
# *TRANSNATIONAL TRENDS:*
## Middle Eastern and Asian Views

**Amit Pandya** **Ellen Laipson**
***Editors***

**July 2008**

ISBN: 0-9770023-4-9
Cover photos: Women of the Islamic Universities, Gaza, © Rula Halawan/ Sygma/Corbis; Philippine farmer at dried water pond, ROMEO GACAD/AFP/Getty Images; Man at Vishwa Hindu Parishad rally, New Delhi, India, PRAKASH SINGH/AFP/Getty Images
Cover design by Rock Creek Creative



The Henry L. Stimson Center
1111 19th Street, NW, 12th Floor
Washington, DC 20036
Telephone: 202-223-5956
Fax: 202-238-9604
www.stimson.org

# — 8 —

# Transboundary Environmental Governance in Southeast Asia

*Antonio P. Contreras*

Southeast Asia has always been considered strategically located. Its territorial space and the resources it contains are considered to be important not only to Asia but to the world. Furthermore, its people face a complex array of political, economic, and social challenges whose effects are felt both inside and outside its boundaries. For example, this region is at a significant crossroads for global political security discussions, being considered both a breeding ground and a training ground for various terrorist groups. Meanwhile, its own people are exposed to the risk of the political fallout of a Western-centered anti-terrorist strategy that labels local political movements for autonomy and sovereignty as agents of terror.

Southeast Asia also plays an important role in global environmental security discussions. This is due to its high biodiversity levels, as well as its high rate of species extinction. For example, 59.6 percent of Indonesia's 29,375 vascular plant species are endemic and not found anywhere else. Southeast Asia encompasses 4 of the 20 "biodiversity hotspots" identified in the world. Its rate of deforestation is the highest of any major tropical region, and it could lose 75 percent of its original forest cover and 42 percent of its biodiversity by 2100. The region includes about 20 critically endangered plant and animal species and as many as 686 vulnerable species of vascular plants, 91 species of fish, 23 species of amphibians, 28 species of reptiles, 116 species of birds, and 147 species of mammals.[1] In discussions of this impending ecological disaster, the blame is often heaped upon the peoples of Southeast Asia, citing the inability of its political elites to implement conservation laws, the rent-seeking and environmentally damaging practices of its economic elites, the lifestyles of its middle class, and the cultural practices of its marginalized communities as contributors to environmental destruction.

The rest of the world sees Southeast Asia as a significant contributor to global problems such as climate change, deforestation, and fish depletion. The region is therefore expected to be responsible for the formulation of a solution to these crises. Painted as both culprit and savior, Southeast Asia is expected to establish social order within its states, as well as create a common agenda and course of action through regional groups, including the Association of Southeast Asian Nations (ASEAN), and civil society regional interactions. For a region that contains complex political economies and a rich array of cultural and historical experiences, living up to such an expectation—that is, of implementing good national and regional governance—is a sizeable burden. The wide diversity among states

in the region is both a challenge and an opportunity for addressing issues that cross political boundaries.

This paper is divided into three main sections. The first section focuses on the various environmental issues that confront Southeast Asia as a region, particularly those that are transboundary in character. The second section discusses the societal context within which such issues emerge, taking into consideration the diversity within and among countries in the region.

Finally, the third section presents the various institutional mechanisms through which the region has responded to the environmental issues and identifies the challenges and prospects that such mechanisms face.

## ENVIRONMENTAL ISSUES

Of the many environmental issues that confront the Southeast Asia region, four are transboundary in character: haze and transboundary pollution, water governance in the Mekong subregion, environment-related issues in the South China Sea, and trade in environmental resources.

### Haze and Transboundary Pollution

While forest fires in some parts of Southeast Asia may result from natural causes such as lightning strikes or from small-scale slash-and-burn agricultural practices, empirical evidence gathered by numerous studies indicates that most of the disastrous fires have been caused by the operations of large-scale commercial oil palm plantations in Indonesia, particularly in Sumatra, Kalimantan, Sulawesi, and Papua.[2] Furthermore, while natural factors can exacerbate the effects of the fires, as the El Niño phenomenon did in 1997–1998, the lack of political will (and even the active complicity or tacit approval of policy makers) has constrained the meaningful implementation of fire prevention policies. The damage that is being caused by these fires is inflicted not only on the local communities and the ecology in Indonesia, but also in other countries. Forest fires have been identified as one of the causes of biodiversity depletion in Southeast Asia. The impacts of the Indonesian fires on health and productivity in the region, particularly in Malaysia, Singapore, and Thailand and to a lesser extent in Myanmar and Vietnam, are equally significant. The 1997–1998 episode alone affected about 20 million people and caused damage ranging from US$4.5 billion to US$9.3 billion.[3] An equally disastrous, albeit shorter, episode occurred on October 6–7, 2006. At this time, 1,496 fire hotspots were sighted in Sumatra and 2,075 in Kalimantan, with Central Kalimantan becoming the worst-affected area.

### Water Governance in the Mekong Subregion

Unlike the haze problem, whose transboundary nature is derived from the fact that the problem is exported from Indonesia to other parts of the region, the issue of

water governance in the Mekong subregion of mainland Southeast Asia is transboundary by the very nature of the resource in question. The Mekong River originates from the Tibetan plateau in Yunnan, China, and empties into the South China Sea in the southern part of Vietnam, passing through Myanmar, Thailand, Laos, and Cambodia. The drainage basin of the river covers about 795,000 square kilometers of land that contains diverse geological formations and landscapes, as well as a complex array of sociocultural, linguistic, political, and economic systems. Thus, any intervention by states aimed at governing the water resources in the Mekong, even to address a country's internal needs, would have inevitable transboundary implications.

The main issue that confronts water governance in the Mekong subregion is competing interests for water resources. The main competing uses in the upper tributaries, such as those located in Yunnan, Myanmar, and upper Laos, are hydropower and irrigation. In Laos, for example, tapping water to irrigate local farms may be compromised by the need to generate foreign earnings by tapping the same water for hydropower and exporting the energy to neighboring Thailand. In Cambodia, the competition exists between commercial and wild-capture fisheries, both of which in turn contribute to the degradation of the fisheries resources in the Tonle Sap River and Lake. The main issue in Vietnam, at the tail end of the river system, lies primarily in the delicate balance between the needs of human settlements, particularly for water for aquaculture and household use by the 18 million inhabitants of the river delta, flood control, and irrigation infrastructures, on the one hand and the ecological needs for resource conservation of an otherwise fragile ecosystem on the other.

Thus, the defining issue of resource use and conflict in the region is the tenuous relationship between livelihood needs of local communities and the large-scale resource and infrastructure development projects usually promoted by states with transnational connections and markets. This complex interplay of demands centers on a natural resource that is already ecologically challenged. At the same time, the options of downstream states and communities may, in fact, be constrained by the choices and prerogatives of their upstream counterparts in the region. The flood pulse and the level of sedimentation, as well as the quality of water that flows downstream, for example, will be affected by infrastructural projects upstream.

## Environment-Related Issues in the South China Sea

Much of the focus on the South China Sea is in the context of the territorial disputes emanating from competing claims by countries such as the Philippines, Malaysia, Vietnam, and China. However, the region is also the site of environment-related transboundary issues. The Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) cites three major reasons why environmental issues in the South China Sea are transboundary: (1) marine resources occur in and move through many countries; (2) activities in the marine environment, such as shipping, fishing, and the movement of migratory and alien

species, involve multiple countries; and (3) the ocean is a medium through which pollutants are relatively easily transmitted from one country to another.

The coastal ecosystems of Southeast Asia are facing severe degradation. Eleven percent of its coral reefs have totally collapsed, 48 percent have been rendered critical, and 80 percent are endangered. Mangrove ecosystems are also badly damaged, with about 70 percent of cover lost. Seagrass beds have also suffered substantial depletion, ranging from 20 to 60 percent. This degradation of coastal habitats and the associated loss of biodiversity could have transboundary implications. It is known that seagrass beds of one country are strongly interdependent with nearby coral reef ecosystems, which in turn affect the stock of fish that may move through the waters to regular fishing grounds used by other countries. Increasing marine traffic due to trade also poses risks in the form of oil spills and water pollution that may have transboundary impacts. Furthermore, the ships may bring with them ballast water contaminated with alien organisms that may be unloaded in the open sea or at dock. This could threaten the health of both humans and ecosystems and could further contribute to the degradation of marine habitats.

## Trade in Environmental Resources

Southeast Asia is considered to be a major hub for trade in environmental resources, mainly wildlife. While some of this trade is legally sanctioned, the magnitude of the trade is underestimated, and a majority of it is illegal in nature. While China and other countries in Asia remain a large market, a substantial regional market within Southeast Asia also exists. Singapore, for example, actively traded wildlife and wildlife products in 2000, with net imports of 7,093 live animals and net exports of 301,905 animal skins. One of the main drivers of this trade is the demand by practitioners of traditional medicine for plant and animal products. This demand has calamitous effects on wildlife species in the region, such as the Sumatran tiger, whose bones are in high demand for medicinal uses even though there are only about 500 of these tigers left in the wild. In the period from 1975 to 1992, Indonesia supplied 60 percent of the total market for tiger bones in South Korea, amounting to 6,128 kilograms.[4] Another source of demand is the thriving pet industry in Southeast Asia. This is the reason the Bali starling, a species endemic to the island, has been driven to near extinction.

Another part of the illegal environmental resource trade is the active illegal timber trade in the region. The main suppliers of legal timber are Laos, Myanmar, Indonesia, and Malaysia. Thailand and the Philippines have banned or restricted logging operations and have since become net timber importers. There is evidence, however, that Thailand has also relied on timber illegally traded from Laos and Myanmar.[5] It has also been discovered that Thai capital has been used in establishing logging concessions in neighboring countries, usually in collusion with rent-seeking elites in those host countries.[6]

Illegal resource trade in Southeast Asia is enabled by the presence of high demand, the porosity of the borders, and the weakness of law enforcement in the countries involved. This is aggravated by the rent-seeking practices of political and economic elites.[7] However, local communities can also be involved. This was evident during the 1997 economic crisis, when dislocated urban workers returned to their local communities and engaged in illegal capture and trade of wildlife and other forest products. A decline in the demand for rare and endangered animals and plants, brought about by the reduced purchasing power of the middle class that is the traditional market for these products, was offset by the huge Chinese market, which was not as affected by the economic crisis.[8]

It is important to point out that while illegal trade in forest products and wildlife resources has indeed contributed to environmental and even social problems in the region, legal trade has also created serious problems. For example, the depletion of forests and their biodiversity in Thailand and the Philippines and the adverse implications for the livelihoods of local forest-based communities were consequences of legal extraction of timber by state-approved concessions, spurred by a lucrative export market. In many cases, the opening of forest areas by legitimate logging operators paved the way for the entry of a second wave of lowland migrant settlers, who deployed unsustainable farming practices and prevented the natural regeneration of logged-over forest areas. Furthermore, as in the case of the Philippines, weak and even corrupted government monitoring has allowed operators to engage in destructive and unregulated logging practices both within and outside their approved concession areas.

## SOCIETAL CONTEXT

### The Role of the State

The transboundary environmental issues identified above exist within a particular societal context. Southeast Asia is a region of divergent political systems. Laos and Myanmar are ruled by single-party, military-led governments, while Cambodia and Vietnam are struggling to adopt democratic principles and juxtapose these with single-party regimes. Brunei Darussalam remains a sultanate. Singapore and Malaysia are both parliamentary democracies, albeit with stringent controls on political dissent. Both Indonesia and the Philippines have presidential forms of government, and both have fragile formal democracies that are the products of people-led democratization movements. Thailand is a constitutional monarchy with military-led governments punctuating its modern political history. Of these countries, it is the latter three (the Philippines, Indonesia, and Thailand) that have a relatively active community of civil society organizations engaging with both local and regional issues, including environmental issues. Historically, except for Thailand, most of Southeast Asia has experienced direct colonial rule by the British, French, Dutch, Spanish, Americans, and even the Japanese.

However, despite this divergence in political systems and historical experiences, there is a common thread that weaves through the development of the region's political institutions. Modern states emerged in Southeast Asia as a product of the interaction between indigenous pre-colonial structures of governance and colonial forces, some of which were direct and penetrating (as in the Philippines), while others came in the form of acquired influences from an increasingly globalizing world (as in Thailand). This interplay between the local and the colonial positioned environmental resources to become primary targets for exploitation as important inputs for state-building processes, and, unfortunately, the resources were in the hands of the colonial elites and/or their native cohorts and later successors. Of these resources, the most affected were the forests of Southeast Asia. Forests in the Philippines, Malaysia, Myanmar, Indonesia, and what used to be Indo-China were logged by the colonial states and later by their successors, and the products were traded in global markets to generate the money needed to finance investments for the public good as well as to meet private elite interests. Thailand's teak forests were depleted in the same manner, albeit without the direct participation of any colonial ruler, although the British invested in the forest industry and influenced the development of the bureaucracy as well as forest policy and science.[9]

These experiences of colonial and/or elite-led exploitation of environmental resources, aside from having serious ecological consequences, also have significant structural consequences. The historical role of elites in resource exploitation and their strong government connections have effectively weakened the processes and institutions of governance to the point where governments are either unable to rein in private interests or are, in fact, colluding with them. This leads to weak policies, weak implementation of policies that look good on paper, and even bad policies. On many occasions, policies and projects of states have undermined or pushed out the local practices of relatively powerless and marginalized communities in the region. For example, the traditional trade practices that existed among local communities in the Mekong subregion, which crossed borders prior to the development of modern state boundaries, were delegitimized when the state declared monopoly over forest-related trade. The current illegal trade in timber and other forest products, therefore, has to be understood in the context of this historical background.

Indigenous property rights, which were rather common in the region, were also often displaced by modern laws. Common property and communal practices were effectively delegitimized when privatization laws were passed or when powerful private interests were granted concession rights on communal lands, as when forestry laws displaced the land rights of the Orang Asli in Western Malaysia and of indigenous peoples in Kalimantan in Indonesia.[10] Ancestral domains were snatched away from the control of indigenous communities in the Philippines by constitutional fiat declaring natural resources to be state property. In Thailand, the passage of the forestry code in the early decades of the twentieth century trans-

ferred the control of forests away from traditional leaders and into an elaborate bureaucratic system of taxes and permits.[11]

State building and its attendant processes have also unleashed adverse consequences on local modes of production. In the Mekong basin in Cambodia, traditional wild-capture fishing practices of local communities were displaced and rendered unsustainable by the establishment of commercial aquaculture ventures, which are in the hands of outsiders.[12] In the upland areas of Southeast Asia, the swidden farming system of forest dwellers was considered to be a sustainable practice; in this system, forest areas are cleared for agriculture, mainly by burning, but are allowed to regenerate through a period of fallowness when the community moves to another area in the forest for another episode of cultivation. However, the spread of urban centers radiating toward the fringes of the forest and the sequestration of forest lands for private timber concessions and for infrastructure projects, such as the building of roads and dams, have effectively reduced the areas available to local forest-dwellers for cultivation. This has drastically shortened the fallow period, in some cases to the point that shifting cultivators eventually turned into sedentary farmers.[13] The consequence for the sustainability of the land's fertility has been severe, for these farmers were forced into a system that they do not have familiarity with. Further, lowland migrant settlers who chose to move into frontier areas or were forced to do so by economic difficulties they experienced in the lowland political economy began competing with the local forest-dwellers for space. These migrants use lowland farming techniques that are not in tune with the requirements of the upland ecosystems. Sloping and steep areas, for example, have been cultivated for shallow-rooted cash crops, thereby leading to fast rates of soil erosion.

The state-environment interactions in the region could be characterized in terms of a highly interventionist and centralized but weak state adopting command-and-control strategies over its environmental resources. This mismatch between organizational capacity and functional jurisdiction of control has seriously undermined environmental governance and has led to the unraveling of state initiatives. The region's challenges in this regard occurred against the backdrop of a global trend in which the state, as an institution, has gradually yielded to more active participation of the private sector and civil society organizations in the development process. They also occurred in tandem with the emergence of democratization movements promoting political and economic reform. Such movements found great expression in the Philippines, Indonesia, and Thailand, although the latter's history of strong military incursions into politics continues today. Attempts to bring civil society voices into the affairs of governance, including those involving the environment, have been made even in Malaysia and Singapore, where civil society activities are more constrained. Economic and political reforms continue to be espoused even by military and single-party regimes such as those in Cambodia, Vietnam (as expressed in *doi moi*, the government's term for reform and "renovation"), and Laos (through its campaign for *chin thanakaan mai*, or "new thinking").

## Non-State and Transnational Actors

Southeast Asia as a region is characterized by dynamic political, cultural, and economic transformations. Civil society actors find stronger voices, even as new economic classes expand. With the advent of the information technology age, access to information is being democratized, as governments lose total monopoly over communication.[14] This trend has created an opportunity for increased bilateral and multilateral interactions not only among states but, more significantly, among civil society actors. However, the widening of the political space that has allowed civil society actors and the private sector to get involved in environmental governance at local and regional levels has also led to a new wave of "colonization," in which civil society has become "externalized" and transnational economic interests have gained influence. This may not necessarily be a completely negative development, considering that foreign nongovernmental organizations (NGOs) and investors can provide intellectual support and capital for local environmental management projects. Furthermore, the presence of an expatriate NGO community has facilitated more participatory and innovative environmental resource management approaches in countries in which local NGOs are either absent or have faced state restraint, such as Laos, Cambodia, and Vietnam.

However, a downside to the entry of foreign interests is the increasing presence of predatory private initiatives. This is dramatically illustrated by hydropower development in the Mekong subregion, where rent-seeking transnational interests, in collusion with domestic players, are able to influence national policy makers to favor less efficient hydropower projects over other sources of energy, such as natural gas. These arrangements are usually in the form of bilateral agreements, in which state governments subsidize the transmission and distribution of power, thereby making the operations of foreign investors in hydropower generation economically viable at the expense of state funds and, indirectly, of taxpayers' money.

The more insidious impact of the externalization of civil society and the involvement of foreign players is manifested in the domination of the formulation of strategies and policies and the generation of knowledge about environmental resources and processes. For example, in the Mekong subregion, irrigation technology has been deployed by national governments aided by foreign consultants, and local knowledge and practices have been sidelined by a growing dependence on modern infrastructures and scientific knowledge. The flood pulse, which the Mekong communities have traditionally adjusted to as part of the seasonality of their production cycle, has now been depicted as a "disaster" (instead of a part of nature's cycle) and thus in need of control and management by infrastructural interventions. Also, as mentioned earlier, the promotion of modern technologies for fish production in the Mekong basin is actively supported by states and by foreign consultants to the detriment of local wild-capture fishing practices.

Thus, Southeast Asia is confronting environmental problems that it inherited from a problematic and diverse set of historical experiences, while taking advantage of

globalization as a resource to be tapped and simultaneously dealing with its attendant problems and challenges. This is the societal context for the transboundary issues in the region, which have to be addressed through various institutional structures and processes.

## INSTITUTIONAL RESPONSES

### Regional Bodies

The dominant institutional responses that have emerged in Southeast Asia to address its transboundary issues involve formal mechanisms mediated by regional bodies such as the Association of Southeast Asian Nations (ASEAN) and the Mekong River Commission (MRC). Both bodies theoretically allow their member countries to collectively address environmental problems that affect all or some of them. In fact, the existence of these bodies is a tacit recognition that mutually beneficial agreements can be forged to address such problems. However, evidence strongly points to the presence of structural limitations that seriously undermine the bodies' abilities to fully address transboundary issues.

One of the transboundary issues that has exposed the limitations on ASEAN is the occurrence of haze and transboundary pollution. Responding to the crisis, ASEAN adopted the Agreement on Transboundary Haze Pollution in June 2002. It came into force on November 25, 2003, after ratification by six countries: Thailand, Singapore, Malaysia, Myanmar, Brunei, and Vietnam. Indonesia, where the fires causing the haze originate, has not yet ratified this agreement. It has been reported that Indonesia's Ministry of Forestry is insisting on a quid pro quo, in which support for the agreement is exchanged for regional assistance with its efforts to combat illegal logging.[15] Specifically, Indonesia expects Malaysia and Singapore to assist not only with its anti–illegal logging campaigns, but also with other activities such as anticorruption and extradition. While it may be realistic for a country to seek to protect its own interests and to maximize concessions to its advantage, nevertheless Indonesia is solely responsible for failing to implement its own laws on forest burning and illegal logging and for enabling the conversion of forests to lucrative oil palm ventures, thereby leading to clearing of massive areas of land through deliberate burning.

While the ASEAN agreement was a positive move and its ratification by Indonesia would give it added significance by, at least on paper, legally binding that country, the agreement offers very little in terms of compliance regulation. Its provisions do not include sanctions for states that do not comply, any compulsory dispute resolution mechanism, or any means of recourse to international courts or arbitration tribunals. These omissions are not surprising; they are simply reflections of the deep-seated ASEAN ideology of nonintervention and nonconfrontation. In fact, the agreement stipulates that conflicts and disputes are to be settled "amicably by consultation or negotiation," but no specific provision

is made concerning the recourse for an aggrieved party should such consultation or negotiation fail.[16] Thus, while ASEAN, through this particular agreement, can provide a venue for the emergence of a collective voice on resolution of the haze problem, it unfortunately has imposed a structural limit on such capacity.

The Mekong River Commission (MRC) is another example of a formal regional body that provides an opportunity for collective action but, in the end, may be compromised by structural limitations. Like ASEAN, the MRC has no means by which to push member countries to harmonize their national policies according to the agreements forged. The MRC is a technically competent body, as evidenced by its impressive database of information about the Mekong basin. However, it is politically challenged, to say the least. The Mekong Agreement, which it helped forge in 1995, is "weakly drafted, and it encourages rather than commands. It lacks the legal 'teeth' to enforce any of its provisions, and therefore, though sustainable development is its noble intention, it is incapable of translating this intention into real substantive achievements."[17]

While the signatory countries in the Mekong subregion participated in the drafting of several procedures embedded in the agreement, there is no evidence that they have made any reference to those procedures or other provisions of the agreement in their national water policies and laws, including those they have passed after the agreement came into force. This stems not only from the lack of strong compliance provisions in the Mekong regional agreement, but also from the weak, if not incoherent, water legislation in each of the signatory countries. The provisions of the Vietnam Law on Water Resources No. 8, passed on May 20, 1998, and the Lao Water Resources Law, issued in 1996, for example, not only fail to provide internal compliance, but lack provisions referring to the Mekong Agreement, even though both were passed after the agreement entered into force. Thailand and Cambodia have many pieces of water legislation, including laws passed prior to 1995, but these have yet to be organized into one coherent piece of legislation.

## Multi-Sector Coordination

It is apparent, from the experiences of ASEAN and MRC, that transnational negotiations are limited by the diplomatic obligations of member countries to be polite to their neighbors, particularly given the ASEAN way of nonconfrontation. This leads to symbolically significant but politically weak agreements. However, parallel venues have emerged in the region in which non-state actors have been involved in the discussion of relevant issues, including transboundary environmental issues. These venues developed along with the growing civil society community of the region. Furthermore, the technical nature of the transboundary issues that confront Southeast Asia, and its formal regional bodies such as ASEAN and MRC, have created an opening for scientists and technical policy analysts to be involved in parallel discussions on a regional scale. Some of the venues for these multi-

stakeholder discussions are the ASEAN Regional Forum (ARF), which conducts sessions that parallel formal ASEAN meetings, and the ASEAN Institute of Strategic and International Studies (ASEAN-ISIS) through its regularly held Asia Pacific Roundtable, among others.

While these venues provide the opportunity for nongovernmental actors, including natural and social scientists, to get involved and help to build confidence and a sense of community in the region, they nevertheless produce only nonbinding statements. They have also exposed independent nongovernmental actors to the possible risk of being compromised by close association with governmental parties.[18] Nevertheless, such venues can serve as a source of pressure on governmental actors toward favorable outcomes and as a catalyst for the formation of consensus, for the identification of constraints that need to be addressed, and for the unveiling of problematic positions to public scrutiny and criticism. This was the case when the Singapore Institute of International Affairs (SIIA), in partnership with the Centre for Strategic and International Studies (CSIS) Indonesia and the World Wide Fund for Nature (WWF) Indonesia, sponsored a workshop on the ASEAN Agreement on Transboundary Haze Pollution in May 2007. The workshop was attended by representatives of Indonesian NGOs, government officials, and provincial leaders, as well as regional actors from Singapore and Malaysia. Its aim was to increase understanding among the various Indonesian stakeholders about practical implementation of the agreement once it is ratified by Indonesia. This was the venue in which the conflicting positions of the Indonesian Ministry of Forestry, on one hand, and the Ministry for the Environment, the civil society organizations, and the local provincial governments, on the other, were brought to public scrutiny. The problematic position of the Ministry of Forestry, in its evident resistance to the agreement, became the focus of much critical commentary, which had the effect of adding to the emerging pressure on Indonesia and would not have been articulated in regular ASEAN meetings. The workshop also revealed an information gap between local and national understanding in Indonesia of the problem that needs to be addressed and made local efforts to curb the fires more visible to the non-Indonesian public.

The involvement of scientists in regional discussions of transboundary environmental issues is another area in need of institutional structure, particularly to allow science-based knowledge to translate into policy. The scientific community can provide technical information drawn from biophysical and social scientific research to support policy making. Networks of scientists, termed "epistemic communities," exist to provide this type of support. The CGIAR Water Challenge Program, under the auspices of the Mekong Program on Water, Environment and Resilience (M-POWER), based in Chiang Mai, Thailand, sponsors research by an international network of research fellows and scientists and conducts meetings and dialogues at different levels, from the local community level to the regional level at MRC, in order to build capacity for institutional and policy analysis of water governance issues in mainland Southeast Asia.

What these types of alliances hope to achieve is to strengthen the otherwise tenuous link between science and policy in the Mekong subregion. Indigenous knowledge about water resources held by local communities is often marginalized by modern science, as evidenced by the manner in which wild-capture fishing practices and local attitudes toward floods have given way to modern aquaculture and infrastructure-fixated approaches. In contrast, scientific knowledge held by university-based researchers, as well as academic consultants and freelancers, is better off in this regard. Indeed, there is some degree of integration of research-based knowledge into the policy process, at least on paper and through rituals of inclusion such as joint research projects, consultancies, and conferences. In Vietnam, for example, the Vietnam Union of Science and Technology Association (VUSTA), the Vietnam Academy of Science and Technology, and the Institute of Energy have significantly contributed to the Energy Development Plan, even though these science communities could take a more critical stance toward some aspects of the plan. Similarly, university-based scientists have provided input to the development of a water privatization policy in eastern Thailand. Civil society organizations also tap scientific knowledge for their advocacies in the region. Actors with technical expertise can engage state policy makers more directly, and their technical knowledge can make their advocacy stand on firm scientific grounds.

However, the link between research-based knowledge and the policy-making process is constrained not only in the Mekong subregion but elsewhere in Southeast Asia. Institutional barriers prevent meaningful interaction. These barriers often derive from institutional inertia and manifest themselves as structural limits imposed by bureaucratic rigidity and state ideology. Their effect is seen in the difficulty of procuring documents and data, and in the engagement of scientists with only noncontroversial issues. A strong history of elite domination within countries in Southeast Asia and the growing presence of transnational economic interests in the region also enable power elites to further their agenda of control and domination of knowledge. One strategy they use is to co-opt resistance by accommodating alternative views that are not as threatening to their interests. Another strategy is to deploy views that cement the synergy between elite actors and science-based policy decisions so as to delegitimize any challenge coming from opposing voices and to project safe scenarios to justify their policy decisions as beneficial and aimed at socially desirable goals. Here, science is effectively co-opted to serve the interests of the dominant elites or state parties. This was most vividly illustrated by the environment impact assessment (EIA) conducted in connection with the Navigation Channel Improvement Project for widening the upper tributaries of the Mekong River in Yunnan, China. The scientific aspect of the EIA gave way to political expediency, as the true interests of the downstream countries Myanmar, Laos, and Thailand, which an honest EIA would have upheld, all yielded to the strategic self-interests of Myanmar's sense of friendship with China, Laos's self-preservation instincts relative to China, and Thailand's seizing the opportunity for cheap energy from China, the project's proponent.

It is, therefore, apparent that formal state mechanisms such as diplomatic channels and official venues, as well as mechanisms that accommodate the participation of civil society actors and of scientists, while opening the possibility for addressing transboundary environmental issues in Southeast Asia, nevertheless have their own structural limitations. The limitations that have hindered countries in the region in addressing the conflicts involved in the issue of transboundary haze pollution and in managing the water resources in the Mekong basin are also manifested in the difficulty that countries bordering the South China Sea have in initiating meaningful discussions about transboundary concerns other than territorial claims and traditional security. The countries in the region seem capable of forging only symbolic agreements that are further limited by an ASEAN culture of politeness and nonintervention. The relative silence of ASEAN on the illegal trade in forest products, evidenced by the absence of any concrete reference to it beyond a high-sounding statement on sustainable development and the protection of biodiversity resources in the Cebu Resolution on Sustainable Development, adopted in 2006, is also notable.

## Local-Level Engagement

The limits that seem to prevent ASEAN and MRC, as well as ARF and other forums, from meaningfully addressing transboundary concerns, in turn, create a void for environmental social movements to occupy, while also giving them reason to exist. The region is hosting a plethora of regional NGOs, some of which are home-grown as distinguished from the expatriate NGO community of middle-class, Western, conservationist progeny such as WWF, IUCN, and TRAFFIC. NGOs such as the Asia-Pacific Women's Legal Defense (APWLD), Towards Ecological Recovery and Regional Alliance (TERRA), and Focus on the Global South (FOCUS), all of which are based in Thailand but have regionwide operations, have emerged as the local response to the need to offer a concerted civil society voice amidst the challenges brought about by more regional integration and globalization.

APWLD, formed in 1986, focuses on enabling women to use law as a tool for social change and for achieving equality, justice, and development. While it does not focus specifically on the environment, it is allied with other regional groups, including those having an environmental agenda, particularly on issues that involve women. TERRA is a regional offshoot of the Project for Ecological Recovery (PER), which was formed in 1986 around the issues of resources and livelihoods of local communities in Thailand. Established in 1991, TERRA's main agenda is to focus on environmental issues affecting local communities in the Mekong subregion. FOCUS was formed in 1991 as a regional and multi-sectoral coalition of academics, NGOs, and people's movements concerned with human security issues, such as socioeconomic and gender inequality, political exclusion, and environmental degradation. These NGO coalitions, together with locally based NGOs operating in component countries, offer alternative analyses, visions, and strategies for

sustainable development that encompasses indigenous rights, women's empowerment, peace, and environmental protection.

While regional in scope, these NGO coalitions operate through localized translations of regional plans of action. After all, the actual behavioral changes in modes of engaging with the environment and its resources—from asking a local Indonesian farmer not to burn the forest, to influencing local wildlife trappers in Laos and Myanmar to shift to other forms of livelihood, to enabling local wild-capture fishers in Cambodia to acquire legal standing to fight for their rights, to organizing coastal communities in Vietnam, Malaysia, and the Philippines to manage their mangroves and coral reefs bordering the South China Sea—are all local in character. It is in this wide range of local action that civil society actors find more relevance. Already, local communities and governments in Laos, working in partnerships with their counterparts in Yunnan, China, have forged direct legal and technical agreements not only to curb illegal trade but also to provide alternative livelihoods.[19] In Indonesia, local NGOs have implemented projects in fire-prone areas and have deployed social support to the direct victims of fires. Local and provincial officials in Riau and Kalimantan, two of the more fire-prone areas in Indonesia, are also implementing fire prevention and control projects on their own.

One mechanism that has emerged recently is the promotion of more people-to-people interactions on a regional scale. An example of this is the ASEAN People's Assembly (APA), which began in 2000, is sponsored by ASEAN-ISIS, and is conducted annually. APA hopes to promote the following goals:

- To promote a greater awareness of community among various sectors of ASEAN on a step-by-step basis;
- To promote mutual understanding and tolerance for the diversity of culture, religion, ethnicity, social values, political structures and processes, and other aspects among the ASEAN population;
- To obtain insights and inputs on how to deal with socioeconomic problems affecting ASEAN societies from as many relevant sectors of those societies as possible;
- To facilitate the bridging of gaps through various confidence-building measures, including participation in the APA, between social and political sectors within and across ASEAN societies on a step-by-step basis; and
- To assist in the building of an ASEAN community of caring societies as sought by the ASEAN Vision 2020.

Another mechanism that has emerged is the establishment of more direct partnerships between local community actors and regional civil society organizations to address issues that are transboundary in character. One example of this is the Indochina Biodiversity Forum, which was initiated in 1997 by the WWF. The forum is a venue to facilitate dialogues and partnerships among local actors working toward the protection of biodiversity and to increase the stability of border areas.

Such venues help to foster understanding and build confidence among actors from various countries concerned with issues that go beyond state boundaries. The forum also brings scientists, academics, and local government representatives to meet with local people's organizations.[20]

However, civil society actors in Southeast Asia are also hampered by structural constraints. NGO-directed processes are encountering problems due to the weak technical capacity of local organizations. There is also a perception by the state that joint conservation efforts between local actors and transnational groups might erode national sovereignty, resulting in lukewarm state support, if not direct hostility and suspicion of multi-stakeholder and transnational efforts and partnerships. Internally, the NGO community is also threatened by the ideological battle between conservation purists who espouse protectionist policies to the detriment of human communities and social development reformers who struggle to achieve a balance between the protection of ecosystems and the social development of those whose livelihoods depend on them. For example, some NGOs are not comfortable opposing the illegal trade of forest products, a position espoused by their more conservationist colleagues, because they believe such trade may be the source of livelihoods for marginalized communities.

NGOs are also politically endangered in many countries, where their advocacies are considered to be radical voices that compromise national security and social harmony. Being labeled as radical, whether rightly or wrongly, can diminish the ability of an NGO to operate safely and/or meaningfully. Myanmar, with its draconian policies on civil society activism, is an extreme case. But elsewhere in the region, civil society activists are also threatened by state reprisal. Even in the absence of actual state reprisal, being labeled as politically dangerous could be very effective in delegitimizing NGO voices as valid conveyers of knowledge that should be considered in policy discussions. Those responsible for the coup in Thailand, for example, at one time restricted the activities of NGOs. However, even prior to that, the corporate mentality of Thaksin Shinawatra led to a discourse in which NGOs were labeled as national problems preventing meaningful progress. Civil society activists remain cautious in Malaysia and Singapore. Even in the Philippines, which prides itself as a bastion of civil society activism, NGO activists, particularly those allied with more progressive forces, have become objects of state harassment and even victims of unexplained disappearances. This coercive and repressive mentality is undoubtedly linked to the post-9/11 discourse and its attendant politics of fear, which infect not only Southeast Asia, but the entire world.

It is also important to recognize that a more insidious threat to local communities and to locally linked civil society mobilization is the encapsulation of local livelihoods, and the social processes within which they emerge and from which they draw their natural logic, in a national and global economic and political system. While being linked to a larger domain opens the possibility for upward

and progressive integration, notably through an influx of development and technical assistance, it can also bring difficulties in the form of imperatives to which local communities could be held hostage. Farming practices and even the choice of crops might no longer be autonomous decisions of local actors but imposed by outside forces that they would find difficult to escape from or resist.

## CONCLUSION

This paper attempted to convey the complexity of transboundary environmental issues that confront Southeast Asia, not only their nature but the societal context within which they emerge and against which institutional responses are framed. The diverse political, cultural, economic, and historical experiences of the countries that comprise Southeast Asia require an equally diverse set of institutional responses. It is apparent that no single response could provide a solution to the overall problem. Several venues for discussion and action exist, from the more formal venues of ASEAN and MRC, to the parallel venues of ARF and ISIS, to the various civil society–based domains that nurture environmental movements. Institutional responses come in various forms—from formal agreements to science-policy partnerships, multi-stakeholder platforms for dialogue such as regional seminars and workshops, and local community action by NGOs and local governments. While these responses and their domains for emergence are also constrained by structural limitations, they are evidence of the dynamism from which various layers of interventions emerge. Some are tempted to see these limitations as disenabling constraints. Others, however, can see in this complexity the opportunity for addressing challenges by drawing on the strengths of the various institutional domains and the diversity of voices which they allow and enable.

20. See Antonio Contreras and C. Fay, *Strengthening Forest Management in Indonesia through Land Tenure Reform: Issues and Framework for Action* (Forest Trends and World Agro-Forestry Centre, 2005), pp. 28–32.
21. Ibid.
22. See *The State of the Forest: Indonesia*, pp. 62–63.
23. See Contreras and Fay, op. cit., p. 7.
24. See E. Lyon, "CSR Law in Indonesia," *CSR Asia Weekly* 3, no. 30, p. 2, http://www.csrasia.com/upload/csrasiaweeklyvol3week30.pdf (accessed July 26, 2007).
25. See J. Gordon, "NGOs, the Environment, and Political Pluralism in New Order Indonesia," http://www2.hawaii.edu/~seassa/explorations/v2n2/art3/v2n2-frame3.html (accessed July 25, 2007).
26. Ibid.
27. *Sustaining Indonesia's Forests: Strategy for the World Bank* (Jakarta: World Bank Office, 2006), Annex 1, pp. 47–48.
28. See G. Giam, "Haze Problem: Bilateral Pressure on Indonesia Works Best," http://www.singaporeangle.com/2006/10/haze-problem-bilateral-pressure-on.html (accessed July 26, 2007).
29. See *The State of the Forest: Indonesia*.

## *Chapter 8*

1. Navjot Sodhi, Lian Pin Koh, Barry W. Brooks, and Peter K. L. Ng, "Southeast Asian Biodiversity: An Impending Disaster," in *Trends in Ecology and Evolution* 19, no. 12 (December 2004), http:rmbr.nus.edu.sg/news/pdf/sodhietal-tiee2004.pdf.
2. A. P. Vayda, *Findings and Causes of the 1997–98 Indonesian Forest Fires: Problems and Possibilities* (Jakarta: World Wide Fund for Nature-Indonesia Programme, 1999; C. V. Barber and J. Schweithelm, *Trial by Fire: Forest Fires and Forestry Policy in Indonesia's Era of Crises and Reform* (Washington, DC: World Resources Institute, 2000); Luca Tacconi, "Fires in Indonesia: Causes, Costs and Policy Implications," CIFOR Occasional Paper No. 38 (Bogor, Indonesia: CIFOR, 2003).
3. BAPPENAS (National Development Planning Agency), *Final Report, Annex I: Causes, Extent, Impact and Costs of the 1997/98 Fires and Drought*, Asian Development Bank Technical Assistance Grant TA 2999-INO, Planning for Fire Prevention and Drought Management Project, 1999.
4. Sodhi et al., op. cit.
5. J. Rigg and R. Jerndall, "Plenty in the Context of Scarcity: Forest Management in Laos," in M. J. G. Parnwell and R. L. Bryant, eds., *Environmental Change in Southeast Asia: People, Politics and Sustainable Development* (London and New York: Routledge, 1996); Raymond L. Bryant, "The Politics of Forestry in Burma," in Philip Hirsch and Carol Warren, eds., *The Politics of Environment in Southeast Asia: Resources and Resistance* (London and New York: Routledge, 1998).
6. Raymond L. Bryant, *The Political Ecology of Forestry in Burma: 1824–1994* (Honolulu: University of Hawaii Press, 1997).
7. Nathan Badenoch, *Transboundary Environmental Governance: Principles and Practice in Mainland Southeast Asia* (Washington, DC: World Resources Institute, 2002).
8. D. Donovan, "Strapped for Cash, Asians Plunder Their Forests and Endanger Their Future," *Asia Pacific Issues*, no. 39 (Honolulu: East West Center, 1999).
9. Pasuk Phongpahichit and Chris Baker, *Thailand: Economy and Politics* (New York: Oxford University Press, 1995).
10. Colin Nicholas and Raajen Singh, *Indigenous Peoples of Asia: Many Peoples, One Struggle* (Bangkok: Asia Indigenous Peoples Pact, 1996).
11. Phongpahichit and Baker, op. cit.
12. Hap Navy, Seng Leang, and Ratana Chuenpagdee, *Socioeconomics and Livelihood Values of Tonle Sap Lake Fisheries* (Phnom Penh, Cambodia: Inland Fisheries Research and Development Institute, 2006).

13. Paul Burgers, Quirine M. Ketterings, and Dennis Garrity, "Fallow Management Strategies and Issues in Southeast Asia," *Agriculture, Ecosystems and Environment* 110, no. 1–2 (2005): 1–13.
14. Donald E. Weatherbee, *International Relations in Southeast Asia: The Struggle for Autonomy* (Boulder, CO: Rowman and Littlefield, 2005).
15. Simon S. C. Tay, "Back to the Burning Issue," *Today*, May 17, 2007.
16. Alan Khee-Jin Tan, "Forest Fires and Haze in Southeast Asia: Prospects for Compliance with the 2002 ASEAN Agreement on Transboundary Haze," May 2004, http://www.law.chula.ac.th/asli/paper/f12.pdf.
17. Philip Hirsch and Kurt Morck Jensen, with Ben Boer, Naomi Carrard, Stephen Fitzgerald, and Stephanie Lyster, "National Interests and Transboundary Water Governance in the Mekong," Australian Mekong Resource Center in collaboration with Danish International Development Assistance and The University of Sydney, May 2006.
18. Herman Joseph S. Kraft, "The Autonomy Dilemma of Track 2 Diplomacy in Southeast Asia," *Security Dialogue* 31, no. 3 (2000).
19. Zuo Ting, *Cases of Transboundary Environmental Management in Border Areas of the Mekong Watershed in Yunnan, China* (Washington, DC: World Resources Institute, 2002).
20. Tom Dillon and Erick Wickramanayake, *A Forum for Transboundary Conservation in Laos, Cambodia and Vietnam* (Hanoi: WWF and UNDP, 1997).

## *Chapter 9*

1. S. Sugiyama, D. Staples, and S. Funge-Smith, *Status and Potential of Fisheries and Aquaculture in Asia and the Pacific* (Bangkok: FAO Regional Office for Asia and the Pacific, 2004).
2. Food and Agriculture Organization of the United Nations (FAO), *The State of World Fisheries and Aquaculture* (Rome: FAO, 2004).
3. Ibid.
4. R. Pomeroy, Y. T. Garcia, M. M. Dey, and L. R. Garces, "Regional Economic Integration of the Fisheries Sector in ASEAN Countries," paper presented at the International Conference on Fisheries and Poverty, April 10–11, 2007, Makati City, Philippines.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
9. FAO, op. cit.; Sugiyama et al., op. cit.
10. Pomeroy et al., op. cit.; Asian Development Bank (ADB), *Special Evaluation Study on ADB's Fishery Policy* (Ortigas City, Philippines: ADB, 2006).
11. Sugiyama et al., op. cit.
12. Bureau of Fisheries and Aquatic Resources (BFAR), *Philippine Fisheries Profile* (Quezon City, Philippines: Department of Agriculture-Bureau of Fisheries and Aquatic Resources, 2004).
13. C. L. Delgado et al., eds., "Fish to 2020: Supply and Demand in Changing Global Markets," Technical Report 62, International Food Policy Research Institute and WorldFish Center (2003): p. 226.
14. Pomeroy et al., op. cit.
15. BFAR, op. cit.
16. Delgado et al., op. cit.
17. K. E. Carpenter, and V. G. Springer, "The Center of the Center of Marine Shore Fish Biodiversity: The Philippine Islands," *Environmental Biology of Fishes* 72 (2005): 467–480.
18. C. M. Roberts, et al., "Marine Biodiversity Hotspots and Conservation Priorities for Tropical Reefs," *Science* 295 (5558) (2002): 1280–1284.
19. G. T. Silvestre et al., "South and South-East Asian Coastal Fisheries: Their Status and Directions for Improved Management—Conference Synopsis and Recommendations," WorldFish Center Conference Proceedings 67 (2003); G. T. Silvestre et al., eds., "Assessment, Management and