

**Romancing Rural Europe:
Nature/Culture Narratives in the EU and Beyond**

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Introduction

Do human activities improve Nature or diminish it? Debates on this question in Western science and philosophy are centuries-old and unresolved. At least since the publication of George Perkins Marsh's *Man and Nature*, scientific opinion has tilted decidedly toward a notion of—as Marsh so graphically phrased it—“man the disturber of Nature's harmonies”. Thus the wave of state-based conservation practices that began in the Americas around the time of *Man and Nature's* 1864 publication and eventually spread throughout the postcolonial world emphasized the creation of territorially bounded, fortress-style protected forests, reserves, and parks. In recent decades the debate has heated again, fueled by the emergence of postmodernism, postcolonialism, chaos theory, and non-equilibrium ecology. Ideas of wilderness, primeval Nature, and stable climax communities have given way to ideas of nature-culture hybrids, socially produced nature, and second nature (Smith 1984; Castree and Braun 1998; Demeritt, David 1998; Zimmerer 2000). Biological conservationists have attacked these theoretical developments as politically dangerous, arguing that such hybrid and relational perspectives on Nature will help justify ecologically destructive practices.

The European Union, however, has embraced the new hybridity paradigm in their biodiversity conservation strategy. According to the European Environmental Agency, Europe's current biodiversity is the product of centuries of human interaction with nature. “In Europe, more than on any other continent, the influence of human activity has shaped biodiversity over time” (EEA 2006: 19). In its biodiversity conservation documents, the EU center has greatly elevated if not romanticized the role of rural communities and their land use systems in producing the continent's biodiversity. Rather than disturbing Nature's harmonies, European framing systems are “responsible for creating and maintaining species-rich semi-natural

grasslands”. Land abandonment resulting from demographic and socio-economic shifts in rural Europe is thus “considered detrimental to biodiversity” (EEA 2004: 2).

In this paper I treat the EU’s biodiversity conservation strategy as a regionally based environmental narrative, which I refer to as the “EU biodiversity narrative”. I begin by contrasting the EU biodiversity narrative with environmental narratives (also called environmental orthodoxies or hegemonic environmental myths) deployed elsewhere in the world, particularly Africa. I explore the EU’s rural development policies associated with biodiversity conservation, again contrasting them with biodiversity conservation strategies in Africa. I examine the empirical evidence to substantiate both Europe’s exceptionalism and the relationship between rural abandonment and biodiversity loss, and then speculate on the ideological and political forces at work shaping the EU biodiversity narrative, thinking about how and why landscapes are naturalized or humanized through environmental narrative. I close by considering what the EU biodiversity narrative might mean for theorizing nature-society relations and for applied biodiversity conservation in other parts of the world.

Degradation narratives and environmental orthodoxies

In his magisterial survey of Nature-Society relations in the history of Western thought, Clarence Glacken observed of the works of the ancient Greeks:

In these earlier writings... the terrestrial order... was conceived of as a balanced and harmonious creation of which man was a part; it is in this conception that we should seek the origins of the modern ideas of a balance in nature, so important in the history of biology and ecology, with the significant difference that in the modern idea human activities have often been regarded as interferences—often destructive—in this balance (1967: 49).

The “modern ideas” to which Glacken referred were first most fully articulated by George Perkins Marsh in his 1864 classic *Man and Nature*, a work which influenced early state forest

and soil conservation policies in the US and elsewhere and inspired scholarly research for over a century (Lowenthal 2000). Marsh believed that nature produced ecological communities of “almost unchanging permanence of form, outline, and proportion” (Marsh 1965 [1864]: 29), which human activities had a tendency to disrupt and destroy. For Marsh and the conservationists and environmental scientists who have drawn inspiration from his great nineteenth-century treatise, human society could only disturb a Nature in perfect balance. No clearer illustration of this perspective can be found than the original title he had proposed for his masterwork, “Man the Disturber of Nature’s Harmonies” (Lowenthal 1965: xxiii). This view of Nature has held sway in environmental science well into the late twentieth century and continues to structure prevailing models of resource management and conservation. When combined with the neo-Malthusianism of much environmentalist thought (Adams 2001), Marsh’s idea of Nature under threat by humans became a powerful discourse shaping all manner of interventions into rural land uses around the globe, particularly within the territories of European empire.

In the context of limited understandings of the complexity of particular ecosystems or of local knowledges and environmental practices and limited or absent empirical data, Northern-based scientists brought to the outposts of empire an ideological cocktail of a racialized cultural hierarchy, Marshian ideas of “man the disturber of harmonies”, a wilderness model of Nature, and a faith in the superiority of Western science, which guided their interpretations of what they observed of environmental change. In the history of European empire, a recurring theme in Western scientific discourse was that the land and resource use practices of non-Western peoples were inherently environmentally destructive. Thus the mere presence of native peoples could be read as an indication of environmental degradation. A small sampling of the critical political ecology literature speaks to the prevalence and persistence of the notion within Western science

that the “native agriculturalist”, “nomadic herder”, or similar essentialized actor is the primary threat to environmental stability (e.g., Peluso 1993; Neumann 1995; Peluso and Watts 2001; Brockington 2002; West 2006; Doolittle 2007). The portrait of non-Westerner land users as environmentally destructive provided European colonial states (and, later, postcolonial states) with the moral and scientific authority to seize control of land and natural resources. The stereotype of the destructive native justified state intervention to control the lives, land uses, and settlement patterns of colonized subjects. In the case of Africa, the primary moral justification for European colonization was the mission to “civilize” and “improve” the lives of its people and to prevent them from destroying their environment out of their own “irrationality”. Thus, for example, it has long been the mainstream view of Northern range specialists that “whatever pastoralists are doing is inappropriate” (Ellis and Swift 1988: 452) and efforts to “improve” pastoralists lives have focused on stopping them from doing it.

Especially since the 1970s such orthodox, mainstream views of environmental destruction in the postcolonial world have come under increasing scrutiny. Is the superiority of Western scientific knowledge demonstrated by the efficacy of the state environmental interventions? What is the empirical evidence to support the view that native land uses are inherently destructive of the environment? Within political ecology and related fields a number of recent studies have begun to address these questions in geographically and historically specific investigations. Advances in nonequilibrium ecology and ethnographic studies of African pastoralism show these claims to be based less on science and empirical evidence than on ideology and political interests (Stott 1998; Sullivan 2000; Brockington and Homewood 2001). In a path breaking study that has “rapidly achieved paradigmatic status” in African environmental history (Beinart 2000: 276), Fairhead and Leach (1996) inverted the widely

accepted scientific thinking on indigenous land and resource use. The location of their study is the West African savanna-rainforest transition zone where outsiders' (notably colonial and postcolonial natural scientists) understanding of ecological change has been structured largely by the wilderness model of Nature. Outside scientists and resource managers have assumed that local peoples' land uses in the transition zone have been ecologically degrading. Specifically, outsiders have "read" the forest islands that distinguish the mosaic landscape of the transition zone as remnants of a once undisturbed wilderness that is disappearing as a result of human occupation. Fairhead and Leach's research suggests, however, that "*human settlement has generally been responsible for forming forest islands*" (1996: 79, emphasis in the original). Using a variety of data sources, they convincingly demonstrate that the establishment of new villages in the transition zone is historically associated with the creation of forest islands.

Fairhead and Leach demonstrated how institutions concerned with environment and development in Guinea produced a "savannisation discourse" (1996: 22) that identified a process of deforestation caused by the destructive land use practices of the local inhabitants. As their study showed, this discourse became hegemonic for over a century, even though photographic, historical, and ethnographic evidence suggested the opposite process; the establishment of forest islands as a consequence of human occupation. More recently, Bassett and Koli Bi (2000) conducted a study in northern Côte d'Ivoire that complements Fairhead and Leach's analysis. In this case the researchers investigated why a global "desertification discourse" became the framework for numerous policy documents produced by national and international environment and development institutions, despite the fact that there was almost no empirical data on ecological change in the region. Bassett and Koli Bi's study revealed that the preoccupation with desertification is completely misguided. They found no evidence for desertification, but

convincing evidence of bush and woodland expansion at the expense of rangelands and significant geographic variability in the quality of ecological change.

The disjunctures among empirical evidence, multiple subjective interpretations, and political power, become extreme when we jump from the scale of global discourses on biodiversity, deforestation, and climate change to the scale of the local. Stott and Sullivan's (2000) collection of political ecology studies focused on the discrepancies between generalized and increasingly globalized environmental narratives and the knowledge and practices of more local actors. The editors "consider that many knowledges about 'the environment' are mythologized as scientifically correct while being based on very little 'science' indeed" (Stott and Sullivan 2000: 7). They argue that much of what passes for scientific fact about the environment can be traced historically to assumptions and hypotheses about Nature-Society relations that have never been tested. Their origins forgotten, environmental narratives become "hegemonic myths" accepted as scientific fact (Stott and Sullivan 2000: 7). In a similar vein, Forsyth (2003) refers to unsubstantiated claims of degradation as "environmental orthodoxies" (also see Leach and Mearns 1996). "Environmental orthodoxies are generalized statements referring to environmental degradation or causes of environmental change that are often accepted as fact", but which are contradicted by the results of field-based ecological research (Forsyth 2003: 38). Examples of environmental orthodoxies are the claims of global trends in desertification, deforestation, and rangeland degradation emanating from the environmental sciences. This is not to say that claims about global trends in environmental change are false, but rather that environmental orthodoxies lack, at the very least, geographic and historic specificity.

For the purposes of this paper, I will label the target of these studies and critiques with the most general and neutral term, environmental narratives. The term degradation narrative

typically refers to the way environmental problems such as deforestation, desertification, and biodiversity loss are framed, whereas environmental narrative refers more generally to the stories we tell about Nature and humans' interrelationships with it (see Cronon 1992). In the context of limited understandings of system complexity and limited or absent empirical data, ideologically driven environmental narratives emerge and become dominant across an entire world region. Claims of about Nature and theories of the direction and cause of ecological change are embedded in relations of power interacting at multiple scales—global, regional, national, and local. The question must be asked, whose interests are served by which environmental narratives?

Biodiversity Loss: A Global Environmental Narrative

One of the most powerful environmental narratives is the global biodiversity crisis. Biodiversity, a contraction of biological diversity, is a recently invented term whose origins are readily traceable. The invention of biodiversity coincides with the emergence in the 1980s of two new scientific fields, genetic engineering and conservation biology. Technological advances in genetic engineering resulted in the commodification of genetic material as a natural resource, the raw material for a new industry. Conservation biology emerged from an effort to structure conservation practices on the scientific foundation of evolutionary biology, with its emphasis on the relationships among genetic variation, genetic exchange, species population sizes, and species extinction rates. The term, biodiversity, originated from within the latter field in 1986. Walter Rosen, then senior program officer for the Board of Basic Biology at the National Science Research Council is credited with coining the term in organizing the National Forum on BioDiversity (Takacs 1996). It is an all-encompassing concept that refers to the diversity within

the entirety of the world's biosphere, as measured at various scales, including between individuals, populations, species, communities, and ecosystems. Biodiversity thus encompasses genetic, species, and habitat diversity.

The invention of biodiversity was an act of political advocacy as much as one of scientific reasoning (Takacs 1996). Scientists, principally biologists and natural resource specialists, sought to rally political support for what they perceived as a general and global-scale crisis of mass extinctions and habitat loss. Biodiversity thus served as a scientific-sounding catchphrase that conservation biologists could employ to educate politicians and the general public. E.O. Wilson cemented the term in both scientific discourse and public consciousness when in 1988 he produced the edited volume, *Biodiversity*, from the proceedings of the National Forum (Wilson 1988). Biodiversity has since supplanted several terms once used by biological scientists and conservationists to describe the object of their labors, including game, flora and fauna, wildlife, nature, and wilderness.

Though many scientists are convinced that we are experiencing a global biodiversity crisis, there is a great deal of uncertainty involved in quantifying trends. First, there is a paucity of baseline data, beginning with the absence of a comprehensive species inventory (Secretariat of the Convention on Biological Diversity 2001). For example, it is estimated that only 13.6 percent of all existing species have been described and cataloged in scientific taxonomies, although the actual number of existing species is unknown. For some taxa, the difference between what is known and what (probably) exists is even more extreme. For example, only 0.4 percent of the estimated total bacteria species have been classified. The lack of basic data means that biodiversity assessments vary wildly by two or three orders of magnitude between what is known and what is estimated as possible or likely. Second, the methodologies used for assessment vary,

so that results are not comparable or only partially compatible. For example, the Secretariat's *Global Biodiversity Outlook* considers bacteria species and cultivars in its assessment, while the IUCN's Red list does not (Secretariat of the Convention on Biological Diversity 2001; Baillie et al. 2003). More troublingly, there are large epistemic differences between science-based inventories and locally based bodies of knowledge that can make them incompatible for the purpose of biodiversity assessment. Third, there is little time series data that would allow scientists to quantify trends in biodiversity over a significant geographic area. Most of the data on species has been collected on an ad hoc basis in static, one-time inventories. Finally, it is difficult to know the degree to which our assessment of biodiversity reflects actual trends in the earth's biosphere or is an artifact of monitoring (Bowker 2000; Lorimer 2006).

Practitioners have labeled conservation biology a “crisis science”, meaning that in a context of great uncertainty, as with certain branches of medicine, the risks of inaction are greater than those of action. The question, what proportion of the world's biodiversity can be lost before the planet's human life support systems collapse, cannot be answered with certainty given the current state of scientific knowledge. Waiting for that question to be answered with scientific certainty is to risk, quite literally, the end of the world as we know it. Generally it is this sort of unanswered empirical, scientific question that conservation biologists refer to when writing of uncertainty. But there are also more fundamental ontological and ideological sources of uncertainty in understanding biodiversity. These include questions regarding how species are inventoried and classified, how well scientific models reflect reality, and the anthropogenic sources of biodiversity. More critical observers suggest that there is an even deeper problem revealed in the conceptualization of biodiversity protection within conservation biology. They note that the historical and philosophical foundations of the prevailing protected area model

equate biodiversity with wilderness and presume that the normal ecosystem dynamics tend toward steady state or stable equilibrium conditions. Equating biodiversity with wilderness discounts the positive role of human activities in biodiversity, requires the displacement of human populations from protected areas, and fails to address the fact that the vast majority of the world's biodiversity exists outside of protected areas. Whether driven by these critical insights or not, the European Union has articulated a narrative of biodiversity loss and conservation that has little to do with the wilderness model of Nature.

The EU Biodiversity Narrative

Unlike other regional narratives of biodiversity loss, the European Union's biodiversity narrative borrows more from the ancient Greek's idea of a natural harmony that includes humankind than from Marsh's idea of "man the disturber". According to the European Environmental Agency, Europe's biodiversity is the product of centuries of human interaction with Nature; indeed in the model endorsed by the agency, biodiversity *peaks* under human management of extensive land use systems (Figure 2). As the EU biodiversity narrative has it, "In Europe, more than on any other continent, the influence of human activity has shaped biodiversity over time" (EEA 2006: 19). Rather than disturbing Nature's harmonies, European framing systems are "responsible for creating and maintaining species-rich semi-natural grasslands". Roughly half of Europe's species are said to depend on agricultural habitats (Kristensen 2003). Thus, according to the EU, "Maintaining adequate farming practices is therefore key to biodiversity conservation" (EEA 2004: 4). The EU has adopted a Euro-specific term, high nature value (HNV) farmland (from Baldock *et al.* 1993; 1995) in referring to the (apparently) exceptional case of Europe's biodiversity stock being dependent upon low-input,

extensive farming and grazing practices. HNV farmland in the EU-15 is mostly concentrated in the Mediterranean regions and uplands and mountainous areas in the more northerly regions (EEA 2004). In Europe's biodiversity narrative, Nature thus has a distinctly hybrid quality, produced through centuries of human husbanding.

This is not to say that the global biodiversity crisis and diminishing biodiversity in Europe is not a concern for the EU. EU environmental officials observe continuing species loss, which suggests that there is a “biodiversity crisis in western Europe” (EEA, 2006: 20). The EU Strategy for Sustainable Development, adopted by the European Council in Gothenburg in 2001, has as a key objective the restoration and protection of key habitats to “halt the loss of biodiversity by 2010” (EEA 2006: 16). The cornerstone of the EU's efforts to protect habitats and thereby halt biodiversity loss is the “Natura 2000 Network” of protected areas, the most significant and comprehensive initiative for Nature conservation in European history. Natura 2000 is a pan-EU system intended to create the conditions necessary to conserve habitats and the biodiversity that they support (Figure 1). The EU's 1992 Habitats Directive (92/43/EEC) and 1979 Birds Directive (79/409/EEC)—the primary legislative instruments for Natura 2000— together require all member states to identify sites for inclusion in the Network. Under the Habitats Directive, each state must designate “Special Areas of Conservation” to protect listed habitats, animals, and plants within their territories. Under the Birds Directive, each state must designate “Special Protection Areas” to protect bird species listed in its Annex I. In some states, such as Spain, which has 22.6 percent of its land in Natura 2000, the ecological and socio-economic impacts for rural areas are substantial. Implementation requires new restrictions on land use at the level of individual farmsteads and new forms of bureaucratic intervention in land use across scales of governance, EU, national, regional, and local (Kasimis and Stathakis 2003).

The Habitats Directive has subsequently become “one of the most litigated environmental instruments in the EU”, suggesting that there are complex political, economic, and cultural processes, operating across geographic scales, which will influence the success of biodiversity conservation (Diaz 2001: 305; Van Huylbroeck and Durand 2003).

The selection and designation of Natura 2000 sites is based on the CORINE “biotopes” hierarchical classification system of European habitats; “since that was the only existing classification at the European level” (European Commission 2003: 3). Many of the CORINE habitat types are defined as being produced by long-term human husbandry. As described in the EU habitats *Interpretation Manual*, the vegetation of “Fennoscandian lowland species-rich dry to mesic grasslands” is “formed by long-term continuous grazing and/or mowing” (European Commission 2003: 64). At least one major forest type, Sclerophyllous grazed forests (*dehesas*), is recognized as the product of a particular agro-silvo-pastoral management regime (European Commission 2003: 66). In many of the forest habitat types, the Nature-Society boundary is blurred and indeterminate: “The distinction between spontaneous forests and long-established formations of artificial origin is often difficult” (European Commission 2003: 122).

Since human land management systems and biodiversity are so closely linked in the EU’s biodiversity narrative and habitat classification system, agriculture is an important part of Natura 2000. According to the EU, “about 17 % of the habitats in proposed Natura 2000 areas depend on a continuation of extensive agricultural practices” (EEA 2005: 9). Narrowing to the habitats directive portion of the Natura 2000, agricultural habitats constitute 35 percent of the total area proposed, and Greece, Spain and Portugal have even higher proportions (EEA 2006: 42). Consequently the EU has concluded that, “Extensive farming systems are important for maintaining the biological and landscape diversity” (EEA 2005: 8) and that, “Maintaining

adequate farming practices is therefore key to biodiversity conservation” (EEA 2004: 4). Forests are also included in the EU’s hybrid biodiversity narrative; thus the Forestry Strategy for the EU emphasizes “restoring traditional management” to minimize biodiversity loss.

These traditional management systems are, however, disappearing as a result of either agricultural intensification or rural abandonment. One EEA document explains:

The most favourable conditions for farmland species diversity are considered to occur under extensive and/or traditional agricultural management. The major pressures on biodiversity on agricultural land result from changes in the type and intensity of farming which generate changes in agricultural landscapes. Such changes can result either from intensification or abandonment, both of which can be detrimental to biodiversity (EEA 2006: 34).

The abandonment of rural land, which has a complex set of demographic, environmental, and socio-economic causes and effects, is thus “considered detrimental to biodiversity” (EEA 2004: 2). According to the EAA, “A loss of biodiversity and heritage landscapes is almost always associated with farm abandonment” (2006: 36). Spain exemplifies the dilemma facing Europe. It has the one of the highest proportions of land in Natura 2000 in the EU—most of it in extensively managed agricultural habitats—but also has one of the highest rates of abandonment (<http://epp.eurostat.ec.europa.eu>; Rojas-Briales, 2000; EEA, 2004). Demographic shifts in Europe’s population means that abandonment of traditional farming regions will likely accelerate where the “proportion of the elderly is already very high amongst farmers” and the younger people have already left the farm (EEA 2004: 7; Heilig 2002). In the livestock sector, the increasing use of “modern breeds” dependent on supplementary feeds has helped accelerate “the abandonment of remote pastures in many areas and the loss of biodiversity that depends on grazing” (EEA 2006: 42). The proportion of mixed livestock farms is shrinking fast—by 25 percent between 1990 and 2000—a significant factor in biodiversity loss “since these farms are often associated with high biodiversity” (EEA 2005: 9).

Since within the EU's biodiversity narrative rural land abandonment and the decline of traditional land use systems are hypothesized to result in diminished biodiversity, its conservation strategy includes numerous policy instruments designed to keep folks down on the farm. Chief among these is the Common Agricultural Policy (CAP). The CAP has been treated to a series of "reforms" over the past 20 plus years, such as the addition in 1998 of new opportunities for farmers to receive financial support for activities other than farming. In 2003 "the environment" became central to CAP and farm payments are now based on their historic levels provided farmers "undertake to comply with a suite of EU directives (including the birds and habitats directives) and keep their land in 'good agricultural and environmental condition'" (EEA 2006: 35). These are referred to as "first pillar" payments, which were originally intended as agricultural productivity catalysts, but are now tied to environmental conditions. "Second pillar" payments fall under so-called agri-environment schemes and less favoured area schemes, which Member States can for promoting the maintenance of "environmentally friendly farming systems" (EEA 2004: 12). With as much as 50 percent of the Natura 2000 sites dependent on (often economically marginal) extensive farming practices in Italy and the Iberian Peninsula, such policy measures are critical.

Where the continuation of positive farming practices is uneconomic to farmers, however, the active management of important habitats needs to be supported by additional measures. Agri-environment schemes and other CAP policy instruments are likely also to play a key role, therefore, in maintaining the conservation status of the future Natura 2000 network. (EEA 2005: 97).

For example, farmers in areas designated as "less favourable" are eligible to receive per hectare payments under the second pillar of CAP while continuing to receive conventional first pillar payments (Figure 2).

It is clear the EU's governing bodies have taken seriously the problem of biodiversity loss as evidenced by Natura 2000 and the environmental emphasis in the reformed CAP. It is equally evident that financial support for rural areas is central to the EU center's biodiversity conservation strategy. Stepping back from the EU's conservation plans and policies, however, one wonders about the actual scientific evidence to support the EU's biodiversity narrative. As with many environmental narratives (hegemonic myths), there is a paucity of evidence that could support conclusions about trends in biodiversity in Europe, let alone demonstrate the causal relationship between rural abandonment and diminished biodiversity. Currently there is "no good monitoring data available about trends within the Natura 2000 sites" and no research that attempts to understand the complex political, cultural, and socio-economic dynamics of continued biodiversity loss in Europe (EEA 2004: 12; EAA 2005). The EU has no way to directly assess what proportion of farmland is HNV in each Member State, nor is there any way to assess trends from existing data. Moreover, "There are few data about actual conservation status of species..." so proxy data on birds and butterflies from voluntary organizations (e.g. Birdlife International) are used as indicators (EEA 2005: 93). Data on trends in land abandonment "are rare, since land abandonment is not easily detected in general agricultural statistics. Therefore no picture can be drawn up for Europe as a whole" and "no reliable pan-European trend data are currently available for plant communities and habitats" in abandoned lands (EEA 2004: 8). As for the disappearance of traditional livestock breeds, "Data on genetic diversity... are limited and difficult to interpret... comparisons between countries or time-trend analyses are not possible" (EEA 2005: 92). In sum, except for extremely limited case studies, there are almost no time series data, no direct comprehensive measures on species numbers save for birds and butterflies (liberally supplemented by indirect data from survey questionnaires), no

data on genetic diversity within livestock and cultivars, no information on the biodiversity effects of abandonment, and no direct measures of abandonment itself.

The EU biodiversity narrative is, in one sense, a hypothesis yet to be tested. Leaving aside for the moment the question of why, in the absence of significant, let alone conclusive, supporting evidence the narrative should take this particular plot line, we might ask if hybrid quality of Europe's biodiversity is exceptional. Using the same limited evidence—i.e., broad extrapolations from archeology and geographically and temporally limited case studies—I explore the condition of biodiversity in non-European regions as a way to question Europe's claim of exceptionalism.

Questioning European Exceptionalism

Outside of Europe, the prevailing model of Nature in the scientific study of biodiversity is that of a steady state system of long duration, which, when disturbed, returns to stasis through an orderly set of stages. Thus habitats of high biodiversity, such as moist tropical forests, are viewed as pristine remnant ecosystems threatened by anthropogenic disturbance. Increasing evidence from both the natural and social sciences suggests that many of the world's most diverse habitats, such as the forests of the Southeast Asian archipelago, are not ancient and pristine, but relatively recent systems that have been subject to widespread and sometimes frequent cycles of disturbance, particularly from fire. Evidence for greater resiliency and less fragility in tropical ecosystems has also challenged the prevailing stasis model of Nature. Moreover, presumed remnant, pristine habitats have been found to be stages in cycles of human food production systems and that disturbances caused by such systems can have the effect of increasing biodiversity. This latter finding raises questions about the role of humans in shaping

the world's biodiversity. Studies from virtually all regions of the globe suggest that humans have played an important role in shaping biodiversity at multiple scales, from habitat diversity to genetic diversity. The empirical findings of cultural geographers, environmental historians, and archeologists lead us to conclude that people have manipulated and shaped Nature "for as long as we have a record of their passing" (Cronon 1995: 83).

Recent research in Africa is illustrative. There has been an explosion of research in Africa documenting the long-term historical interactions between human actions and the structure and distribution of biodiversity on that continent (e.g., Beinart 2000; Guyer and Richards 1996; Fairhead and Leach 1996; Kandeh and Richards 1996; Homewood and Rogers 1991; Neumann 2001; Little 1996; 2004). In East Africa, for instance, despite ample evidence of occupation and management by humans for centuries, areas targeted for protection are purported to be unspoiled wilderness that has retained its primeval character (e.g., Turton 1987; Neumann 2001b). In the case of Omo National Park in Ethiopia, for example, the main report advocating its establishment greatly underestimated the existing population of Mursi agro-pastoralists and characterized it as "Ethiopia's 'most unspoiled wilderness'" (quoted in Turton 1987: 179). Ecological research would reveal, however, that "virtually every square inch of this country bears the imprint of human activity" (Turton 1987: 180). Indeed, ecological studies have determined that much of Africa's savanna grasslands, the predominant ecological community of the most renowned wildlife parks in the region, are not wild landscapes, but rather have been shaped by centuries of pastoralists' herding and burning activities (Homewood and Rodgers 1984; 1991; Moe et al. 1990). In West and Southern African landscapes as well, governments evacuated lands that had long been under the husbanding hand of herders and farmers in order to create national parks in the name of wilderness preservation (Ranger 1999; Zuppan 2000). Some

rare species in West Africa appear to be dependent on human derived habitats and biodiversity levels for certain taxa may be enhanced by the landscape patchworks and ecotones produced by human use (Kandeh and Richards 1996).

The debate over the agency of human populations in producing biodiversity is also evident in other world regions. Denevan's (1992) critical assessment of the "pristine myth" of the Americas documents the completely humanized landscape that existed on the eve of European arrival.

By 1492 Indian activity throughout the Americas had modified forest extent and composition, created and expanded grasslands, and rearranged microrelief via countless artificial earthworks. Agricultural fields were common, as were houses and towns and roads and trails. All of these had local impacts on soil, microclimate, hydrology, and wildlife (Denevan 1992: 370).

New environmental histories challenge the notion that other iconic North American landscapes, such as Glacier National Park were "virgin wilderness", and instead emphasize a record of centuries of occupation by Native Americans (Warren 1997: 134; Keller and Turek 1997).

These narratives suggest, "uninhabited wilderness had to be created before it could be preserved" (Spence 1999: 4; see also Cronon 1995). In Yosemite National Park, because authorities refused "to recognize the importance of the Native Americans' use of fire in creating the open, park-like landscape scenery of Yosemite, the landscape became more and more overgrown...and the park became a fire hazard" (Olwig 2002: 208).

Without needing to continue a region by region survey of the role of human land uses in shaping the form, distribution, and composition of the world's habitats, the point can be made that the exceptionalism of Europe's biodiversity narrative is not constructed on a geographically and historically broad base of empirical evidence. Nor can we discern in the EU's biodiversity narrative an explicit theoretical or philosophical position on Nature-Society relations that would

explain why Europe's biodiversity is an historical artifact rather than a natural one. Accepting that there is a global biodiversity crisis and that the causal forces driving the crisis vary regionally and locally, why is rural land abandonment such a key force in Europe and not in, say, sub-Saharan Africa or Southeast Asia?

The answer to the question of Europe's exceptionalism lies not in ecological theory or in a solid set of empirical data gathered in extensive fieldwork. Rather ideology and politics, forged in networks of power relations, frame the way landscapes are read. Fairhead and Leach's study of the forest-savanna transition zone is a classic illustration of Northern-based experts "misreading" the historical role of people in shaping the landscape and the biodiversity is supported. A study of Southeast Asia's forest narratives demonstrates how explanations of the origins of biodiversity are very much a matter of positionality. Peluso and Vandergeest (2001) observed that what Northern-based foresters and explorers took to be natural forests in Southeast Asia were actually the products of human activities of collection, production, protection, and cultivation. The forests of the region, which are the fallow stage of the swidden agricultural cycle, can be viewed as a beginning or ending stage. "If we see [the cycle] as starting with a forest cut, the forest itself gets naturalized. If we see it as the last in a series of stages starting from planting crops, the forest is a product of the process of fallowing after planting" (2001: 767). From this example it is easy to see how Northern-based experts may be reading the landscapes of Europe from the latter perspective and other(ed) landscapes from the former perspective. That is, in Europe biodiversity is humanized and incorporated into the realm of culture and history. Elsewhere, particularly the tropical South, biodiversity is naturalized and incorporated into the realm of primordial wilderness.

What sort of ideology and politics might underlie these regional shifts in perspective? Part of the answer can be found in Eric Wolf's aptly titled *Europe and the People Without History* and James Blout's exploration of what he called "the myth of emptiness". Both works, in different and equally cogent ways, analyze the way that the histories, cultural achievements, knowledges, systems of trade and manufacture, and agency of the non-Europeans were appropriated, ignored, or dismissed by the West in the Age of Empire. As Blout showed, Europe conceived itself to be the center of all innovation, positioning itself as both exceptional and superior in relation to the rest of the world. This difference is most exaggerated in relation to the colonized portions of the world, especially the tropics. Where Europe has history and culture, the territories of empire have only Nature and savagery. Thus in the EU's biodiversity narrative, European history stands out in its role in shaping the continent's biodiversity.

What of the politics driving this narrative? Why are rural Europe and traditional land management practices elevated to such importance in EU policy and discourse? Is the EU center romancing rural Europe and if so to what end? The answer lies in part in the EU's crisis of political legitimacy, which is most acute among rural populations. The subsidization of rural areas through the CAP in the name of environmental sustainability and biodiversity conservation is a powerful tool for generating political support for the center where it is weakest while providing a defense against accusations from international trading partners of unfair agricultural trade practices. The EU Agricultural Directorate General has embraced the concept of "multifunctionality" to argue that agriculture in Europe provides distinctive cultural and environmental services that fall outside of the GATT and WTO apparatuses for regulating trade in commodities (Van Huylenbroeck 2003; Hollander 2004). According to Hollander, "Multifunctionality provides a strategic opening in which to recognize the landscape functions of

agriculture and rural settlement, so that the resultant social and ecological complexity can be defined as public goods and maintained through state policies” (Hollander 2004: 302).

Related to the political legitimacy crisis is the ongoing problem of cultural legitimacy and an effort to forge some sort of European identity in the midst of resurgent nationalist and sub-nationalist political movements. There is an extraordinary emphasis on and elevation of the rural quality of “European” society in much of the EU literature on agriculture and the environment. Such rhetoric raises the political question: Is the EU reworking and rescaling the rural-based ethnic nationalisms of the 19th century as a green, rural-based pan-European identity for the 21st century? Finally, within European political discourse there is much concern over the aging of rural populations, the movement of the young into the towns and cities across Member State borders, and the immigration of guest workers from outside the EU. How much of the support for the subsidization of traditional management systems is driven by fears of a European way of life literally dying out?

Discussion and Conclusion

For anyone who has researched Nature-Society relations in the tropical Third World, the contrast with the EU biodiversity narrative can be striking. In Africa, in one country after another, colonial and postcolonial states have forcefully evicted people from their ancestral lands in the name of biodiversity conservation—formerly called “game protection”—while in Europe, the state’s conservation efforts are directed at trying to keep rural people in place. In Latin America and Southeast Asia, states have implemented all manner of penalties and agricultural modernization programs to halt the practice of traditional swidden agriculture. In Africa, pastoralists have faced decades of state pressure to destock, fence in pastures, and sedentarize.

Meanwhile in Europe agroforestry, agro-silvo-pastoral systems, and extensive grazing regimes are all considered HNV agriculture that Member States not only should leave in peace, but also subsidize so that they remain in place against all social, economic, and demographic odds. Why are traditional extensive farming practices in the tropics inherently threatening to biodiversity, while in Europe inherently constructive of a biodiverse landscape? What if we extended the EU's biodiversity narrative beyond the narrow confines of Europe to the rest of the world? How might prevailing policies and programs for environmental conservation and rural development be transformed? There may be liberatory potential in the EU biodiversity narrative. Extended to non-European settings, it could create the conditions that would lead to more support and respect for the role played by indigenous knowledges and practices in producing the very biodiversity Northern-based scientists desire to protect. One need only imagine applying the kinds of EU financial instruments describe above to rural African systems of traditional cultivation and pastoralism to see how powerful and transformative a new narrative of biodiversity could be in the Third World.

In the absence of a tested or testable hypothesis about the role of humans in production and/or destruction of the biodiversity we observe, narrative becomes the principal means through which we understand and explain its form, distribution, and quantity. Will the EU's biodiversity narrative provide the instrument to finally knock Malthus off the saddle from which he has ridden roughshod over our efforts to theorize Nature-Society relations? The EU biodiversity narrative inverts the neo-Malthusian perspective on the population-environment relationship that has dominated biological conservation theory and practice. At the very least, such an inversion opens the possibility that population pressure will no longer be the sole or even principal

explanation for biodiversity loss in other parts of the world, the explanation of first resort as it were.

Theoretically speaking, there is much to be done. To take just one example, the concept of marginality is central to both the EU biodiversity narrative and the causal explanation of environmental degradation in political ecology. According the EEA “Marginalisation is caused by low agricultural profitability, often linked to physical or climatic handicaps and wider socio-economic trends” (EEA 2005: 38). This is similar to Blaikie and Brookfield’s conceptualization (Blaikie 1985; Blaikie and Brookfield 1987). Building upon the work of geographers and economists (e.g., de Janvry 1981, Bernstein 1979, and Wisner 1976), Blaikie linked the economic marginalization of land users to their ecological and spatial marginalization. For example, it is often the case in Third World countries that the most productive land has been appropriated by large-scale capitalist enterprises while poor peasant farmers (i.e., a socio-economically marginalized class) are relegated to less productive and more ecologically fragile (i.e., marginal) lands: “Hence land degradation is both a result of *and* a cause of social marginalization” (Blaikie and Brookfield 1987: 23). However, the EU narrative draws a different conclusion: “Marginalisation can have far-reaching effects on the environment by favouring farm abandonment with an associated loss of biodiversity and heritage landscapes” (EEA 2005: 38). Thus the same complex concept of socio-economic-ecological marginality in traditional political ecology is seen as shaping degradation by forcing poorer segments of society *into marginal regions* and destructive land use practices, while in the EU narrative it is seen as shaping degradation by forcing poorer segments of society to *abandon marginal regions* and environmentally sustainable (and sustaining) land use practices. There has been a tendency in political ecology to treat environmental problems in developed countries in Europe and North

America as theoretically distinct from those in developing countries in the tropical regions (McCarthy 2002; Walker 2003; Schroeder 2005). Only recently has political ecology informed studies about biodiversity conservation efforts, land use change, cultural identities, and socio-economic change in the EU (Swartz 2005; 2006). A critical examination of the EU's biodiversity narrative can open new theoretical pathways. Using the analytical tools derived from research in the Third World to understand biodiversity loss and conservation in Europe, producing in the process a more robust and globally relevant political ecology theory.

BIBLIOGRAPHY

- Baillie, Jonathan E.M., Craig Hilton-Taylor and Simon N. Stuart (eds). (2004). *IUCN Red List of Threatened Species: A Global Species Assessment*. Gland, Switzerland: The IUCN Species Programme.
- Beaufoy, G. 1998. The EU Habitats Directive in Spain: Can it contribute effectively to the conservation of extensive agro-ecosystems. *The Journal of Applied Ecology* 35(6): 974-8.
- Beinart, W. 2000. African history and environmental history. *African Affairs* 99: 269-302.
- Bernstein, H. 1979: African peasantries: a theoretical framework. *Journal of Peasant Studies* 6(4): 420-44.
- Blaikie, P. 1985: *The Political Economy of Soil Erosion in Developing Countries*. New York: Wiley.
- Blaikie, P. and Brookfield, H. 1987: *Land Degradation and Society*. New York; London: Methuen.
- Boel, Mariann Fischer. 2007. Preface. Pp. 1 in *Genetic Resources in Agriculture: A Summary of the Projects co-financed under Council Regulation (EC) No 1467/94*. Luxembourg: European Communities.
- Bowker, G. 2000. Biodiversity Datadiversity. *Social Studies of Science* 30(5): 643-683.
- Brockington, D. 2002: *Fortress Conservation: The Preservation of the Mkomazi Game Reserve Tanzania*. Oxford: James Currey.
- Castree, Noel and Bruce Braun. 1998. "The construction of nature and the nature of construction: analytical and political tools for building survivable futures". Pp. 3-42 in Braun, B. and Castre, N. (eds.). *Remaking reality: nature at the millennium*. London: Routledge.
- de Janvry, A. 1981: *The Agrarian Question and Reformism in Latin America*. Baltimore: John Hopkins University Press.
- Demeritt, David. 1998. "Science, social constructivism and nature." Pp. 173-193 in Braun, B. and Castre, N. (eds.). *Remaking reality: nature at the millennium*. London: Routledge.
- Diaz, C.L. 2001. The EC Habitats Directive approaches its tenth anniversary: an overview. *Review of European Community and International Environmental Law* 10(3): 287-95.
- Doolittle, A. 2007. Native land tenure, conservation, and development in a pseudo-democracy: Sabah, Malaysia. *Journal of Peasant Studies* 34(3&4): 474-97.
- EEA. 2004. *High nature value farmland: characteristics, trends and policy challenges*. European Environmental Agency Report No 1/2004. Luxemburg: Publications of the European Communities

- EEA. 2005. Agriculture and environment in EU-15— the IRENA indicator report. EEA Report No 6/2005. Luxembourg: Office for Official Publications of the European Communities.
- EEA. 2005. *Agriculture and environment in EU-15—the IRENA indicator report*. European Environmental Agency Report No 6/2005. Luxembourg: Publications of the European Communities
- EEA. 2006. *Progress towards halting the loss of biodiversity by 2010*. European Environmental Agency Report No 5/2006. Luxembourg: Publications of the European Communities.
- European Commission. 2003. *Interpretation manual of European Union habitats-EUR 25*. Brussels: EC, DG Environment.
- Fairhead, J. and Leach, M. 1996. *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic*. Cambridge: Cambridge University Press.
- Guyer, J. and Richards, P. 1996. The invention of biodiversity: social perspectives on the management of biological variety in Africa. *Africa* 66(1): 1-13.
- Hamell, M. , Friedrichsen, A.L., and Van De Velde, J. 2006. Forward. Pp. 1 in *Life and European Forests*
- Hillstrom, K. and Hillstrom, L. 2003. *Europe: A continental overview of environmental issues*. Santa Barbara, CA: ABC-CLIO.
- Hollander, Gail M. 2004. Agricultural trade liberalization, multifunctionality, and sugar in the south Florida landscape. *Geoforum* 35: 299-312.
- Homewood, K. and Rodgers, W. 1984: Pastoralism and conservation. *Human Ecology* 12(4): 431-41.
- Homewood, K. and Rogers, W. 1991. *Maasailand Ecology: Pastoralist Development and Wildlife Conservation in Ngorongoro, Tanzania*. Cambridge: Cambridge University Press.
- Kandeh, H. and Richards, P. 1996: Rural people as conservationists: querying neo-Malthusian assumptions about biodiversity in Sierra Leone. *Africa* 66(1): 90-103.
- Kasimis, Charalambos and Stathakis, eds. (2003) *The reform of CAP and rural development in southern Europe*. Aldershot, England: Ashgate.
- Light, S. 2004. *The role of biodiversity conservation in the transition to rural sustainability*. Washington, D.C.: IOS Press.
- Little, P. 1996: Pastoralism, biodiversity, and the shaping of savanna landscapes in East Africa. *Africa* 66(1): 35-51.
- Little, P. 2004: Rethinking interdisciplinary paradigms and the political ecology of pastoralism in East Africa. In Bassett, T. and Crummey, D. (eds), *African Savannas: New Perspectives*

- on Environmental and Social Change*. Oxford, UK: James Currey Publishers; and Portsmouth, NH: Heineman Books (Forthcoming).
- Lowenthal, D. 1965: Introduction. In Marsh, G.P., *Man and Nature: Or, Physical Geography as Modified by Human Action*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press, ix-xxix.
- Lowenthal, D. 2000. Nature and morality from George Perkins Marsh to the millennium. *Journal of Historical Geography* 26(1): 3-27.
- Marsh, G.P. 1965 [1864]. *Man and Nature; or, Physical Geography as Modified by Human Action*. Cambridge, MA: The Belknap Press of Harvard University Press.
- McCarthy, J. 2002. First World political ecology: lessons from the Wise Use Movement. *Environment and Planning A* 34(7): 1281-302.
- McNeely, J. 2003. *Ecoagriculture: strategies to feed the world and save biodiversity*. Washington, D.C.: Island Press.
- Neumann, R. 1995: Ways of Seeing Africa: Colonial Recasting of African Society and Landscape in Serengeti National Park. *Ecumene* 2(2): 149-69.
- Neumann, R. 2001. Africa's "Last Wilderness": Reordering Space for Political and Economic Control in Colonial Africa. *Africa* 71(4): 641-665.
- Onate, J.J., J.E. Malo, F. Suarez, and B. Peco. 1998. Regional and environmental aspects in the implementation of Spanish agri-environmental schemes. *J. of Env. Mgmt.* 52: 227-40.
- Robertson, M. 2006. The Nature that Capital Can See: Science, State, and Market in the Commodification of Ecosystem Services. *Environment and Planning D: Society and Space* 24: 367-387.
- Rojas-Briales, E. 2000. Socio-economics of nature protection policies in the perspective of the implementation of Natura 2000 Network: the Spanish case. *Forestry* 73(2): 199-207.
- Ruiz, M. 1986. Sustainable food and energy production in the Spanish "Dehesa". The Food-Energy Nexus Programme, No. 16. Paris: United Nations University.
- Schroeder, R.A. 2005. Debating the place of political ecology in the First World. *Environment and Planning A* 37(6): 1045-48.
- Schwartz, K. 2005. Wild Horses in a 'European Wilderness': Imaging Sustainable Development in the Post-Communist Countryside. *Cultural Geographies* 12(3): 292-320.
- Schwartz, K. 2006 "Masters in Our Native Place": The politics of Latvian national parks on the road from Communism to "Europe". *Political Geography* 25: 42-71.

- Secretariat of the Convention on Biological Diversity. (2001). *Global Biodiversity Outlook*. Montreal: Secretariat of the Convention on Biological Diversity.
- Smith, N. 1984: *Uneven Development: Nature, Capital, and the Production of Space*. New York: Basil Blackwell.
- Stott, P. 1998: Biogeography and ecology in crisis: the urgent need for a new metalanguage. *Journal of Biogeography* 25, 1-2.
- Stott, P. and Sullivan, S. (eds). 2000: *Political Ecology: Science, Myth and Power*. London: Arnold; New York: Oxford University Press.
- Sullivan, S. 2000: Getting the science right, or introducing science in the first place? Local 'facts', global discourse—'desertification' in north-west Namibia. In Stott, P. and Sullivan, S. (eds), *Political Ecology: Science, Myth and Power*. London: Arnold; New York: Oxford University Press. 15-44.
- Takacs, D. (1996). *The Idea of Biodiversity: Philosophies of Paradise*. Baltimore: The John Hopkins University Press.
- Van Huylenbroeck, Guido and Durand, Guy. (2003) *Multifunctional agriculture: a new paradigm for European agriculture and rural development*. Aldershot, England: Ashgate.
- Walker, P. 2003. Reconsidering regional political ecologies: toward a political ecology of the rural American West. *Progress in Human Geography* 27: 7-24.
- Wilson, E. O. (ed.). (1988). *Biodiversity*. Washington, D.C.: National Academy Press.
- Wisner, B. 1976: Man-made famine in Eastern Kenya: the interrelationship of environment and development. Institute of Development Studies Discussion Paper No. 96. Sussex: IDS.
- Zerner, C. (ed.). 2000. *People, Plants, and Justice: The Politics of Nature Conservation*. New York: Columbia University Press.
- Zimmerer, K. 2000. "The reworking of conservation geographies: nonequilibrium landscapes and nature-society hybrids". *Annals of the Association of American Geographers* 90(2): 356-369
- Zimmerer, K. and Bassett, T. (eds) 2003. *Political Ecology: An Integrative Approach to Geography and Environment-Development Studies*. New York: Guildford.

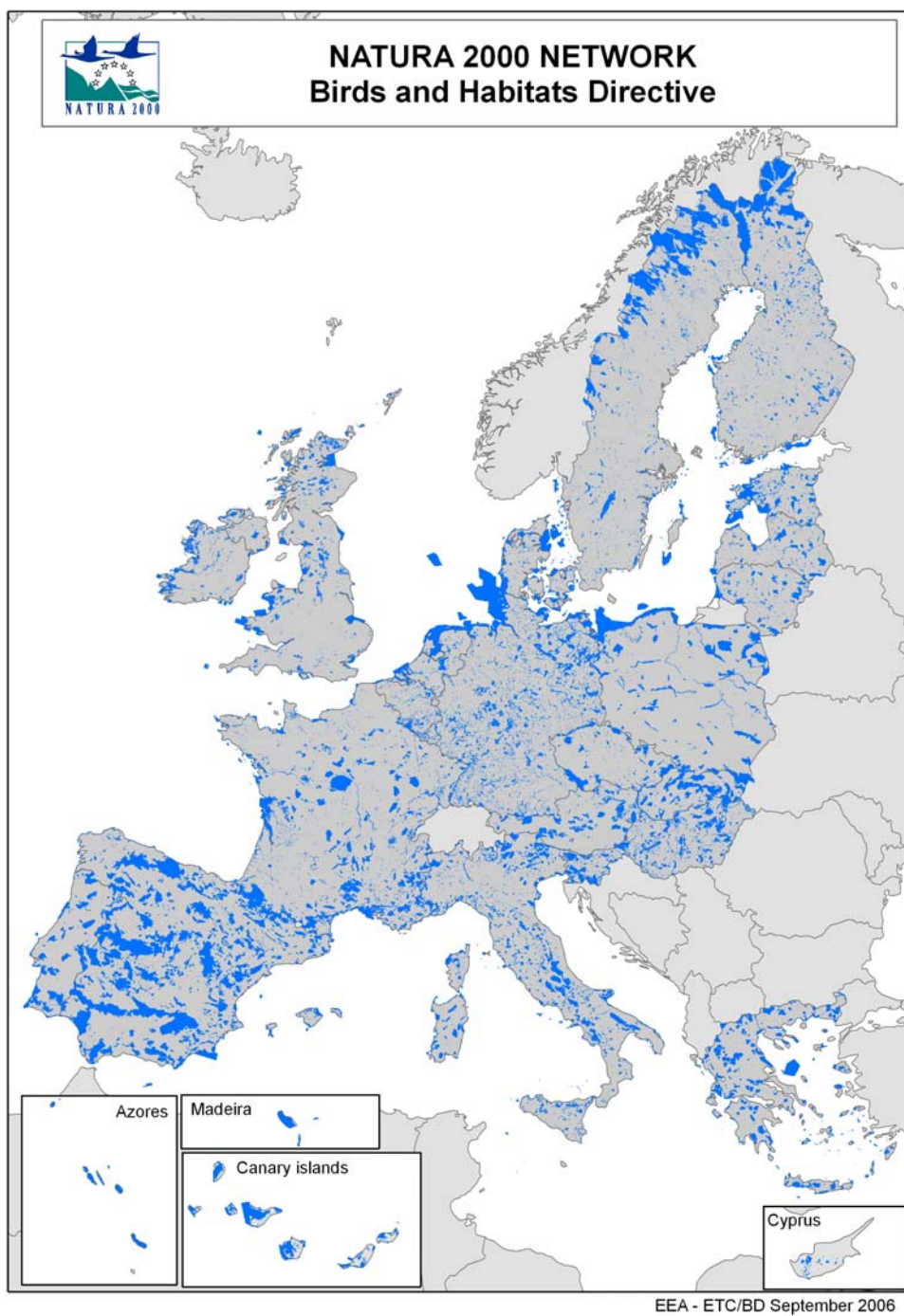


FIGURE 1. Natura 2000 sites in the EU-25

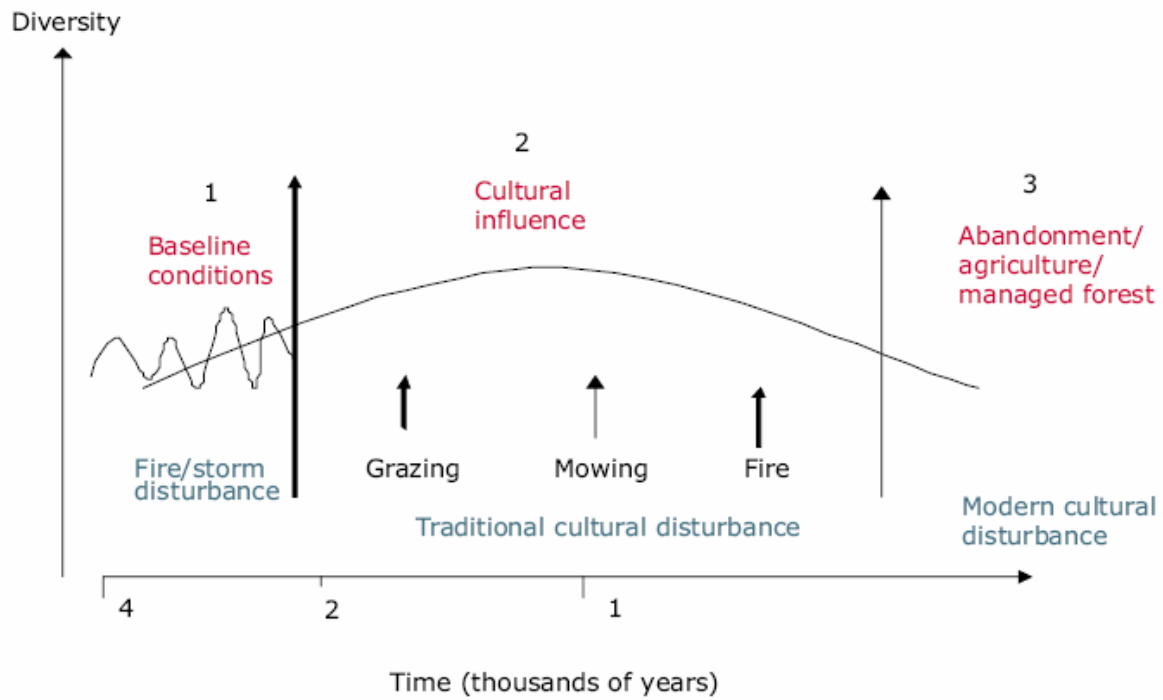


FIGURE 2. Model of changes in biodiversity associated with the development and abandonment of traditional agricultural in Europe (Source: EEA 2006)

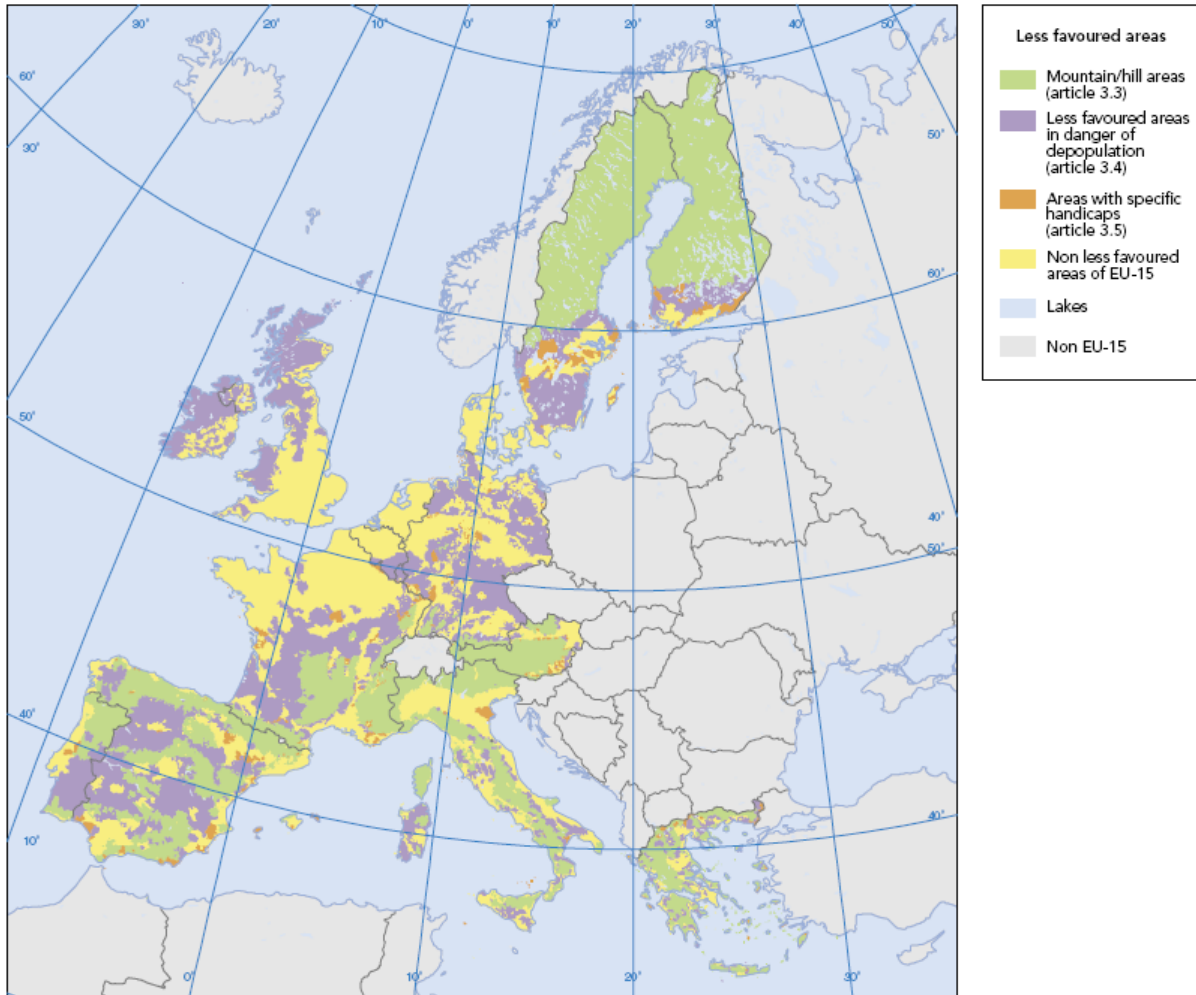


FIGURE 3. Less Favoured Areas under the EU Common Agricultural Policy (Source EEA 2004)