponsored by international aid agencies in an effort to cut opium cultivation on the highlands. Yet, despite the best intentions, the novelty led to extensive land clearing, rapid deforestation, soil erosion, and drought, and the eventual abandonment of the programme has left visible environmental scars. This has entailed consequences quite contrary to those following from the indigenous regime of managing natural resources.

The approach adopted by the government to put an end to the environmental drift has been to turn the last remaining forest areas into national parks, wildlife sanctuaries and watershed areas and to outlaw human settlement, thereby making the area of 3,361 square kilometres encompassed by more than six national parks state property. Faced with this, indigenous people are banned from living and farming on what they claim as their “ancestral” lands and are locked in mortal combat with the authorities over land rights.

As an alternative to the radical government remedy, CARE Thailand, funded by the new Danish Cooperation for Environment and Development (DANCED) through CARE Denmark, has launched the Integrated Natural Resources Conservation (INRC) project aimed at broadening community planning by bridging the gap between villagers and government officers (Ukrit Kungsawanich, “Out of the woods,” *Bangkok Post*, Outlook section, 10 February 2001: 1). Adopting the bottom-up approach through reinforcement of time-hallowed community participation in natural resources management, whereby efforts are made to settle conflicts over the use of natural resources between ethnic groups and state agencies, CARE has worked closely with *tambon* (sub-district) administrators in the project area.

In retrospect, mistakes of past management imposed by international aid agencies can be pinpointed. Contrary to previous experience, forest encroachment in the Mae Chaem area occurred when villages were dominated by profit-driven, cash-crop plantation activities. Moreover, as mono-crop plantations consumed huge amounts of water, water wars between highlanders and lowlanders ensued. Instead of imposing a set of solutions on the communities, the CARE new bottom-up approach claims to have established village committees and mini-watershed networks to work out rules and activities for forest conservation. This is similar in nature to the “meta-plan,” the collective management model adopted by the pre-Columbian Kogi Indians and emulated in Europe (Pierre Delannoy, “Les Indiens kogis, nouveaux sorciers du management,” *Paris Match*, 1 February 2001: 27-28) and the indigenous management system in the area itself. With all stakeholders being able to air their concerns over round-table discussions, such battles are said to have subsided. Besides, the village committee, comprising, as it does, district officials who are in touch with forestry officials, is said to save the communities from possible eviction threats.

Environmental conservation tactics spontaneously proposed by local communities themselves are said to be effective and address root causes. In its search for mutual understanding, the watershed management network committee is known to frequently meet to discuss concerns over common property areas. For instance, in a remote Karen hamlet of the Ban Mae Ya Sang village, community members are said to have devised their own set of rules and regulations to preserve the ecological balance of their important tributary, the Mae Raek, which feeds the majestic Chao Praya system cutting across central Thailand. According to the rules such things as used pesticide containers reportedly have to be buried properly instead of being dumped in the creek, and violators are known to be fined according to village rules. Other than paying a fine, wrongdoers are also said to face social punishment if they intentionally cut down trees or start fires in protected areas to expand their plantations. On the more positive side, important forest areas are said to be demarcated, and there is said to be a deliberate effort to keep the entire forest relatively intact. The Karens are said to believe that the forest near a watershed area is sacred and no member of their community would dare to cut down trees in it. Moreover, they appear to have adopted the tree-ordination ceremony that has been practised by forest conservation groups elsewhere. In the ceremony, sacred *sutras* are chanted and, once selected trees have thus been blessed, saffron robes being tied around them, they are deemed to be holy and are prohibited from being felled.

Apart from building up local institutions and reinforcing indigenous natural resources conservation strategies, CARE is also said to have initiated sustainable land management of rice paddies, home gardens, animal farms, and crop rotation. There is no doubt that sustainable farming practices are the key to forest conservation in Mae Chaem District. In the past slash-and-burn agriculture has resulted from mono-crop production. As an alternative to this unsustainable practice, CARE is said to have encouraged a self-sufficient lifestyle through crop rotation, small animal husbandry, handicrafts, and cotton weaving. With the growing influence of giant commercial enterprises, CARE is known to have added one more stakeholder to its INRC model, which now incorporates not only NGOs, government agencies, and communities but also the agro-industrial giant Charoen Pokphand Group (CPG).

Although CARE's approach is said to be bearing fruit in the form of slow recovery of forest areas, the threat of future deforestation remains, the constant challenge being to find a proper balance between economic gain and ecological well-being. If it is true that local customs, at any rate within certain tribal groups, are in favour of conservation, CARE's facilitating role would come in handy when communities are threatened with conflict, especially over the distribution of economic gain, which could get out of hand. The mountainous north of Thailand is home to numerous tribal groups and a unique gamut of flora and fauna. In the teeth of conflicts over rights to natural resources, a fresh approach termed INRC, something in the nature of a revival of tribal age-old customs, bringing, as it does, all stakeholders to the discussion table, may yet help preserve the country's biological and cultural diversity.

7. Imposed Management Regimes for Natural Resources

While the government's overall development effort is relevant to environmental issues, management regimes for natural resources may be said to be no less so. It is still not possible to say how effectively the constitutional mandate of the state on the environment is being carried out, though at least one thing appears to be clear from its management of natural resources: it may be said to have placed too great reliance on an open-access regime. The difficulty with this approach is not so much that it provides the impetus for the abuse and overuse of forest, water, and fishery resources (Mingsarn Kaosa-ard and Pornpen Wijukprasert, eds., *The State of Environment in Thailand: A Decade of Change*, August 2000, Bangkok: TDRI)—infamous ills of the tragedy of the commons—as that it condemns most rural people to lifetime enslavement to the use of such resources in their natural state, their dependence on them being total. The regime, apparently inherited from Roman Law—the paramount wellspring of Thai legal erudition—dealing with *res nullius* (things belonging to no one), is convenient to run since it requires practically no management effort on the part of the authorities. As in Roman Law *occupatio*, or taking legal possession of a fragment of such resources, tends to generate the dangerous illusion of ownership not only of the captured fragment, but also of their entire mass. In actual fact, the main body of these resources is *de jure* in the public domain and is therefore not susceptible to private ownership. In a manner typical of the John Stuart Mill's model, such widespread presumption of ownership leads the bulk of the rural people to build their life and even their community around the use of these resources and gives them no incentive whatsoever to exert themselves by, for instance, keeping their own fish ponds or cages instead of depending entirely on the natural supply of fish in rivers. While, in the past, the man-land ratio was still favourable the regime performed perfectly well. However, when dams are seen to disrupt the natural flow of rivers and start to adversely affect the natural fish supply, or when there are too many people exploiting dwindling resources, people do not hesitate to clamour in protest. "Traditional rights" to natural resources and "robbing the rural people of their means of sustenance" then become stock phrases in battle cries against the authorities. The open-access system has not only prevented the government from inculcating a sense of self-reliance among most of the rural people but clearly shows that the government's wounds sustained from popular protests may be said to have been self-inflicted. What is more, business interests known in Thailand as "capitalists"—a term construed not necessarily in the Marxian sense—go out of their way to exploit the rural people's over-dependence on natural resources and make use of them as their proxies to despoil the countryside.

Perhaps the more deplorable aspect of the so-called "open-access" system is not that the rural people have been misled into believing that such access works to their advantage but that, in reality, the legal regime could give land ownership to the privileged few. Thus it is claimed that, by dint of the landmark Land Law of 1901, one elitist family of the country was able to occupy, through their labourer proxies, and eventually came to own, a vast expanse of land (Walden Bello et al., *A Siamese Tragedy: Development and Disintegration in Modern Thailand*, London: Zed Books, 1998: 138-139).

Unfortunately, Thailand presently has no law to limit the amount of land an individual may own, nor to impose high penalty taxes on idle land held for speculative purposes. It is therefore possible for a person to own a great deal of land and leave it entirely idle. At the same time, there is a mass of landless persons who lack a firm basis, in terms of *terra firma*, of livelihood.

Landlessness, which has inflicted untold hardship on the rural poor, appears to have come to a head in the form of illegal encroachment of unused private plots in 14 villages in Lamphun, North Thailand (Onnucha Hutasingh, "Landless farmers take over unused plots," *Bangkok Post*, 12 February 2001: 2). The encroachers seize unused land, à la Zimbabwe, and distribute it among members of the group, thereby taking the law into their own hands. In fact, encroaching villagers know full well that their actions are illegal, but say that they are left with no choice but to act so as to draw the authorities' attention to their long-standing land problems. In one case, a neighbouring 426 *rai* private plot owned by an absentee landlord family has been left unused for over 40 years, though the law is said by the encroachers to give the state the right to revoke land titles to private property left unused for more than five years. It is claimed that the private plot at issue used to be a public grazing area and a public farmland. While local farmers had occupied the plot for generations at a nominal rent payable to the state, they had not been given land-right documents during their occupation. On the other hand, changes occurred when a land speculator, on the strength of the rumoured state plan to evict local farmers, enforced a fire sale, presumably of possessory rights to the plot, a large part of which has been turned into golden teak plantations, the rest remaining unused. Apparently the Land Department has managed to issue land title deeds to the speculator, the legal fiction of sale by the state presumably being used for the purpose. How ownership could be obtained only when land thus changed hands is a mystery, law on land rights being in limbo—a state of affairs not different from that obtained in ancient Rome prior to legal codification in the form of the Twelve Tables. Of course, the villagers feel that they have been treated unfairly by the state, and this constitutes another reason for the land encroachment. Unless concrete measures are drawn up, it is feared that encroachment on private land will continue, the Lamphun incident being the thin end of the wedge. Most Lamphun encroachers are members of the Alliance of Northern Farmers, which has brought together 50,000 farmers in 500 villages in the upper north. They call on the government to urgently revise land reform policy by allocating land plots that have been left unutilised to landless farmers who are in dire need of land for cultivation.

Indeed, according to recent research sponsored by the Thailand Research Fund (Ploenpote Atthakor, "Urgent measures urged to tackle land shortages," *Bangkok Post*, 12 February 2001: 2), a fresh direction in land management is urgently needed to help the country combat land shortage. It has been pointed out that state land management has been a total fiasco. In the absence of laws to limit land ownership (already noted), it is argued that a vast area of the country is now in the hands of a few wealthy landlords who have acquired it largely for speculation, while leaving it unused. It is estimated that up to 70 percent of Thailand's land area is not in use or under-used as a result of land speculation—a rampant phenomenon during the economic boom preceding the crisis of 1997. This has represented an economic loss of no less than 127,384 million *bah*t per year. Pathum Thani, adjacent to Bangkok, with its ideal irrigation system, has been cited by way of illustration. Unused land in the province was recorded at 31,107 *rai* in the wake of the economic slowdown, plunging from 18,942 *rai* at the peak of economic boom in 1989, when land was too expensive to develop. The research project has also found that up to 73 percent of land with Nor Sor 3 Kor documents is "owned" by wealthy people who individually own over 200 *rai* of land in possession. The same thing is true of land with Sor Kor 1 documents, with 44 percent of land in this category falling into the hands of large-scale landlords. Of course, while such documents are not title deeds, they do guarantee eventual ownership.

The research project's thrust is its concern over land shortage that could, as in the case of the Lamphun's land encroachment (already noted), result in a rising conflict between the parties concerned. What is of great significance is that, while the current land shortage problem is not solved, expansion of agricultural land will no longer be possible.

Topping the list of remedial measures recommended for solving land problems are progressive land tax and land re-adjustment, which could help boost the economic value of land resources. The former, without which landlords will continue to keep the land unused, is a velvet-glove substitute for such radical land reform as seems to have been suggested by the Lamphun encroachers, while the latter is aimed at increasing the effectiveness of land use. It has also been suggested that the concept of a land bank should materialise so that unused land may be mobilised and allocated to landless farmers. Of course, the land reform process is recommended as part of a package made up of such efficient measures as land banks, land re-adjustment, and land demarcation. The last element, marking off degraded forests to be given to

landless villagers under the land-reform scheme, is destined to prevent further forest encroachment. A mechanism for land and land-related conflict management, including a tribunal and a working relationship between local administration and informal groups, is also called for. This is believed to offer a more effective alternative than the market mechanism, which enables wealthy landlords to rid the poor of land while much of it has been left unused.

Much of the foregoing analysis is confirmed by the People's Network of 25 River Basins, a grassroots movement in northern Thailand. The network claims that landlessness and land-rights conflicts stem from the government's draconian system of top-down, centralised management of natural resources, allowing state authorities to exploit natural resources under their jurisdiction whenever they want to do so without heeding local concerns. This is why countless forest villagers are evicted and their status is reduced to that of landless labourers while, at the same time, mining concessions and tree plantations are allowed to thrive in "national" forests. This is also why the Irrigation Department believes that it can dam up any river in the country without concern for the locals' uprooting and impoverishment.

To undo such central control, the grassroots movements in various parts of the country are in consensus that the locals need to have more say in managing natural resources—be they land, forests, rivers, mountains or ores—in their areas. It is relevant to point out that the demand for community rights to co-manage nature resources with the state is endorsed by the 1997 Constitution. There are, however, no organic laws to make things happen, and this has been attributed to bureaucratic resistance.

To press for land reform, the grassroots movements are banking on His Majesty the King's philosophy of self-sufficiency, according to which each farm household needs about 15 *rai* of land to be self-sufficient. Past experience has shown, however, that land allotted to the poor all too frequently ends up, by hook or by crook, in land speculators' hands. The grassroots movements of forest villages in the north and the west believe this problem can be solved if the law recognises their traditional practice of land management, which focuses on community land security rather than private ownership.

An economic perspective does serve to corroborate the gloomy upshot of the foregoing politico-juristic analysis. The open-access system may be said to be conducive to a facile treatment of natural resources as either "free" or "public" goods. In the former scenario, "capitalists" and their rural proxies are lured into behaving as though such resources are freely available for the taking without a limit, while, in the latter, with the government being duty-bound to expend taxation proceeds to ensure the availability of such resources for "public use," the conspirators act as "free riders" and contribute little or nothing to their upkeep. Of course, a licensing system would have avoided all such complications, rationed the use of resources more rationally, and encouraged people to depend more on their own efforts.

8. Adoption of Clean Technology

Every cloud has, however, a silver lining. Adoption of clean technology, which emphasises environmental management by reducing, re-using, and recycling resources before and during the manufacturing process rather than wait till the end of the process to clean up waste and pollution, has enabled 270 factories, nearly all of which are owned by multinationals, to achieve the ISO 14000 international management standard. Fortunately, clean technology is said to be more acceptable to industry, as it is becoming increasingly clear that protecting the environment is not only good for the corporate image but also good for profits (interview given by Mr. Ratchada Singalavanija, deputy director-general for industrial works, October 2000). Since such manufacturing resources as oil, electricity and water are becoming more expensive, clean technology is said to enable factories to lower their costs by making changes in their production processes (interview given by Mr. Pilan Dhammongkol, vice-chairman of the Federation of Thai Industries' environment committee, October 2000). For instance, Mr. Dhammongkol's own enterprise, one of Samut Prakan's oldest textile-dye factories in the industrial-belt outskirts of Bangkok, turned to clean technology a decade ago. This has meant using textile dyeing machines which consume less water, energy and chemicals and rely on high-density colours which curtail processing, and the savings from the economical use of colour, chemicals, water and energy and the pruning of costs of wastewater treatment is said to have amounted to as much as 11 million *baht* in 1999. Of course, in the past, a major obstacle to the adoption of clean technology is said to have been the huge cost of building facilities for

treating wastewater, disposing waste, and cleaning up air emissions. This was thus considered to be a luxury for factory owners because it contributed nothing to productivity.

As part of official industrial policy, the Industry Ministry is said to have collaborated closely with the Pollution Control Department, the Thailand Environment Institute, and the Federation of Industries to promote the adoption of clean technology. Thus personnel in 150 local factories are said to have been trained to adopt clean technology in their manufacturing processes. For its part, the Industrial Works Department also hopes to convince financial creditors and the Board of Investment to use the adoption of clean technology as a policy criterion in granting loans and giving investment incentives.

Despite such optimism on the part of some bureaucrats and industrialists, it is submitted that the adoption of clean technology in industries could only be envisaged over the very long term as old equipment wears out or becomes obsolescent and as their management becomes more enlightened. In the short and medium term, however, short-sighted factories will persist in choosing to turn off their water treatment facilities, and ignore the world and the environment without caring whether their success will last. After all, to cite just two infamous examples, the north-eastern Konkaen paper pulp and the south-western Kanchanaburi Klity Creek lead extraction plants, which are known to have seriously contaminated local water supplies, have enjoyed incredible longevity in the teeth of public outcry. The Klity Creek case calls for some elaboration. Its lead separation plant went into operation upstream some 20 years ago. A study undertaken by the Department of Pollution Control revealed that the lead content in the creek is 10 times higher than that deemed safe. It also discovered about 15,000 tonnes of lead-laden sediment piled up as high as 30 centimetres along the course of the 19 km creek (*Bangkok Post*, Outlook section, 30 January 2001: 1). It is unfortunate that the Public Health Department has been slow to react. It waited for almost two years after the contamination was reported to begin medical check-ups and blood tests among the 200 villagers living along the creek. The first blood test, conducted in 1999, showed that the amount of lead in most villagers' blood was four to five times higher than the 4.9 microgrammes per decilitre (ug/dl) in the average Thai adult. Another test was administered in early 2000, and, on average, the level had not receded. There is, however, no such thing as a "safe" level. The accumulation of lead in the human body, even at close-to-zero amounts, is said to be able, in the long run, to damage brain cells and the nervous system. It is also known that, since 1994, hundreds of cattle have died after drinking water from the stream and at least seven residents of the lower Klity village are believed to have died of causes related to lead poisoning. Most villagers admit that since the lead separation plant was ordered closed in 1998, the water has improved. A scheme proposed by the Pollution Control Department, after the failure of the initial attempt by the lead plant, will include dredging of the lead-laden sediment, and the dregs therefrom will then be buried in a landfill. The dredging will take at least four to five years, the rough access road meaning that work can be carried on for only the three or four months in a year when it does not rain. It will, of course, take longer before the villagers can use water directly from the creek for consumption, and even longer before they can eat the fish in the river. Ironically, the contamination has not prompted the government to review its policy on mining and its impact on the environment. Faced with such a state of affairs, government environment agencies have no option other than to monitor such end-of-pipe solutions as wastewater treatment and waste incineration.

9. Afforestation and Rehabilitation of Mangroves

As in industrial pollution, measures to tackle environmental degradation head-on need to be both short- and long-term in nature. Even short-term steps, by their very nature, take time to make themselves felt. Eleven years after the banning of commercial logging, results became visible only during the latter half of 2000. It is claimed by the Director-General of the Royal Forestry Department that the country's forest cover has increased, from about 80 to 102 million *rai* or by 5 percent over the past few years (*Bangkok Post*, 7 October 2000: 2). It is to be noted that the term "forest cover" refers to the presence of the green area whose boundary is defined by law, while "forest density," a measure of the density of vegetation in the forest area, may or may not have increased to the same extent.

The official claim is, however, contested by another source according to which environmental degradation in Thailand has continued unabated. Thus, it is alleged that the forest cover declined from 171 million

rai in 1997 to about 43 million *rai* in 2000, and this has been accompanied by the virtual extinction of 562 varieties of wildlife. With population growth, the quantity of available renewable resources per capita has become more limited. The figure for fresh water is 3,877 m³ annually and the total amount of land (321 million *rai*, half of which is non-cultivable) has had to be shared out among more people, thereby accentuating the problem of landlessness (*Matichon*, 4 December 2000: 16).

Large areas of coastal and mangrove forests are said to have been destroyed to make way for shrimp farms. While it is recognised that prawn farming does bring in earnings and generate employment, government agencies do not see eye to eye on the future direction of policies. The Fisheries Department has been promoting shrimp cultivation, but the Science Ministry is up in arms. As shrimp farming concessions in coastal areas have been found to adversely affect mangrove forests, overall government policy, at any rate for the short run, is, as it should be, refusal to renew them when they fall due for expiry in 2002. In certain provinces, including Phuket, the world-famous southern resort, the Ministry of Science has gone so far as to ban shrimp farming for five years. The five-year ban for Phuket was imposed in October 1997, and the Ministry has been urged not to extend it for fear of loss of a major source of income and employment (*Bangkok Post*, 18 February 2001: 2). In the meantime, the Fisheries Department has been conducting a survey of shrimp farming throughout the province with a view to preparing a report on it for the Science Ministry. In the longer term, large-scale shrimp farms (i.e., those with areas exceeding 10 *rai*) will be required to have wastewater treatment systems in order to meet standards on water discharge being drafted by the Pollution Control Department. Such large shrimp farms account for 20 percent of the country's shrimp-farming industry, which covers over 500,000 *rai* of coastal land and is responsible for most of the discharge blamed for causing water pollution. Under the new standards being worked out, the biochemical oxygen demand (BOD) of waste water from shrimp farms is required to be under 20 milligrammes per litre and suspended solid must be under 70 mg/L, as compared with corresponding levels of 60-100 mg/L and 150-200 mg/L for pig farms, depending on their size, and 20-60 mg/L and 50-150mg/L levels for industrial plants. Smaller farms will be recipients of technical aid, so that they may develop their own low-cost wastewater treatment. (*Bangkok Post*, 7 October 2000: 2).

It is hoped that the new standards, which have not been imposed but have resulted from negotiations between farmers and state officials, will help prevent further environmental degradation and enable the farmers to operate more sustainably (*Bangkok Post*, 19 February 2001: 3). It is estimated that as much as 70 percent of total wastewater will be managed once standards have been put in place, and this will benefit farmers themselves as well as the public at large. However, some farmers claim, perhaps rightly, that some water pollution exists quite independently of their farming activities, water that operators pump into their farms being said to be full of silt. This seems to cast a cloud over the emerging optimism. In the much longer term, suitable steps include adoption, as in manufacturing industry, of clean technology where water can be used over and over again without any need for release, as happens in some farms, as well as rehabilitation of farming areas. Thus, as a result of research findings of the comparatively high carbon storage capacity of old mangroves, making investment in rehabilitation highly cost-effective (*Bangkok Post*, 7 October 2000: 2), international cooperation has been secured to assist the government in research to develop techniques to restore them.

10. Overall Institutional Failure

Remedies advocated for the country's environmental ills have so far been largely technical and include such devices as the adoption of clean technology, reforestation, and the opening of dam gates, which, unfortunately, do not strike at the root cause—overall institutional failure (TDRI, August 2000). The government appears to lack a long-term strategy to prevent environmental degradation, and has inevitably resorted to crisis management. The typical official approach was exemplified on one occasion by the abrupt confrontation of the public with the announced prospect of impending river pollution, in the winter months of 2000, because of the riparian factories' and communities' continuing release of untreated waste into the Nam Pong (a tributary of the Nam Mun, which, in turn, flows into the Mekong) (*Bangkok Post*, 29 November 2000: 4). This appears to reflect sheer helplessness on the part of the authorities despite the panoply of environmental laws at their disposal.

The Thailand Development Research Institute (TDRI) study points to six major constraints on past environmental governance and corresponding lines of institutional reform. First, government institutions dealing with the environment have not moved with the times and it is therefore suggested that they be superseded. Secondly, policies and plans adopted to solve the country's environmental problems constitute mainly technical solutions while institutional responses called for have not been forthcoming. Thirdly, there is an urgent need for a sharper focus on coordination of the government's public relations activities and for such effective devices as environmental taxes to be put in place. In fact, despite past pessimism, Thailand's first "green tax" is about to become reality in order to deal with packaging, which is said to have become a major environmental problem (*Bangkok Post*, 22 January 2001: 2). The Pollution Control Department is said to have put forward a proposal for an excise tax on packaging waste destined to encourage manufacturers to reduce production of packaging materials which are difficult to dispose of and instead produce eco-friendly packaging materials. Initially, five types of packaging—paper, plastic, one-way glass, metal, and aluminium—would be hit by the tax. The proposed tax would vary from five *baht* per kilogramme for foam containers to 0.8 *baht*/kg for paper boxes, while such other packaging materials as beer bottles, more difficult to dispose of, are singled out for the higher rate of one *baht* per piece. Plastic and foam waste costs more to dispose of because it is light. It also requires more trips to transport and takes up more land-fill space than such other materials as paper boxes. It is hoped that the tax will make manufacturers more responsible for the quality of the environment. More fundamentally, the tax is designed to recover the disposal cost of packaging waste. It has rightly been observed that the tax income from this source should not be treated as part of general revenue, but should go towards an environmental fund earmarked for fighting pollution. After all, the green tax is intended to correct environmental ills, not increase state revenue (Wasant Techawongtham, "Commentary," *Bangkok Post*, 2 February 2001: 9). Fourthly, in numerous cases environmental laws are overshadowed by political influence, which needs to be done away with. Fifthly, the government's administrative capacity for implementing fresh environmental laws and practices leaves much to be desired and needs reinforcement. Sixthly, environmental NGOs and communities could play important watchdog and other roles in environmental protection, and there is a need for the government to give them further financial and technical support. The overriding conclusion of the TDRI report is that the future of the country's environment hinges largely on facilitation of public participation, which entails the definition of environmental rights and the development of individual and social responsibility to enforce them.

11. Conclusions

The foregoing TDRI recommendations are so comprehensive and significant, and comments on them could well serve as conclusions.

First, as has been pointed out earlier, antiquated institutions, such as the open-access regime for natural resources, should be replaced by alternative management methods, such as licensing.

Secondly, following incorporation of the first plan for natural resources and the environment into the sixth development plan (1987-1991) and the promulgation of the NEQA in 1992 (already noted), a short-term plan and policy for environmental management has become part of the seventh plan (1992-1996). Moreover, the 1992 Act invests government entities with authority to enforce the laws through medium-term plans. Unfortunately, government entities either at the centre or in the provinces treat environmental plans mechanistically as a budgetary framework, while problems of depletion of natural resources and degradation of the environment resulting from people's unchanged attitudes and behaviour are not addressed. In particular, while the Act empowers state agencies to sue polluters, they frequently fail, in practice, to acquaint themselves sufficiently with its provisions to make effective use of them (*Bangkok Post*, 1 February 2001: 3).

Thirdly, dissemination of public information on the environment by government agencies is not carried out in a sufficiently co-ordinated manner to achieve a common directive or message, and an opportunity has been missed to raise public awareness of environmental issues and encourage, in keeping with the 1997 Constitution, their participation in environmental management. Again, while the NEQA of 1992 does not cover such economic tools as environmental taxation that could be deployed in environmental management, the excise tax administered by the Ministry of Finance may still be used in its place. Yet

this needs to be handled with great care; environmental taxation and enforcement of stringent environmental standards (already discussed) may handicap the country's export industry and rebound to the benefit of its international competitors.

Fourthly, although natural resource management laws have existed in the country for over a century, focus has been on extraction rather than conservation. The first piece of environmental protection legislation, passed in 1975, was almost the first of its kind in Asia. While there is no dearth of natural resources management laws in the country, they are not effective; they give substantial power to ministers or directors-general to lay down the rules or reset them, and the existence of overlapping pieces of legislation prevent their full enforcement by the authorities for fear of stepping on one another's toes.

Fifthly, responsibility for natural resource management is vested in a number of line ministries. While the approach offers the advantage of specialisation, the holistic nature of an ecosystem requires a holistic management model as one sector's activity affects that of another. Conflicts could thus arise among various government ministries armed with different priorities over such things as national parks and mangrove forests. Participatory management on the part of various agencies and other stakeholders is called for at the basin level, as has been the case in indigenous management systems, rather than on the basis of administrative boundaries arbitrarily drawn up. Moreover, successful prosecution in environmental violation cases is rare since, as has been stated, there are too many laws and too many agencies involved—there are about 10 laws on environmental protection and 38 agencies in nine ministries responsible for enforcing those laws—and a legal process that is too complicated and costly (*Bangkok Post*, 1 February 2001: 3). In particular, state agencies have, in many cases, opposing opinions. Argument too frequently involves the question as to which agency is responsible to pursue a case and whether a civil or criminal law should be applied in suing the polluters. An example is the case (already alluded to) of Nam Pong, which has been repeatedly polluted, but the matter has not been taken in hand by any agency over the past seven years. Another notorious case is that of the cobalt-60 radiation leak in which neither the owner of the abandoned cylinders containing the radioactive material nor the Office of the Atomic Energy for Peace has been held legally accountable. Still another major obstacle to effective environmental law enforcement is the fact that the civil code is the traditional basis for determining damages in legal cases. In civil cases, however, only directly-injured parties or owners of property directly affected have the right to sue. Unfortunately, the civil code does not provide a leeway for unaffected communities or individuals to file a case in court. Nevertheless, a long-awaited solution appears now to be in sight (*Bangkok Post*, 1 February 2001: 3). In fact, the Attorney-General's Office is in the process of drafting a Prime Minister's Office regulation to settle conflicts arising from the various laws and ensure coordination among state agencies, members of the public, and NGOs. The proposed regulation is said to prescribe the formation of a special committee to serve as a coordinator helping state agencies and people affected by all kinds of pollution to bring cases to court. It will also determine which state agency is responsible for pursuing legal action against polluters and in which court the case should be filed. The committee, whose members will be drawn from communities, NGOs, state agencies, and academic institutions, will monitor the progress of each case until a verdict is reached and, in addition, lend assistance in the legal procedure. This regulation, as well as another making money from the Environmental Fund available to low-income plaintiffs in pursuing legal complaints against polluters, should, in time, overcome old work habits that tend to die hard.

As far as the enforcement of environmental laws is concerned, the role of the judiciary is no less important than that of the executive branch of the government. The Thai Environmental Enforcement and Compliance Forum, organised by UNEP early in 2001, is an eye-opener with regard to this crucial matter. Judges present at the symposium agreed that they lacked the emotion and sensitivity needed in deliberating on environmental cases, and that such traditional judicial qualities as objectivity and lack of emotional involvement are hindrances preventing them from understanding environmental cases and coming to appropriate decisions. One suggested solution is to give the judges information on environmental cases to help them visualise the environmental impact that could inflict harm on people. Of course, judges admittedly appreciate the fact that environmental cases are unlike criminal or civil cases because of their peculiarity. In the process of gathering evidence, such environmental impact as would become evidence in legal cases could take 10 years to manifest itself—a period too long for normal court procedures to afford to wait—or some such pieces of evidence as polluted water samples are hard to come

by or could not even be backed by scientific explanation. Fortunately, litigation in environmental cases in Thailand is said to be less active than in India or the Philippines, where environmental problems are seen to be more serious (Interview reported by the *Bangkok Post*, 5 February 2001: 4). While Thai judges tend to see environmental lawsuits as civil cases, it is suggested that they could be tried as criminal cases on account of the harmful effects of environmental degradation on life and property, and, where they constitute environmental violation, could be treated as violations of human rights. What is more important is the proposal to establish a special court to specifically handle environmental violation cases. The findings of the symposium point to the need to deal effectively with environmental degradation at the judicial level through judicial reform.

Sixthly, popular participation is a double-edged sword that needs to be employed with caution. Thus the government's plan to allow people who live in the mangrove forests to stay put under strict regulations, while helping with the salvaging of coastal systems, is to be welcome. Again, the *Bangkok Post* October 2000 seminar proposed that villagers adversely affected by government projects be allowed to rent forest land, as business interests have in the past, to work on ecological recovery, this being worthy of support provided that proper safeguards are put in place.

A seminar organised at the privately-run Rangsit University in Bangkok in mid-January 2001 rightly placed an emphasis on the local community's awareness of the dangers of environmental degradation and its determination to protect, at all costs, the natural environment constituting, for many local communities, their touristic livelihood (*Krungdhep Turakit, Chutprakai* section, 31 January 2001: 3). In its finger-pointing effort, the seminar rightly named human activities as being the chief culprit in the environmental crisis and urged a radical change in human behaviour on a day-to-day basis. For instance, refraining from using natural streams as open sewers, from using leaded petrol in motor cars, and from felling trees was considered to be a big step forward. The seminar significantly noted the use of science and technology in the preparation of the environmental perspective for the year 2020 in an effort to ensure that the Thai man in the street enjoys a decent quality of life on a sustainable basis.

Seventhly, the state's management of the environment has been marred by an undue concentration of power in the hands of government agencies, leaving the private sector and, in particular, the localities directly affected by the state's decision-making to play second fiddle, and resulting in injustice, lack of transparency, and discrimination.

Eighthly, the baffling complexity of the government bureaucracy has rendered the state's effort at managing the environment self-defeating. There are at present at least 19 departments or department-level agencies operating under seven ministries that bear the brunt of the environmental management burden. While they place sole reliance on the aforementioned environment act of 1992, there also exists a bewildering body of regulations bearing on the environment, leaving the overseeing national environmental board in a quandary (Thai Rath, 12 December 2000: 15).

Ninthly, the national educational system has not imparted an adequate appreciation of the role of the environment to the people who are thereby unable to cope intelligently with environmental issues (Matichon, 11 December 2000: 7).

Last but not least, national environmental policy seems to have been overshadowed and indeed supplanted by a development strategy that favours the industrial and commercial sectors and vested interests at the expense of natural ecological balance and overall national interest. This needs to be reformulated to take account of such concerns.

Notes on the vernacular sources

Other than the *Bangkok Post* and the *Nation* all media sources are vernacular. However, their names have been freely translated—for convenience sake. For instance, the *Daily Manager* refers to *Phuchadkarn Raiwan*. They can be identified with ease at the National Archives. While several such sources rely on sensationalism for their appeal to the masses, they do play a key role in sensitizing the public to environmental issues.