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Book section

Original citation:

Originally published in: Sayer, Jeffrey and Maginnis, Stewart, (eds.) *Forests in landscapes: ecosystem approaches to sustainability*. [Earthscan](#), London, UK, 2005 pp. 165-176.

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Available in LSE Research Online: August 2009

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The Political Ecology of the Ecosystem Approach for Forests

pp. 165-176 in Sayer, J. and Maginnis, S. (eds) *Forests in Landscapes: Ecosystem Approaches for Sustainability*, London: Earthscan. 2005

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Introduction

This paper contributes to this edited collection by discussing the politics of the Ecosystem Approach (EsA), and especially the role of state forestry institutions. To date, most political analysis of the EsA has focused on its role in international negotiations, or as a means of implementing the Convention on Biological Diversity (Hartje *et al*, 2003). There has, however, been comparatively little attention to the influence of politics at the national and sub-national level, and in particular to the ways that the EsA is defined scientifically, with whose participation, and with access to which type of knowledge. This paper seeks to highlight these factors by discussing the potential ways in which state forestry institutions can influence the formulation of the EsA, and how localized politics can lead to variations in forest policies between different countries and contexts.

The paper adopts an approach known as ‘political ecology.’ Academics have used this term since the 1970s to refer to the relationship of ecological science and environmental politics. Initially, much political ecology focused on environmental conflicts between social actors such as the state and non-governmental organizations on topics where environmental impacts were assumed to be clear-cut, such as the establishment of national parks or the location of polluting industries (e.g. Bryant and Bailey, 1997). Increasingly, however, political ecologists are examining the politics of ecological science itself, which looks instead at the political authority of different knowledge claims about environment, or why we have come to assume certain environmental changes are problematic. This approach does not suggest that environmental problems do not exist, or that ecological science cannot help, but acknowledges the greater political controversies about the nature of ecological risk, and the influence of different political actors upon what is seen to be authoritative knowledge (Forsyth, 2003).

The emergence of the EsA, and the role of state forestry departments are both legitimate topics for a political ecology approach. The EsA has been defined as a strategy that ‘recognises that humans, with their cultural diversity, are an integral component of ecosystems’ (see Convention on Biological Diversity website). Yet, it is important to note that the EsA is a set of guiding principles rather than a specific method to manage ecosystems. To date, little attention has been given to how different social groups or organizations may influence forest policies, and how far the EsA may vary between locations as a result. Similarly, state forest institutions play a fundamental role in

formulating and implementing forest policies. There is often an assumption that forest departments are politically neutral bodies simply applying objective science and expertise. The fact that their organisational history and context may have influenced this 'science' is rarely discussed. A growing number of analysts suggest that these questions of political participation and organisational approaches need to be understood in order to make forest policy, including the EsA, more effective and transparent.

This paper is divided into three further key sections. First, the paper lists some potential ways that political factors may influence forest policies, and how environmental science and politics may be considered 'co-produced.' Second, the paper lists potential impacts of organisational politics and illustrates these with reference to state forestry departments in Thailand and Guinea, West Africa. Thirdly, the paper draws some lessons for understanding the political ecology of the EsA as a scientific approach, with some suggestions for making it more transparent and socially inclusive in different locations.

Political influences on the formulation of the Ecosystem Approach

The Ecosystem Approach (EsA) has been discussed since the mid-1990s as an overarching framework of integrating conservation and development, and particularly as the preferred approach to implementing the Convention on Biological Diversity (CBD). Yet, there is still great uncertainty about the full meaning of this approach, and the extent to which the EsA represents a transferable guideline for forest management, or an approach to allowing the integration of different objectives from diverse stakeholders.

The definition of the EsA adopted within the CBD highlights some of these uncertainties. The CBD website defines the EsA as 'a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way', and which 'recognizes that humans, with their cultural diversity, are an integral component of ecosystems.' In this respect, the EsA seeks to achieve the Convention's three key objectives of conservation, sustainable use of resources, and equitable sharing of benefits. Yet, the definition of terms such as 'sustainable' and 'equitable' are open to negotiation. Plus, the recognition of 'cultural diversity' does not imply how far diverse social perspectives should control ecosystem management, or developed in consultation with them. Sometimes, political analysis of the EsA has discussed how far ecosystem managers or the state should consult with different resource users. But the political analysis of the EsA should not simply rest with asking who should be consulted in implementing policies, but should also include increasing participation in the formulation of the EsA, and in the scientific assumptions underlying policies and programmes.

The underlying scientific assumptions about ecosystem or forest management may reflect political influences in many ways. First, the concept of ecosystem 'function' is often referred to in factual and universal terms, but without acknowledging the social perspectives that frame concepts of 'function.' Article 2 of the CBD, for example, has stated that 'ecosystem' may be defined as a 'dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional

unit.’ Yet, definitions of ‘functional unit’ may depend upon the elements of the ecosystem that are particularly valued or expected from observers. For example, forest systems may have different ‘functions’ according to whether they are classified as a watershed, wildlife reserve, or site of occasional agricultural production. Each land use would produce different proposals for maintaining ecosystem ‘function’ at optimal levels. In scientific terms, academics have called this phenomenon ‘problem closure’ because it encourages the adoption of predefined definitions of how an ecosystem should be seen. If one specific forest is seen only in terms of (say) its ability to supply year-round water to a lowland area, then much research and explanation of environmental change in this location will be couched in those terms. Seeking to identify a different ‘function’ for the forest may therefore appear to be counter to existing scientific evidence built upon a different ‘function.’ Implementing a more diverse, Ecosystem Approach to forest management may therefore require questioning how far perceptions and empirical information about the forest have been shaped by past definitions of its function by only a few social groups.

Second, the question of ecosystem function also raises important questions of the time and space scale of inquiry. Frequently, the definition of ecosystem ‘function’ may simultaneously define, and be defined by, the spatial area under consideration, and the social groups within this area. For example, the categorisation of land as a watershed forest must necessarily be based upon the existence of water users outside the zone who wish to gain access to water from inside it (Barham, 2001). This combination of consultation and problem closure may exclude social groups who live inside the allotted watershed forest who may wish to use the land and forest for purposes other than protecting the supply of water outside. Similarly, the definition of ecosystem extent may change if the objective is protection of specific species. The spatial scales of ecosystems and problem closure are therefore closely linked, and both may change if the social consultation about problem closure changes.

Indeed, the assumption that ecological functions are fixed in space has caused much political commentary. For example, the early writings on ecological politics in the 1960s urged attention to the necessary limits posed by ecosystems to human activities without necessarily identifying the social divisions in how ecosystem functions were defined. For example, Eugene Odum, one of the most influential early ecologists, wrote: ‘The new ecology is thus a systems ecology ... [it] deals with the structure and function of levels of organization beyond that of the individual and species’ (Odum, 1964:15). Later critics have suggested that this ready association of ‘communities’ with ecosystems was generated more by a concern about the state of society and politics, rather than about the needs for specific communities to live within ecological boundaries. Moreover, others have suggested that making generalisations about the cohesiveness of social groupings was a recipe for excluding social groups such as indigenous people, or for avoiding the differences within society based on factors such as age and gender (Agrawal and Gibson, 1999).

Third, it is also clear that forest policies rarely develop in a vacuum, and frequently have relationships, seen and unseen, with other political objectives. Forest departments are

rarely independent from other sections of the state, and often forest policies are seen to be ways to enact a variety of complementary political objectives. For example, the classification of land as protected or non-protected may often overlap with strategic concerns about land in border regions, or where insurgency has been experienced in the past. Moreover, state forestry policy may reflect the desire of the state to win support from social groups outside the state such as growing numbers of middle classes. For example, the protection of land seen as 'wilderness' may be partly to win political alliance with urban populations who are increasingly worried about rapid forest loss (e.g. see Neumann, 1998). Academics have often described how governments may 'depoliticise' complex strategies for control and legitimisation by ascribing these decisions to the supposedly neutral 'scientific' world of forest departments or development agencies (for a discussion of this process in Lesotho, see Ferguson, 1990). Moreover, the overlapping interests of allying political actors may result in the adoption of scientific explanations or problem closures as means of cementing these interests. Academics have called this phenomenon 'discourse coalitions' (Hajer, 1995:65), because they occur when different viewpoints and objectives overlap, and consequently reinforce the belief that these views are the only way of seeing things. An alliance of a state, which seeks to gain control over strategic land, and middle classes, who want to see more action on protecting wilderness, may therefore result in the perceived function of that land in being classified as untouchable by localised agriculture.

Hence, as a consequence of these factors, the scientific assumptions underlying many approaches to ecosystem management may reflect the political participation in how such management has been framed, for what spatial area, and for which purposes. Analysts have frequently referred to repetitive patterns of environmental explanations as 'environmental narratives' because they are commonly repeated explanations of how an ecosystem works, or how it may be degraded. They are often seen as 'fact', but are based in social discourse that has accumulated over some years (see Roe, 1991). It is important to acknowledge that some powerful political actors may support these narratives, but the narratives do not necessarily reflect the potential framing (or problems closures) of different social groups. Indeed they may avoid the insights of alternative knowledge claims from actors who have not been involved in the creation of narratives. Frequently, state forestry institutions have strongly influenced the creation of narratives about forest management, and yet their role is often left unchallenged.

Political influences of state forest departments

State forestry departments, of course, may influence, or be influenced by the kinds of political factors described above, and these may be less visible than their stated policy objectives. In particular, the history, and original terms of reference may influence the 'functions' and problem closures ascribed to ecosystems by forest departments. It is well known, for example, that many forest departments in developing countries were established during colonial administrations, and hence had objectives that reflected those of colonial authorities rather than diverse stakeholders. Indeed, analysts have argued that the very identification and mapping of forest areas by forestry departments simplified

diverse forest ecosystems into the single function of 'timber farms' (Scott, 1998:263). The techniques used by forestry departments, such as cadastral mapping, and the pre-identification of different trees as 'timber' or 'trash' species in effect defined what was seen to be viable forest according to particular 'problem closures', and did not highlight how other methods of measurement may indicate alternative functions.

The policies of colonial forestry departments also, obviously, reflected partial social consultation. In Bengal in India during the nineteenth century, teak and sal production was given priority, and the practices of shifting cultivators were seen to be inimical to the objectives of the foresters. Hill forest areas were identified as less valuable for timber production and therefore were burnt to encourage the cultivation of less valuable products such as sabai grass (Sivaramakrishnan, 2000). The objectives of forestry departments have changed over time to reflect a higher prioritisation of biodiversity conservation but not all organisations can change attitudes or have the ability to adopt new policies as quickly as some would want (Dove, 1992).

Forest departments are not, usually, overt political bodies in the sense that they take formal political stances on topics of citizenship, public accountability of the government, or law formulation that are usually the responsibility of legal or parliamentary sections of the state. Yet, the search for alternative forms of forest management may increasingly require forestry departments to consider such questions as citizenship or rights for minorities. If the Ecosystem Approach really does call for a greater recognition 'that humans, with their cultural diversity, are an integral component of ecosystems', then this also calls for a diversification in the means of managing forests. Such transitions may challenge historic practices within forestry departments in order to start acknowledging forest uses instead of log production alone. Yet, these changes also require forestry departments to be aware of practical problems of access to land, land tenure, and political representation that may prevent some minority groups from influencing how ecosystem management may proceed.

Furthermore, many forest department actions have implicit political implications that require greater scrutiny. Forestry departments are often called upon to provide expertise in their role as a scientific agency. Yet, analysts are increasingly proposing that scientific advice in this context should not be seen as neutral and a prelude to policymaking, but as further connected to the underlying environmental narratives and functions (or problem closures) identified by the state and its allies. Indeed, forestry departments occupy an influential position of being able to determine how far scientific information about forests and ecosystems connect with the policy world. This influence, and the boundaries used between so-called 'science' and 'politics' (and who defines them) are increasingly seen to be important in revealing the tacit assumptions underlying scientific advice. Academics have used the term, 'boundary organization' to describe such social organisations or collectives that can be accessed equally by members of each world without losing identity (Guston, 2001:400). According to this line of thinking, we should not look to see how forest departments may use science to influence other parts of the state and public, but instead see how the organization may remain stable (or successful) while building consensus in both constituencies of forest ecologists and overt policymakers. Instead of

the science being communicated as it ‘exists’, the concept of boundary organisations suggests we should look at how far the scientific information is shaped, and pre-shaped to find areas of agreement between these constituencies. Frequently, such areas of agreement may also be called ‘discourse coalitions’ as discussed above.

Consequently, seeking to reform state forestry departments may throw up challenges to various ways in which the departments have previously established authority, and this includes the notion that forest departments are the arbiters of scientific approaches to ecosystem management. The concept of ‘scientific forestry’ – or the maximised production of logs or watershed protection functions through application of forestry and ecological science – may be challenged on the social grounds that it excludes various alternative framings of ecosystem purpose (Scott, 1998:19). It is incomplete because it proposes that the science used is without social and political contextualisation. In some cases, challenging the tacit assumptions of scientific principles underlying forest institutions may also challenge the political purpose of the institution. At times, this may refer to international or non-governmental organisations as well as state forestry departments. For example, the ‘Alternatives to Slash and Burn’ initiative overseen by the Consultative Group on International Agricultural Research (CGIAR), has been criticized for defining ecosystem management in a way that automatically, and without negotiation, defines some forms of shifting cultivation as problematic (Forsyth, 2003:146). Similarly, some authors (e.g. Jeanrenaud, 2002; Fairhead and Leach, 2003:42) have detected a backlash to the entire conservation-with-development enterprise from conservationists who advocate a return to the values and practices of strict nature protection. Such advocates have often promoted a purely biophysical and spatial basis of defining ecosystem ‘functionality’ (e.g. Oates, 2000; Terborgh, 1999). These critics have written:

‘In this context, eco-regional approaches [i.e. those that specify an ecosystem function according to the regional extent, rather than by the views of people who live within it] have become more than mere ways to set priorities for conservation, coming to represent a new era of biologically-led and supra-national initiatives responding to the urgency of biodiversity protection, overcoming the problems of inefficient or failed states, and justifying major funding through scientifically-led strategic plans’ (Fairhead and Leach, 2003:42).

Thus, there still remain two main approaches discernible in discussions concerning the EsA, or integrated conservation and development: a focus on managerialism and predefined notions of ecosystem function; and an alternative focus on adaptation, negotiation and open-ended governance as a means of achieving ecosystem management. The first tends to be rooted in the typical history of state forestry departments as managers and advisers about forest areas; the second is an attempt to achieve the wording of the EsA by recognising cultural diversity and local human uses of resources. The role of state forestry departments is crucial in either approach, or if direct managerialism is to be replaced by more open-ended discussion. Yet, of course, there are significant organisational barriers to achieving these changes in practice.

The case of the Royal Forestry Department of Thailand

The Thai Royal Forestry Department (RFD) was established in 1896 to oversee the

logging of Thailand's teak forests. Thailand was never formally colonised by a European power, and so the RFD cannot fully be described as a 'colonial' forestry department, but the department is representative of state forestry institutions that have adapted from a primarily exploitative function to one that deals increasingly with conservation. This paper cannot summarize the entire history or structure of the RFD (see Anat *et al.*, 1988:162-164), but will focus on the relationship of the RFD to recent political debates concerning the proposed Community Forestry Bill, which has been discussed in Thai politics since the 1990s. The Bill in many ways reflects the concerns of the Ecosystem Approach, as it involves defining how far forests can be managed in diverse and decentralised ways, with recognition of cultural perceptions.

Thailand's legal framework for forestry and forestland is complicated, and dates from times when the current population distribution and economic activity of Thailand was very different. The Forest Act of 1941 defined 'forest' as 'the land area which no one has authority to occupy or use' (Anat *et al.*, 1988:142). Consequently, the indications of such land at the time defined vast quantities of the country as state-owned forestland, even if there were technically no forest there, or if local customs about settlement and land occupation implied that land could be settled through usufruct or regular cultivation. Most deforestation occurred in Thailand in the mid-twentieth century, with total forest area falling from 53 percent of the kingdom in 1961, to just 29 percent in 1985 (Anat *et al.*, 1988:143). Illegal logging, urbanisation, agricultural expansion (especially in the north), and the extension of aquaculture in previous-mangrove forests in the south have accounted for this loss. In 1989 Thailand implemented a total ban on logging as a response to the problem, and discussions since have attempted to reform this total ban into a more flexible form of 'community forestry' to allow some limited forms of forest use.

The RFD produced the first official draft of community forestry legislation in 1990, yet this was criticized by non-governmental organisations for maintaining the strong role of the state in forest management. In response, a coalition of activists and NGOs such as the Project for Ecological Recovery developed a new 'people's' draft bill that asserted the rights of local villagers to enter and use forests. Discussion on community forestry was delayed because of the re-emergence of a military government (1991-1992), and the attempts of this and successive governments to regain control of land in north-eastern Thailand through large-scale plantation and resettlement of villages in land claimed by the state. But in 1996, the government requested the National Economic and Social development Board (NESDB), a policymaking body composed of government and public figures, to develop a new Community Forestry Bill. This Bill has yet to be passed by parliament but has been rewritten following criticisms from conservationist NGOs, and pro-business politicians (such as the one-time Prime Minister, Chavalit Yonchaiyudh), who wanted to open forests to logging and mining concessions. The RFD, in particular, opposed decentralisation of governance to the village level, with their previous Director General, Plodprasob Suraswadi once stating in emotional terms that people and forests cannot co-exist. One key debate, for example, refers to the definition of 'community.' The 'people's' version proposes, in accordance with the 1997 Constitution, that a local community is defined as a 'social group' living in the same locality and having the same

cultural heritage, and who can apply for that status after a minimum of five years experience in safeguarding forest land. By contrast, the alternative government version proposes that a 'community' may comprise at least 50 individuals living in proximity to forest, regardless of how long they have been there or how forest is managed (see Johnson and Forsyth, 2002:1596).

It is important to note that the specific discussion of the Community Forestry Bill is not explicitly a discussion of the Ecosystem Approach (EsA), but that many parallels exist between the two concepts, and on occasions, the EsA has been discussed in the context of community forestry. The debate in Thailand also paralleled many of the general political themes outlined above. Most fundamentally, the implications of defining ecosystem 'function' in specific ways have resulted in different policy proposals for a supposedly 'sustainable' forest ecosystem. The government and RFD, for example, have defined forest ecosystems in the mountainous north of Thailand as predominantly watersheds for the lower plains and cities, and as sites for log production via teak and pine plantations. Yet, the 'people's' version of community forestry frames forests instead as sites of rural livelihoods, where poor villagers require access to forests in order to gather fuelwood and limited use of agricultural land. Both of these perspectives, however, have invoked political rhetoric of ecological fragility and potential devastation, on one hand, with democratisation and human rights on the other. The portrayal of ethnic minorities in the north of Thailand has also been shaped by this debate. Much discussion in Thailand represents the Karen people, on the Thai-Myanmar border, as classically closer to the type of localised forest management intended under the Community Forestry Bill. This is because the Karen have usually lived in settlements for decades or even centuries, and have generally adopted forms of shifting cultivation that allow for field rotation and fallow periods. This is seen in contrast to new, more migratory, ethnic groups in Thailand such as the Hmong and Akha, who have typically relocated villages every 10–20 years, without concern for field rotation. Some critics have suggested that the romantic image often afforded to the Karen in the context of community forestry discussions is more the result of current political perceptions, and the desire to find examples of positive local forest users, rather than a deeper understanding of how all groups may, or may not, adopt the EsA (Walker, 2001). In other words, one dominating 'narrative' (that shifting cultivation is necessarily damaging to upland watersheds) is now being amended by reference to another narrative that refers to a popular idea of how upland villages should be.

Yet, political debate about forests is also limited by who is allowed to participate. The Thai government clearly cannot give formal citizenship to all people who cross international borders from China, Laos and Myanmar. But local academics in Thailand have estimated that only 40–50 percent of Thailand's one million ethnic minority people in the north do not have formal citizenship, and consequently have fewer rights of political participation or land tenure. In May 1999, some 5,000 hill farmers from both Thai and ethnic-minority groups congregated outside the provincial hall in the northern capital of Chiang Mai, requesting citizenship and an end to plantations on agricultural land. The police and RFD forcibly broke up this demonstration.

Moreover, there is also growing concern that the underlying assumptions about the impacts of upland agriculture on lowland water supplies are flawed or simplistic. Long-term research on water patterns have suggested that the presumed influence of upland land-use-cover change on the discharge of major rivers may be overrated, and that increases in lowland demand for water because of urbanisation, industrialisation and irrigation may be more immediate causes (Alford, 1992; Walker, 2002). Indeed, these results have been claimed in other locations, and there is also evidence to suggest that teak plantations may increase soil erosion and runoff because of their influence on the impact of rainfall on the soil surface (Calder, 1999:16-19). Much RFD literature and public statements, however, continue to make the link between upland agriculture and lowland water shortages.

The case of Guinea, West Africa

The country of Guinea in West Africa is quite different to Thailand because it is a much poorer country, with a relatively more arid climate, and of course with a different political history and diversity of cultures. One further difference is that Guinea was a French colony. Yet, Guinea is worth describing alongside Thailand because forest policies have been highly contested here, and the role of formal forestry institutions such as the state forestry department can be examined.

Formal concern about forest resources in Guinea from the colonial state dated to the late nineteenth century, when local administrators sought to establish financial and military security for the region (see Fairhead and Leach, 1996:237-260). Surveyors noted that the landscape of Guinea was characterised by 'forest islands' that frequently surrounded villages, and a wider savannah ecosystem in-between such islands. These forest islands were often maintained by villages as a means of military defence against potential raiders. At the time, the colonial surveyors, and particularly the botanist, Chevalier, assumed that local agricultural practices and population increase were threatening both the forest islands and savannah by degrading forest and accelerating soil erosion. As in Thailand, much concern to protect the forests was because of a belief that the forests were a key factor in maintaining high levels of rainfall. Moreover, the forest islands were seen to be relics of a previously much larger closed-forest area. One colonial administrator, Nicolas, wrote in 1914: '...the effects of this de-wooding are disastrous; one will soon see nothing more than entirely naked blocks of granite... Now there rests no more than a little belt of trees around each village and that is all' (in Fairhead and Leach, 1996:240).

These views had important consequences for how forestry was seen at the time, and on how ecosystem function and equitable sharing of benefits have been defined since, such as under the EsA. In colonial times, various administrators were concerned about the perceived relationship between land use and forest loss, and its impact on other potential land uses such as plantations for export crops such as rubber, coffee and oil palms. But the first, formal state forestry department was created only in 1931 with the national Service des Eaux et Forêts, as a separate unit from the agricultural service. The initial forest policy was to create a 'curtain' of reserves to halt southwards savannization, and

two ridges were identified for reforestation and restricted land use. In 1935, a new decree distinguished between 'wild' and 'useful' fire, which sought to ban the former and restrict the latter to controlled circumstances. There was also more state regulation of farmers' land and tree management. These strategies were partly inspired by the desire to ensure that the flow of the River Niger was not adversely affected by land-use practices. It reflected the belief found in Thailand and elsewhere that lowland water shortages could be explained largely through upland vegetation change (Calder, 1999).

Such views, however, have been criticized by recent research in Guinea about the origin of the forest islands. Fairhead and Leach (1996, 1998, 2004), for example, have used historic photographs, land-cover transects, and oral histories of villagers to argue that the 'forest islands' should not be seen as relics of a previously-larger forest, but as units of forests that have been created largely by the villages themselves. Moreover, the assumptions about savannization and human land use have been questioned by more general research that has highlighted the role of longer-term changes in climate, and the vegetation dynamics within savannah ecosystems themselves. This may explain the progression and regression of land classified as savannah (e.g. Bassett and Zuéli, 2000; Cline-Cole and Madge, 2000).

According to such critics, the belief that rural land use contributed to landscape degradation can be described as another narrative that reflected the historic functions ascribed to the ecosystems, and the selective knowledge at the time. 'Ostensibly concerned with the environment and the sustainability of resource use, this landscape interpretation in policy has had the instrumental effect of appropriating resource control and revenue from villagers, and of extending state bureaucracy into rural areas' (Fairhead and Leach, 1996:259-260). These views, suggest that outdated scientific narratives may already jeopardize the EsA's objectives of integrating the perspectives of diverse stakeholders into forest management. These narratives reflect historic views of ecosystem functions, and the long-term objectives of the state to control rural areas. Implementing the EsA may therefore require revising accepted 'truths' about the causes of forest degradation, rather than seeking to implement forest management without challenging them.

It is unclear still how far these scientific narratives inform current environmental policies. International aid for Guinea has increased since independence from France in 1958, and some attempts to support local biodiversity or forestry policies have reflected older beliefs. For example, Fairhead and Leach (2003:87) cite one expatriate forestry official in Guinea as saying: 'In village forests, biodiversity has no role. It does not interest villagers. In the forest reserve, the biodiversity aim must necessarily reduce the extent of participation; the more one has a goal of biodiversity conservation, the less one has participation.' Such views, of course, run counter to the definition of the EsA discussed above. To achieve the objectives of the EsA, it may be necessary to diversify approaches to biodiversity in order to acknowledge the historic ways in which villagers have protected forest islands, or manipulated the growth of different species of use to them, rather than adhere to certain specific definitions of biodiversity. Moreover, this statement suggests that the speaker sees expertise as lying mainly within formal organizations

rather than with resource users, again counter to the intentions of the EsA.

Some international land-cover monitoring agencies have also apparently adopted the view that forest islands are still relics of wider forest areas. Taking a controversial position, Fairhead and Leach (1998:183) have estimated that total forest loss in six West African countries since 1900 may reach 9.5–10.5 million hectares, rather than commonly discussed estimates of 25.5–30.2 million hectares. But some agencies, such as the World Conservation Monitoring Centre, have placed deforestation in this region even higher, at 48.6 million hectares. These criticisms do not suggest that rural land use is without impacts on forest cover, or that there is no need for formal forest policy. Instead, they indicate that there is a need to reconsider the driving forces behind land-cover change in order to make forest policies more effective, and to prevent forest policies from restricting rural livelihoods in unnecessary ways. In Guinea, it seems, implementing the EsA – in the terms discussed under the CBD – depends on challenging certain beliefs about the extent and causes of forest loss, and in working alongside (rather than criticising) the perspectives and expertise within local populations.

Conclusion

This chapter has summarized various ways in which national political structures and institutions shape the implementation of the Ecosystem Approach (EsA). It used the examples of state forestry departments in Thailand and Guinea, West Africa, to indicate how specific organisations may shape forest policies, and how political factors may influence state departments too. But what are the general conclusions for questions concerning the EsA?

First, it can be suggested that the EsA – as defined under the CBD – underestimates the role of local institutions and politics in determining how it may be interpreted and implemented. There is a tendency within the CBD discussions to portray the EsA as a single approach that may be applied in different locations. Instead, it is important to note that the EsA is a set of guiding principles, from which different institutions may ‘pick and choose’ in order to suit strategic goals. While the essence of the EsA could be better seen as a negotiable, and culturally sensitive approach to ecosystem management that can be adopted in diverse locations, it is important to note how local contexts and politics will result in different policy outcomes.

Second, the nature of forest policy adopted formally by state institutions frequently reflects political concerns of a wide-ranging nature, and which are not always specifically the domain of forest management or of people living in zones affected by forest policies. In Thailand, for example, much forest policy has been influenced by the identification of ecosystem function as watersheds for the lowland plains and cities, or by national security concerns about citizenship and state control over lands close to national borders. In Guinea, forest policies have similarly coincided with attempts at state expansion into rural areas, and the objectives of some international conservation organizations to highlight forest loss in this area.

Thirdly, the scientific basis of forest policy may be based on so-called ‘narratives’ of explanation that reflect historic framings of how ecosystem should be seen (or so-called ‘problem closures’), and the experiences of only a selected number of people. Frequently, such narratives are repeated and reinforced by state forestry departments because these are seen to be the underlying purpose of such bodies, or because they allow the chance for political alliance or funding from other actors. In Thailand, the narrative that shifting cultivation or upland agriculture is responsible for lowland water shortages has found support from the military (who have sought to control upland areas for security reasons) and urban middle classes (who are concerned about lost wilderness and who may also not be willing to regulate water shortages by reducing water demand). In Guinea, the underlying narrative that historic rural land uses cause savannization found initial support from the French authorities who wanted to regulate lowland water flow, and more recently from some international conservation organisations. But it also important to note that critiques of such entrenched positions may also reflect counter-narratives of their own. For example, in Thailand, critics have suggested some proponents of community forestry have portrayed one minority (the Karen) in ways that are romantic and detrimental to ways of identifying effective ecosystem management (Walker, 2001).

Fourthly, forest departments may frequently use ‘science’ as a means to define themselves with authority and legitimacy within political debates about forest policy. Yet, frequently such science is based on narratives that are increasingly challenged – such as that concerning the relationship of upland agriculture and lowland water supply, or the relationship of rural agriculture with savannization. This tendency has implications for the ability to implement the EsA in terms that allow for pluralistic visions of ecosystem management. The EsA urges forest departments to ‘recognise that humans, with their cultural diversity, are an integral component of ecosystems.’ Yet, this statement effectively means that predefined scientific explanations that blame environmental degradation on the practices of ethnic minorities should be challenged. Forest departments in Thailand and Guinea have shown themselves to be highly resistant to attempts to accept decentralised expertise, and this has partly reinforced the presentation of departments as scientific expert bodies in order to reduce the possibility for influence from other sources.

These conclusions, however, should not be interpreted simply as reasons to dismiss state forestry departments, but instead as reasons to view their influence more critically. It is clear from the examples of Thailand and Guinea that forestry departments frequently reflect political influences from wider forces, and are often allied with external actors such as other state departments and, middle class activists within countries, or international organisations outside. There is still a crucial need for state forestry departments to act as coordinating units for forest policy, and to enforce policies where needed. There is also a need to make their influence more transparent, and to enhance their ability to consult and include alternative perspectives and explanations of ecosystem function and impacts. This has fundamental implications for the organisation and management culture of forest departments and these are further discussed in chapter XX.

Two important steps may enable forestry departments to adopt the EsA more effectively. First, it is important to see the EsA as a new form of diversified forest governance rather than another uniform code or ecological guidelines. The objective of the EsA is to enhance biodiversity and ecosystem protection, but it seeks to do so via greater awareness of cultural diversity and the need to avoid using environmental policies as restrictions on local livelihoods. This cannot be achieved by centralised power within state forestry departments that may still be influenced by wider political concerns and narratives based on controlling rural lifestyles. There must be greater ability to make forest governance more diversified, yet in such ways that still harnesses the political power and analytical expertise usually contained within state institutions.

The second step is to analyse state forestry departments, and reform them, in ways that reflect their ability to influence the production of knowledge about forest management. This paper has called upon debates in political ecology to suggest various ways in which forestry departments can be analysed: the concepts of problem closure and narratives allow means to identify the structured way in which debate about forests may be foreclosed in advance. The concepts of boundary organisations and discourse coalitions indicate ways specific forestry departments may interact with other actors and organisations to reinforce those debates. Showing how forestry departments use science and narratives to reinforce their resistance to reform is necessary to enabling the adoption of the EsA. Such analysis should then be followed up by the reform of departments, or the creation of alternative arenas, that allow the discussion of biodiversity and ecosystem management without such predefined ideas.

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