Local, national and international conceptions of justice: the case of swidden farmers in the contexts of national and regional developments in Southeast Asia

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Abstract
This paper contrasts the social and ecological situations of swidden farmers in Southeast Asia with those of sedentary farmers who have participated in the so-called Green Revolution. This serves to highlight contrasting views (and their respective moral underpinnings) on the development prospects of indigenous farmers. Proposed agricultural transformations are assessed in terms of their likely cultural, institutional and ecological consequences. The paper looks at the complex ideological and institutional relations existing between national development agencies on the one hand and swidden farming communities on the other, drawing especially on fieldwork conducted in Indonesia, and asks what a critical understanding of these relations has to contribute to the theory of environmental justice.
Local, national and international conceptions of justice: the case of swidden farmers in the contexts of national and regional developments in Southeast Asia

Much has been written about the “Green Revolution.” It made possible a dramatic increase in the productivity of millions of farmers around the world, and the increases in food production were generally able to keep up with, and even slightly exceed, the unprecedented increases in world population during the latter half of the twentieth century (Hendry 1988). It was in 1944 that the Rockefeller Foundation, at the request of the U.S. government, funded a study to find ways of increasing Mexico's production of basic food crops. Norman Borlaug and his team developed high-yielding, semi-dwarf varieties of wheat, and in 1970 Borlaug received the Nobel Peace Prize for his efforts towards overcoming world hunger. In the early 1960s new high-yielding rice varieties were developed at the International Rice Research Institute in the Philippines, adding further momentum to the Green Revolution. By the early 1970s the new high-yielding wheat and/or rice varieties were being grown in many countries, including Mexico, India, the Philippines, Iran, Algeria, Morocco, Tunisia, Iraq, Saudi Arabia, Turkey, Kenya, Egypt, Pakistan, Brazil and Indonesia (Eblen and Eblen 1994: 311-312). Crop harvests for these areas increased more than two and one-half times between 1950 and 1980. The increases in productivity depended not just on planting the new high-yielding varieties (HYVs), but also on irrigation and a whole range of “modern” techniques and inputs including manufactured fertilizers, pesticides and herbicides. The low-input, labour-intensive practices of traditional farmers were transformed into modern, mechanized farming systems requiring higher inputs of energy and capital.

Proponents of the Green Revolution argued that the increases in productivity per unit of land would result in lower food prices, and free more arable land for growing lucrative cash crops. The economic benefits would be felt throughout society. With the passing of time, however, the limitations of the Green Revolution have become increasingly apparent (Shiva 1991a). The HYVs are only high-yielding so long as they grow in an environment with abundant water and fertilizer, and this combination of inputs all too easily leads to contaminated ground water and degraded soils. Chemical pesticides have often eliminated the threat from one pest only to allow others on which it preyed to be more destructive. And the replacement of many traditional varieties of grain by a limited selection of high-yielding hybrids makes these species genetically more vulnerable to future environmental shocks, such as exposure to new strains of fungi or to climate change.

There have been high social costs too. Many poor farmers went into debt to pay for the necessary modern inputs, and others lost their farms altogether. The replacement of labour-intensive techniques by others more capital-intensive resulted in many agricultural laborers being displaced and forced to migrate to other usually less-fertile rural areas or to the cities. Those who stayed behind have found themselves dependent on government agencies, subjected to more political control, and vulnerable to market forces. Vandana Shiva (1991a: 28), in her study of the ecological and social consequences of the Green Revolution in the Punjab, argues:

Control over nature and control over people were essential elements of the centralised and centralising strategy of the Green Revolution. Ecological breakdown in nature and the political breakdown of society were consequences of a policy based on tearing apart both nature and society.

The Green Revolution benefitted most the suppliers of the modern inputs and those farmers who were already cultivated the more fertile lands and who could afford to adopt the new techniques. Government subsidies supporting the introduction of Green Revolution methods only exacerbated previously existing social and economic inequalities in rural farming communities. Notwithstanding its enormous contributions to tackling world hunger the Green Revolution did not usher in an era of sustainable development. Analysts today are more likely to describe it as “buying time” for humans to balance their demands on the Earth’s resources than as a “miracle” to feed their growing numbers indefinitely.

The changing conditions of low-resource farmers

Much less attention has been given during this period to low-resource farmers who were not in a position to take advantage of the Green Revolution. These farmers are to be found not in fertile, well-irrigated plains and deltas, but in more difficult and unfavourable areas, mostly rainfed and often undulating with fragile soils. “They include farming lands of many types – in hinterlands, high lands, drylands, and wetlands, and in forests, mountains and hills, savannas, near-deserts, and swamps” (Chambers et al. 1989: xviii). Chambers cites Wolf’s 1986 estimate that more than one quarter of the world’s population are dependent
on low-resource agriculture. There is a connection between green revolution agriculture and low-resource farming, since the agricultural modernization of the fertile areas, combined with prior inequalities in land tenure and rapid population growth, pushes more and more of the rural poor into the more remote and ecologically fragile areas (Leonard 1989).

There are many equity issues raised by these developments. In this paper I want to focus on the situation of swidden farmers in Southeast Asia. Swidden farmers, in general, fall squarely in the category of resource-poor farmers. My aim is to present some empirical truths about swidden farming communities which I believe should be addressed by the philosophy of environmental justice; but since I am a social scientist and not a philosopher I will leave it to the experts on environmental justice to resolve just how these issues should be addressed. My observations and reflections are based in part on fieldwork I have undertaken on the island of Seram in the Moluccas (Eastern Indonesia) as part of a collaborative research project between the Australian National University and the Indonesian Institute of Science (LIPI) studying a broad range of population and development issues in Eastern Indonesia (Jones and Raharjo 1995). Since many of the social and ecological processes we have observed in the Moluccas and elsewhere in Eastern Indonesia are *mutatis mutandis* quite common throughout Southeast Asia I have included the latter designation in the paper's title.

Traditional subsistence farming throughout most of the nonirrigated areas of Southeast Asia has for centuries been based on what is called "shifting cultivation" or "swidden agriculture" (Dove 1985; Ellen 1978; Geertz 1963; Kunstadter 1978; Ormeling 1957). This depends on clearing irregular patches of secondary forest by slash-and-burn and planting a selection of food crops in the clearings. Each clearing (or *kebun*, in Bahasa Indonesia) is cultivated for one or more years, depending on how quickly the fertility of the soil declines, and then is abandoned to allow secondary forest growth to take over again, although tree crops on the patch may continue to be harvested periodically. After a number of years the community will normally return to a given patch and clear it for cultivation again, and the whole cycle is repeated. The fallow period may be as short as a few years or as long as two or three decades, depending on local conditions and needs.

Geertz (1963) describes three salient features of swidden agriculture practised in the region as compared to irrigated rice agriculture. First, a swidden plot is characterized by a much higher "degree of generalization" (i.e., by more biodiversity) than a wet-rice terrace. Second, a swidden plot has a higher "ratio of the quantity of nutrients locked up in living forms (that is, the biotic community) to that stored in the soil" compared the same ratio for most settled agriculture. And third, swidden is more of a "closed-cover" biotic community than a rice field. These three properties of swidden plots mean that tropical forests and swidden *kebun* tend to "converge" in terms of their formal ecosystem properties.

Any form of agriculture represents an effort to alter a given ecosystem in such a way as to increase the flow of energy to man: but a wet-rice terrace accomplishes this through a bold reworking of the natural landscape; a swidden through a canny imitation of it (Geertz 1963: 16).

There is still a fair amount of controversy regarding the relative merits and liabilities of shifting agriculture from the point of view of its use of natural resources in relation to promoting sustainable development, but everyone agrees there are demographic and environmental limits (Peters and Neuenschwander 1988). In the 1940s Van Beukering (cited in Geertz 1963: 26) estimated that on average swidden in Indonesia could support populations of up to about 50 per square kilometer. As Ormeling (1957) points out, in the more arid areas of Nusa Tenggara close to Australia the secondary forest needs a longer period to regrow and under these conditions shifting agriculture can only support population densities of 20 to 30 persons per square kilometer before serious ecological deterioration begins. Swidden-based agriculture cannot support dense populations, and as swidden-based populations approach critical densities their utilization of forest resources becomes non-sustainable, primarily through making the fallow period shorter and shorter, and the forests are eventually destroyed.

Growing population densities in conjunction with dwindling forests mean that swidden agriculture can no longer be regarded as a sustainable way of life in Southeast Asia except in the more remote areas. Large tracts of land in Borneo and elsewhere in the region are already covered by *Imperata* savanna grass (*alang-alang*). Some grasslands in the region may be the result of natural processes of species succession acting alone, but it is reasonable to conclude that many are the result of over-exploitation of forest resources by local populations. Geertz (1963: 28) maintains, "All in all, the critical limits within which swidden cultivation is an adaptive agricultural regime in Outer Indonesia are fairly narrow." To some extent indigenous populations may have over-exploited because of their own population growth, but the balance of forces between population and environment which governs their livelihood has also been affected by other aspects of development in the region. Migration of landless peasants to frontier regions and commercial logging, in particular, have reduced the area of forest available to many swidden communities,
thus causing them to exploit more intensely their remaining forest area, or to clear patches of forest on higher or steeper slopes. Precise data on these processes are still for the most part lacking. Geertz’s (1963: 26) conclusion of just over thirty years ago is in the main still true today: “it is not known to what degree the various local population densities in Outer Indonesia now exceed critical limits and are producing grassland climaxes as a result of the need for more rapid recultivation.”

**Deforestation**

A better understanding of the situation of today's swidden farmers may be reached by clarifying some common misunderstandings. The first is the role of swidden farmers in the current processes of deforestation in the region. While we confer in Melbourne forest fires burn out of control on Borneo and Sumatra and have already destroyed an estimated 300,000 ha of forest. The acrid smoke is so dense over vast areas that airports are closed, schoolchildren are told to stay at home, and tourists are avoiding the region. While some of the forest and bush fires which occur regularly in the region are accidental many are deliberately set using slash-and-burn techniques. Since the squatters may have migrated from distant parts of the archipelago, may themselves not be traditional swidden farmers, will normally not be familiar with local ecological conditions, and are not sure how long they can occupy the area before the government may enforce other claims, their practice of shifting cultivation can be unnecessarily reckless. Unlike indigenous swidden farming communities, forest squatters will not normally plan on returning to a given patch once they are through exploiting it for a season or two. Unless they can secure legal title to the land they have no interest in its long-term sustainability. It is important to distinguish traditional swidden farmers from forest squatters (sometimes called ”forest pioneer cultivators”), although many accounts of the environmental impact of “shifting cultivation” confuse the two.

Sunderlin and Resosudarmo (1996: 15), drawing on ideas from Arild Angelsen and David Kaimowitz, make an essential distinction between the **agents** of deforestation and the **causes**:

**Causation should be specified at three levels of explanation:** agent; immediate cause; and underlying cause. The **agent** refers to the people or organisations (e.g., smallholders, logging companies, plantations) that have a physical role and/or a proximate decision-making role in forest cover change. The **immediate causes** of forest cover change are those decision parameters that have a direct influence on the behaviour of the agents. Examples of such parameters are: relative prices; relative access to resources and markets; availability of technology; rules regarding resource use; and cultural traditions. The **underlying causes** of forest cover change are those overarching national, regional, or international forces that can govern the influence of decision parameters. Examples of such forces are social structures, power relations, patterns of capital accumulation, terms of trade, and demographic and technological changes.

Sunderlin and Resosudarmo review the ongoing debate about the causes of deforestation in Indonesia. “On the one hand, there are explanations that see smallholder production and the growing number of such producers as the main cause of deforestation [among the references cited are FAO 1990; World Bank 1990]. These explanations tend to view civil society (i.e., non-state actors), and notably smallholders, as a lead force in forest removal. On the other hand there are explanations that, while acknowledging a significant role of smallholder production in deforestation, give greater emphasis to the role of government and its development projects, and to the timber sector [e.g., Dick 1991; WALHI 1992; World Bank 1994; Angelsen 1995; Dove 1996].” It is noteworthy that the World Bank, one of the key players in the debate, has shifted its position from the former side of the debate to the latter. In a 1994 report the World Bank (1994: 52) notes: “In general, such swidden farming is so much a part of the local
ecological history that the continual re-use of clan-owned secondary forest should probably not be considered deforestation at all. Deforestation by traditional agriculturalists is thus limited to those cases where increasing population pressures result in either expansion into primary forests or in serious soil degradation due to the too-frequent re-farming of forest lands." Sunderlin and Resosudarmo (1996: 15) note that in general "early assessments of causation focused on agency, whereas later formulations gave attention to agency and to underlying causes."

Major causes of deforestation in Indonesia are market failures and resource management inefficiencies resulting from government policies: "actual incentives are highly distorted, as the prices of both land and logs have been set at levels far below their economic value" (World Bank 1994: 54). The World Bank estimates that up to one third of the total annual timber harvest is wasted.

Rents have been dissipated in the construction of inefficient plywood factories, a condition imposed on award of a concession. Very high timber wastage rates have occurred. Forest management standards have been very poor ... Regeneration and replanting activities have been limited, the result both of limited lease periods (20 years, as opposed to the customary regeneration cycle of 35 years), and weak and corrupt supervisory capacity by the relevant government agencies. An efficient fiscal regime would have almost certainly produced a superior outcome from the viewpoint of both public revenue and environmental concerns. However, powerful vested interests in the timber industry and the Ministry of Forestry have ensured that no such reforms are introduced (Hill 1996: 145-146).

The vicious circle of poverty and environment

Another source of misunderstanding arises from the indiscriminate application of what Arild Angelsen (forthcoming) calls the "poverty-environment hypothesis." This hypothesis was given prominence 10 years ago in the Report of the World Commission on Environment and Development (the Brundtland Commission):

Many parts of the world are caught in a vicious downwards spiral: Poor people are forced to overuse environmental resources to survive from day to day, and their impoverishment of their environment further impoverishes them, making their survival ever more difficult and uncertain" (WCED 1987: 27).

This hypothesis was presented in the context of making proposals for "sustainable development" (SD). A "central theme" of the report was that "many present development trends leave increasing numbers of people poor and vulnerable, while at the same time degrading the environment" (WCED 1987: 4). In other words, the hypothesis does not assert an immutable link between poverty and environmental degradation, but simply that "many present developmental trends” engender a vicious downwards spiral between poverty and the environment. The report gives some examples drawn from various parts of the world where it appears the downward spiral is at work, but it does not attempt a general statement of the conditions under which the hypothesis is held to apply. This left the way open for a fair amount of misrepresentation of the hypothesis in the critical literature on sustainable development.


Alleviating poverty is both a moral imperative and a prerequisite for environmental sustainability. The poor are both victims and agents of environmental damage. About half of the world's poor live in rural areas that are environmentally fragile, and they rely on natural resources over which they have little legal control. Land-hungry farmers resort to cultivating unsuitable areas -- steeply sloped, erosion-prone hillsides; semiarid land where soil degradation is rapid; and tropical forests where crop yields on cleared fields frequently drop sharply after just a few years. ...

Poor families often lack the resources to avoid degrading their environment. The very poor, struggling at the edge of subsistence, are preoccupied with day-to-day survival. It is not that the poor have inherently short horizons; poor communities often have a strong ethic of stewardship in managing their traditional lands. But their fragile and limited resources, their often poorly defined property rights, and their limited access to credit and insurance markets prevent them from investing as much as they should in environmental protection (World Bank 1992: 30).

The poverty-environment hypothesis implies that development planners do not need to anguish over whether to devote scarce resources to either poverty alleviation or environmental protection, since contributing to one will also help the other; an essentially win-win situation pertains.
Substantial synergies exist between alleviating poverty and protecting the environment. Since the poor are less able than the rich to "buy out of" environmental problems, they will often benefit the most from environmental improvements. In addition, the economic activities stimulated by environmental policies — such as the use of agroforestry and windbreaks to slow soil erosion and the construction of infrastructure for water supply and sanitation — are often labor-intensive and thus can provide employment. Targeted social safety nets make it less necessary for the poor to 'mine' natural resources in times of crisis. Extension and credit programs and the allocation of land rights to squatters increase the ability of the poor to make environmental investments and manage risks (World Bank 1992: 31).

The same report acknowledges "[m]any relationships between human activity and the environment remain poorly understood" (World Bank 1992: 43), but does not otherwise specify conditions restricting the scope of application of the poverty-environment hypothesis.

The fact that most development reports promoting the poverty-environment hypothesis do little to specify the precise conditions under which the downward spiral occurs is a serious limitation. Leonard (1989), relatively early in the debate, went some distance in addressing this. He argues that the poverty-environment hypothesis applies in those instances where we have the poorest of the poor living in ecologically fragile zones; that three factors — namely, rapid population growth, land consolidation and agricultural modernization in fertile agricultural areas, and prevailing inequalities in land tenure — are pushing more and more of the world's poorest people into "remote and ecologically fragile rural areas and the edge of growing urban areas," areas which can been regarded as increasingly like "poverty reservations"; and that in these areas environmental degradation and intractable poverty are becoming "more and more intertwined." "The interaction of poverty and environmental destruction sets off a downward spiral of ecological deterioration that threatens the physical security, economic well-being, and health of many of the world's poorest people" (Leonard 1989: 6).

Poverty and environmental destruction are becoming inseparable twins less because the absolute numbers of people have grown than because the poorest people (who have the least access to investment capital and technology) occupy lands that need the most infrastructure, management, and external inputs if their utilization is not to result in land degradation and environmental destruction (Leonard 1989: 19).

To sum up, the combination of development achievements in many fertile areas and increasing population pressures in areas that were previously not heavily exploited has changed the nature of poverty in the developing world in recent decades. Instead of being ubiquitous across the landscape, poverty is in many developing countries more and more concentrated into definable geographical areas. In many of these areas, poor people occupy marginal or ecologically vulnerable lands that lack appropriate infrastructure and technology (Leonard 1989: 22).

Leonard's arguments have important policy implications. It is not enough to try and break the downward spiral; the underlying forces propelling more of the poor to live in ecologically fragile environments also need to be addressed. He also notes that while "the poorest of the poor ... may be reached by relief efforts ... recent research has demonstrated clearly that they are generally beyond the reach of externally supported development projects or government-financed investment programs" (Leonard 1989: 10).

Sharachchandra Lélé (1991: 613-614) states that "even a cursory examination of the vast amount of research that has been done on the links between social and environmental phenomena suggests that both poverty and environmental degradation have deep and complex causes." The poverty-environment hypothesis simplifies these complex realities to the extreme, arbitrarily selecting some of the factors involved for explicit treatment and ignoring the rest. Lélé criticises mainstream SD thinking on poverty-environment links for tending to focus on some factors, such as "inadequate technical know-how and managerial capabilities, common property resource management, and pricing and subsidy policies," while ignoring other important factors, like "[d]eeper socio-political changes (such as land reform) or changes in cultural values (such as overconsumption in the North)." His criticism was perhaps more on the mark in the early 1990s than it is today. His main conclusion remains pertinent, however: "the technical discourse needs to begin with an acknowledgement that the big picture essentially holds in all cases, and then proceed to developing analytical methods to help estimate the relative importance of each causal factor in specific cases and identify means of and scope for change."

Similarly Reardon and Vosti (1995) "take issue with the narrow focus of the current poverty-environment debate" and show how the "strength and direction of the poverty-environment links" vary according to "the composition of the assets held by the rural poor and the types of environmental problems
they face." They argue that, for environment-poverty analysis ... it is inadequate to limit the measurement of poverty to 'welfare-poverty', measured according to income, consumption, or nutrition criteria as is common in the poverty and food security literature. Rather, we argue that the criterion for poverty in environment-poverty analyses should be the ability to make minimum investments in resource improvements to maintain or enhance the quantity and quality of the resource base, to forestall or reverse resource degradation. A household below this line we term 'investment poor' to differentiate it from being 'welfare poor' (Reardon and Vosti 1995: 1496).

The determinants of poverty-environment links are identified with the behaviour of the poor, at both the household and village level, and are shown to depend in particular on their assets. Consequently policy strategies need to focus on conditioning variables that affect market development, community wealth, infrastructure, land rights, household asset distribution, and the affordability and appropriateness of natural resource and conservation technologies. There is no reason to assume that reducing the poverty of slash-and-burn farmers will in and of itself cause the farmers to invest more in long-term conservation of forest resources.

**Paths to development for resource-poor farmers**

Development of low-resource agriculture in Southeast Asia is difficult for a number of reasons. The wide range of topographical, climatic and ecological conditions means that the development of a "standard package" -- comparable to the combination of higher-yielding crop varieties and chemical fertilizers at the center of the Green Revolution -- which could then be applied uniformly is unlikely. Since these farmers are investment poor and have few resources to start with development strategies requiring sophisticated and expensive inputs are not realistic. The remoteness of many of these forest areas, their relative sparseness of population, and lack of infrastructure make development of the swidden-based communities difficult and expensive. Meanwhile there is a tendency in some parts of the region for richer farmers who have benefitted from the Green Revolution, along with others groups who have prospered in the mainstream of development, to buy land from low-resource farmers, causing the latter then to exploit yet more difficult and mariginal lands.

Faced by this perplexing situation the most common strategy proposed by development planners has been to try, despite all the obstacles, to transform low-resource farmers into settled agriculturalists. Needless to say this is not always successful, often because the environmental conditions are not suitable (Donner 1987). Strong persuasion by government authorities in the name of national development has often been met by equally strong local resistance inspired by indigenous cultural values. It is for such reasons that Robert Chambers and others suggest that development planners should adopt a more participatory "farmer first" strategy for agricultural development in regions of low-resource farming to complement the more conventional technology-transfer approach (Chambers *et al.* 1989).

The study of swidden farmers in Seram undertaken by Deny Hidayati and myself documents the breakdown in communication between government development officials and local farmers. The model of developed agriculture presented to the farmers by agricultural extension workers (and other officials) is preconceived and prepackaged, and appears not to engage the immediate needs and aspirations of the local farmers themselves. For example, the extension workers offer help with raising chickens or introducing new crops when the farmers say what they really need is help with land processing and sago production (Brouwer 1996). The development strategies being offered the local farmers are based on different cultural value assumptions, and therefore are not perceived by the farmers themselves as presenting improvements in their lifestyle and quality of life (Hayes 1990: 4-6; 1997a). In turn, the apparent lack of response on the part of the farmers causes some officials to see them as "lazy" and "unmotivated." There is a need for more dialogue and better communication between government officials and swidden farmers so that a more relevant path to development can be fashioned which recognises the current needs and aspirations of the farmers, and which builds on their considerable knowledge of local agricultural and ecological conditions (Hayes 1997b).

Improved technologies have a part to play. As Lappe and Collins (cited in Shiva 1991a: 45) have pointed out: Historically, the Green Revolution represented a choice to breed seed varieties that produce high yields under optimum conditions. It was a choice not to start by developing seeds better able to withstand drought or pests. It was a choice not to concentrate first on improving traditional methods of increasing yields, such as mixed cropping. It was a choice not to develop technology that was productive, labour-intensive, and
independent of foreign input supply. It was a choice not to concentrate on reinforcing the balanced, traditional diets of grain plus legumes.

There is a particular need among swidden farmers for improved technologies for managing tree crops, their traditional source of cash income (Browder 1989; van Noordwijk et al. 1995; Vosti and Witcover 1996). While plantation owners take advantage of improved varieties and modern techniques the practices of most smallholders, at least in Indonesia, have not changed significantly in 100 years.

The new technologies should be low-input and environmentally friendly, based more on an ethic of cooperation than technology transfer:

This should not suggest an ‘engineering solution’ or ‘technological fix’: Technological innovation is important for both environment and development, but it is not sufficient in providing adequate responses to deep-rooted social causes of the environmental catastrophe. Furthermore, technology cannot compensate for short-comings in the process of political decision making or for mismanagement. But in combination with social changes, land reforms, a more balanced and fair trade pattern between North and South, and effective, enforceable regimes for environmental protection on national and international levels, it will undoubtedly be a key factor (Koenig 1995: 9).

A more participatory approach to setting local development goals and deciding on appropriate strategies for low-resource farmers also depends in part on strengthening certain community institutions through which farmers can freely express their needs, aspirations and opinions (Baland and Platteau 1996; Colchester 1994). For instance, Javanese sawah farmers dependent on irrigation typically have such farmers’ associations and cooperatives, but since swidden agriculture does not depend on such a high degree of cooperation and coordination among individual farming households, swidden farmers tend to be more loosely organised. Nonetheless the clan organizations which bind the communities together are themselves highly developed, and some traditional institutions, such as the kewang and sasi in parts of the Moluccas, play crucial roles in establishing, maintaining and monitoring effective natural resource management practices. Unfortunately national policies and development efforts sometimes preempt and undermine these institutions instead of building on their strengths (von Benda-Beckmann et al. 1995). The kewang Eliza Kissya from the Moluccan island of Haruku is well-known in Indonesia for his efforts to revive interest in traditional adat and has poignantly described the current difficulties:

Environmental damage to the coral reefs on the coast of Haruku through unauthorized bombing by irresponsible elements is still continuing. Various efforts have been made by the people to prevent the spread of this destruction of habitat, going so far as bringing this to court and to the police. But all these efforts have resulted in dead ends, often because the people of Haruku are not important people, they are simple and ordinary and do not have access to the centres of power which wield authority over these matters. Under these conditions confused and almost ready to give up, the people of Haruku feel that even the Kalpataru Award of 1985, complete with a commemorative monument in front of the Village Hall, is of no significance whatsoever to them in preventing the destruction of this habitat (Kissya 1995).

Strengthening relevant local institutions can facilitate participation of local farmers and their communities in the development process to ensure they do not become further marginalised. It is also important that relevant local knowledge about environmental conditions is mobilised and used as secondary forest is converted to agriculture.

These are some of the empirical items which, in my view, need to be put on the agenda if the contemporary North American ideology of environmental justice (Newton 1996) is to be broadened and deepened into a philosophy of global ethics for the twenty-first century. The fundamental question is whether this can be done by simply adjusting priorities within the framework of what Vandana Shiva (1991b) calls green capitalism, or whether it requires a social ecology entailing a more radical shift in our apprehension of nature (Naess 1989) or what Max Weber would call a "transvaluation of values." One is reminded of Albert Schweitzer's appreciation of Goethe:

In what he thus betrays of himself as a poet, Goethe is revealed as a thinker. It is true that all his life long he resisted entering the ranks of the philosophers. In one sentence he proudly boasts that he only had so much success because he 'never thought about thinking'. He certainly tried to understand Kant, Hegel (for whom he had genuine affection) and Schelling, and endeavoured whenever possible to feel himself one with them. But he did not succeed, in the end he was repeatedly obliged to admit that they were travelling on a path that was not his. He did not understand the way in which the German spirit in these thinkers waged the battle for an ethical, idealistic Weltanschauung.
And once again, it is in his profound union with Nature that the greatness and the limitation of his thought as of his art are to be found. However much he tries, he ultimately cannot join these thinkers because for them thought stands between Man and Nature. That is why for him Kant's *Critique of Pure Reason* is, as he says, a 'prison fortress' which prevents us from moving within Nature in freedom of imagination and thought; therefore the systems of speculative philosophy are in his eyes a violation of Nature.

The intimate relationship in which he stood to nature, combined with his sense of reality, did not allow him to treat her in this way. He approached her with reverence, hoping she might reveal to him something of her secrets and permit him to find the knowledge which bestows strength for life's journey. His efforts were aimed at an objective, ethical nature-philosophy (Schweitzer 1949).

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