False Forest History, Complicit Social Analysis: Rethinking Some West African Environmental Narratives

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Summary. — Social science analysis has helped to explain the rapid and recent deforestation supposed to have occurred in Guinea, West Africa. A narrative concerning population growth and the breakdown of past authority and community organization which once maintained "original" forest vegetation guides policy. In two cases, vegetation history sharply contradicts the deforestation analysis and thus exposes the assumptions in its supporting social narrative; assumptions stabilized within regional narratives based more on Western imagination than African realities. For each case and then at the regional level, more appropriate assumptions are forwarded which better explain demonstrable vegetation change and provide more appropriate policy guidelines.

1. INTRODUCTION

This paper examines social science analyses that are being used to explain environmental degradation and inform policy responses to it. We focus on two cases pertinent for exploring the production of applied social science knowledge about people-environment relations. They exemplify the type of social analysis often brought to bear to explain environmental degradation in Africa, yet it can be demonstrated that what they explain so successfully has not actually taken place.

Our examples clearly expose a spectrum of assumptions on which social science analyses — whether or not carried out by social scientists as such — tend to draw. These assumptions have strength and credibility in large part because they are linked together, diffused and stabilized within "narratives" (Roe, 1991), that is, stories of apparently incontrovertible logic which provide scripts and justifications for development action. But once dissected from the reality they seek to construct, these explanations reveal instead how the applied social sciences can be used to lend weight to popular Western perceptions about African society and environment — a mythical reality which development interventions are acting to recreate in vain. By stripping away the explained from explanations of it, our cases pave the way for rethinking people-environment relationships in this region. We do this by forwarding alternative sets of assumptions stabilized within narratives which better fit the facts.

The specific cases considered here concern Guinea's forest margin zone. They articulate, in different ways, the position that local community institutions were once better capable of controlling environmental resources than they are today, and thus of maintaining a forested environment and resisting pressure toward its degradation. This articulation enables supposed forest loss to be explained in terms of "institutional breakdown." An armory of purported factors is called to account for such social rupture

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whose results seem so evident in a degraded landscape. These include socioeconomic change and commercialization, increasing mobility, the weakening of traditional authority, more individuated farming, the new economic and cultural aspirations of the young, new social cleavages, the alienation of local resource control to state structures, and the emergence of “anarchic” charcoal, fuelwood and timber businesses to supply the urban market. The impact of migration is added to these arguments: Eco-ethnic integration once associated with “forest people” with supposedly forest-benign lifestyles has been disrupted by the immigration or influence of “savanna peoples.” Overlaying all is the specter of population growth, as viewed through a Malthusian lens. Foreign observers today tend to date such socioenvironmental disruption to the notorious regime of Guinea’s first republic (1958–84) under Sékou Touré, imaging the colonial period as environmentally friendly, while nationals tend to look to the precolonial period to find “good” society and environment. As if to make the point, one scholar forced the social-environmental Eden back to that period documented by the 13th century Arab geographers, i.e. a period where his personal moral sympathies lay (Zerouki, 1993).

Social sciences have no monopoly over these social-environmental visions in which a forest past has become a moral past. They are shared by many local administrators and school teachers, as much as external consultants and university academics. The production of history serves many ends. What will become clear is that social scientists have been complicit in producing a view of history as one of increasing tension from a harmonious past. Treating this past as a model and set of objectives for the resolution of today’s tensions, they have been forging links between social and environmental conditions in a way that assists in relieving those subjected to their study of what little resource control they have.

2. CASE 1: FOREST ISLANDS OF KISSIDOUGOU

(a) The deforestation narrative

Kissidougou looks degraded. The landscape is largely savanna, especially open in the dry season when fires burn off the grasses and defoliate the few savanna trees. Nonetheless, rising out of the savanna and surrounding and hiding each of the prefecture’s villages, are patches of immense semi-deciduous humid forest. Scientists and policy makers consider these forest “islands” and the strips of streamside gallery forest to be relics of an original, formerly much more extensive, dense humid forest cover. Inhabitants have, they suppose, progressively converted forest into “derived” savanna by their shifting cultivation and fire-setting practices, preserving only the belt of forest around their villages to protect their settlements from fire and wind, to give necessary shade to tree crops, to assist fortifications and hiding, and to provide seclusion for secret ritual activities. They argue that today’s climate would support general forest cover, and infer from the presence of “relic” forest islands that it once did:

At origin, the forest between Kissidougou and Kankan was...a dense, humid, semi-deciduous forest. The trigger of degradation is...the farming system and the fragility of climate and soils in tropical regions. Some primary formations still exist, however, in the form of peri-village forest islands and gallery forests on the banks of water courses. These forest islands show the existence of a dense forest, which is today replaced in large part by degraded secondary forest. All the stages of degradation are represented: wooded savanna, bush savanna and grass savanna (KAN II, Plan d’Operation, 1992, pp. 6–7).

Deforestation is considered to provoke problems at several levels, rendering it an urgent policy concern. At the local level it leads to soil degradation and renders farming less productive and sustainable. At the regional level — the upper watershed of the Niger river — deforestation is thought to have caused irregularities in downstream river flow and in rainfall. In addition, it is contributing to global warming. Something must be done.

Social analysis has always been instrumental in explaining this problem and its recent acceleration. In the early part of this century, the celebrated French colonial botanist, Auguste Chevalier, considered greater movement and trade during the postoccupation period to be responsible for an increase in fire-setting from a previous, less forest-harmful level (Chevalier, 1909). He considered that inhabitants conserved the forest islands for cultural reasons, presumably in a sea of otherwise degraded profanity (Chevalier, 1933). In 1948, Adam published the view prevalent in earlier archives that the Mandinka were a “savanna” people who had migrated southward into the forest zone, and created savanna there (Adam, 1948). In doing so, they reportedly forced the original “forest people,” more benign to that resource, south and further into the forest zone.

More recently, professional social scientists have focused on environmental issues in Kissidougou, usually in the pay of international or bilaterally funded environmental programs. One team, responsible for structuring the European Community-funded Niger river protection program, illustrate this focus thus:

Our questions sought to explain the deterioration of the environment, viz: erosion and soil impoverishment, the drying up of water sources, the origin and nature of forest destruction, the origin of perverse use of bush
fire...Parallel to the physical causes of soil erosion, there are others of a social, political and religious nature. We can suppose a strong relationship between soil erosion, environmental degradation and the break-up and impoverishment of socio-cultural structures and relations. Environmental management is strongly linked to the state of socio-cultural structures...The more a community is in equilibrium at the level of social organisation, the healthier is the nature of its relations with the environment. There is a dialectical relationship between social, political and religious institutions and ecological equilibrium...In these communities, the existence of the living is above all justified by a more or less good management of what the ancestors have left to them. This management is inscribed in the collection of laws, concrete and abstract, rational and irrational, which, once disturbed from the exterior, can be the cause of a deterioration which manifests itself as much at the level of social, religious, political and economic institutions, as at the level of the environment (Programme d'Aménagement des Hautes Bassins du Fleuve Niger, n.d., pp. 4–7).

In a second study, devoted to local fire setting, the author aimed to give an inventory of cultural traits which function around the practice of fire. "We have tried to retrace the transition from a traditional practice to 'modern' practice. Our hypothesis was that the 'fire social system' instituted itself as such, in destroying its host 'system', the traditional one" (Zerouki, 1993, p. 1). In short, the author argues that "modernity" is responsible for disrupting the once successful integration of fire control within diffuse sets of intra- and inter-village social, cultural and political relationships. He finds that "Degradation seems to be recent" and that "it accelerates with the development of an urban network...and population growth." The study proposed "solutions to social dysfunctioning" (Zerouki, 1993). A coresearcher on this same study expands on the causes of such "dysfunctioning":

According to inquiry on the one hand from elders...and on the other by IFAN in 1968, the whole region was covered with forest about 99 years ago, corresponding to the Samorian period. War chiefs used fire for better visibility and for encampments. The introduction of the locomotive during the colonial period had a serious impact on the vegetation. Since independence, there has been demystification of sacred forests and of islands considered once as cult places, the installation of wood mills, and brickmaking. Nomadic farming and herding, uncontrolled bush fire, forest fire, and runaway demography, aggravate the process of vegetation degradation already begun (Fofana et al., 1993, p. 49).

Other recent expert views have drawn on conventional social analysis to assert once again that the Kuranko people (who speak a Mandinka dialect) are a savanna people and brought bush fire practices with them when they pushed the Kissi further south. "As forest people, the Kissi are not as careless as savanna people with regard to fire" (Green, 1991, p. 20). In a typically racialist way, agency for degradation is diffused into the ambiguity between culture and origin.

A study of an area just over the eastern border of Kissidougou, while somewhat cynical of the crisis mold of environmental analysis, nevertheless claims that:

The degradation of forests — always qualified as "explosive" — has continued in an accelerating fashion...Peasant exploitation is correctly identified as the principal factor of destruction, but in general, the measures taken [since colonial times] have only treated the symptoms. The social reasons for fire setting in hunting are...closely linked to growing tendencies of commercialisation and monetarization in the rural milieu. This underlines the loss in importance of traditional organisations of hunters which, to date, are marked by an anti-commercial character. [Pasture will be threatened by] growing immigration of herdsmen into the region, a consequence of the degradation of pastures in the traditional herding regions (e.g., Fouta Djallon). Traditional structures which regulate the exploitation of natural resources, most often of pre-Islamic origin, incorporate a series of conservation aspects. Some still operate...but a change is beginning to show itself: a process of social change which implies a dissolution of traditional regulative structures which are not easily reconcilable with the commercialisation trends which are more and more marked in the region (Stieglitz, 1990, pp. 54, 70, 77).

The author, who considers Islam to have disrupted this "pre-Islamic" tradition, incorporates more agro-demographic explanations into her explanatory mix:

The period of cultivation being too prolonged or the fallow period too short, there is too great a loss in the nutritive materials leading finally to an irrevocable degradation of the soils. The fallow period is limited to 5–10 years. A tendency for land shortage can be seen (Stieglitz, 1990, p. 71).

This is the position on demographic change held by most analysts. Ponsart-Dureau, for example, an agronomy student advising a nearby project, considers that:

around 1945, the forest, according to the elders, reached a limit 30 km north of Kissidougou town. Today, its northern limit is found at the level of Gueckedou-Macenta, thus having retreated about 100 km...Demographic growth forces the villagers to exploit their land completely, and to practice deforestation which dis-equilibriates the natural milieu (Ponsart-Dureau, 1986, pp. 9–10 and 60).

Thus in different ways, each of these analyses contributes to a narrative now as prominent in Kissidougou’s education and administrative circles as it is in social science analyses. Once Kissidougou had an extensive forest cover, maintained under low population densities and by a functional social order
whose regulations controlled and limited people’s inherently degrading land and vegetation use. The breakdown of such organized resource management under internal and external pressures, combined with population growth, has led to the deforestation apparently so evident in the landscape today. Observers invariably consider degradation as a recent, ongoing and aggravating problem. The social and economic changes are, like “runaway demography,” always seen to be accelerating out from a “zero point” (the archetype “tradition” so dear to Malinowskian social anthropologists and the object of description in old ethnographies). A host of indicators is drawn upon to support ideas concerning recent and ongoing degradation, such as rainfall decline since the mid-1950s, the drying-up of certain water sources, and more.

Policy implications have followed logically from the assumptions contained and stabilized within this narrative, and have changed little since its first elaboration in the early colonial period. The first policy emphasis is on the reduction of upland farming — seen as inherently forest and soil degrading and becoming more so under greater individualization and population growth — in favor of swamp farming. What upland use must remain needs to be rationalized (the archetypal “control” over resources in favor of the “community.”)

(b) The counternarrative

Examining how vegetation has actually changed in Kissidougou is a necessary first step in evaluating these social science analyses. Fortunately, a number of historical data sources make this possible — sources ignored or deemed unnecessary by social analysts convinced of the degradation they were explaining. Aerial photographs exist for Kissidougou which clearly show the “gestion de terroir villageois” of historical data sources make this possible — sources ignored or deemed unnecessary by social analysts convinced of the degradation they were explaining. Aerial photographs exist for Kissidougou which clearly show the state of the vegetation in 1952–53. These provide incontrovertible evidence that during this recent, supposedly most degrading period, the vegetation pattern and area of forest and savanna have remained relatively stable. Changes which have occurred do not involve forest loss; rather there are large areas where forest cover has increased, and where savannas have become more, not less, woody. Forest islands have formed and enlarged, and in many areas, savannas evident in the 1950s have ceded to secondary forest vegetation.

To examine vegetation change further back, we reviewed descriptions and maps of Kissidougou’s landscape made during the early French military occupation (roughly the 1890s to 1910), as well as indicators of past vegetation that emerge from oral history and accounts of everyday life in the youth of today’s elderly people. These sources make clear that what was true for 1952–94 is equally true for 1893–1952. Moreover, villagers suggest, quite contrary to policy interpretations, that they established forest islands around their settlements, and that it is their work which encourages the formation of secondary forest thicket in savanna. In 27 of the 38 villages we investigated, elders recounted how their ancestors had founded settlements in savanna and gradually encouraged the growth of forest around them.

Earlier documentary sources from the 1780s–1860s do not suggest extensive forest cover; indeed they suggest the opposite. Both Harrison, traveling to Kissi areas (c. 1780, see Hair, 1962), and, as we shall see in the next case, Seymour (1859/60) in Toma country south-east of Kissi, describe short grass savannas and an absolute scarcity of trees in places which now support extensive dense humid forest. Sims (1859/60), speaking of the area just to the southeast (between Beyla and Kerouane) writes that: “There are no trees; the whole country is prairie; for firewood the people have to substitute cow dung, and a kind of moss which grows abundantly in that country.” This picture of less, not more, forest cover in the 19th century is supported by several sets of early oral history data. All the above villages claiming foundation in savanna were established during or before the 19th century. Several village foundation stories in the south refer to conflicts triggered by the scarcity of construction wood, seemingly bizarre given the present forest and thicket veg-
station, and in certain areas savanna grasses are said to have changed from those associated with drier climates to those associated with wetter ones.

It appears, therefore, that social science analyses in Kissidougou have been providing explanations for forest loss which has not actually been taking place. In doing so, they have supported a vegetation-change narrative quite at odds with — even the reverse of — more demonstrable environmental “facts.” This casts into question the relationships between society, demography and environment valorized in these analyses. As we suggest now, there are other ways of conceiving of these relationships — counter-narratives, if you will — which better fit and explain vegetation history as demonstrated.3

The first reconception involves recognizing that local land use can be vegetation-enriching as well as degrading. It can (and often does) serve to increase the proportion of useful vegetation forms and species in the landscape according to prevailing local values and productivity criteria. This has often meant increasing the prevalence of forest forms in a once more savanna landscape. Thus, for example, villagers have encouraged the formation of forest islands around their villages for protection, convenient shelter for tree crops and sources of gathering products, and the concealment of ritual activities. They have achieved this both through everyday use of village margin land (for instance, in the thatch and fence-grass collection and cattle-tethering which reduce flammable grasses, and in the household waste deposition which fertilizes the cattle-tethering which reduce flammable grasses, and in the household waste deposition which fertilizes the forest successions beginning to develop), as well as through deliberately applied techniques (such as planting forest-initiating trees and cultivating the margins to create soil conditions suitable for tree establishment). In addition, on the slopes and plateaux between forest islands, local farming and fire use practices tend to maintain existing woody cover, and upgrade soils and vegetation from savanna to forest conditions. Much farming is concentrated on land that farmers have improved, whether by long-term alterations to edaphic quality through habitation, gardening and gardening-like cultivation; or by shorter-term fallow improvement through intensive cattle-grazing, seed-source protection, the multiplication of savanna trees from suckers, or distributing forest-initiating creepers. These forms of knowledge and practice are found among all of Kissidougou’s ethno-linguistic groups. There seems little basis for distinguishing between “forest” and “savanna” people.

A related reconception concerns the character of natural resource management “organization.” Environmental management in this region seems to depend — and always depended — less on community-level authorities and sociocultural organizations (which might be “threatened” by social change), than on the sum of a much more diffuse set of relations; a constellation more than a structure. Indeed, the maintenance of long-term productivity is in many cases built into short-term production patterns; whether carried out for oneself, one’s household or one’s compound, these improvements frequently interact with others — spatially or temporally — so that the combined effect on resource enrichment is greater than the sum of their parts. Thus, the fires set in the early and mid-dry season by hunters to clear small hunting grounds, and by others to protect property and fallows, create barriers to more devastating later fires; and the small tree crop plantations which people make and protect behind their kitchen gardens add to the creation of the village forest island. For much “resource management” there is no need for village or higher level management structures to “regulate degrading pressures.” Nevertheless, village authorities do intervene in certain vegetation-influencing activities — e.g., in managing early-burning around the village, in protecting palm trees, in imposing cattle-tethering dates, and in coordinating the fallow rotations of farmers’ contiguous plots in some Kissi areas. Village and higher level organizations also exert control over external factors which influence the agricultural environment, such as in negotiating with prospective Fula (Peuhl) pastoralist settlers or representatives of the forest service.

In this context, socioeconomic change has been articulated in shifts in landscape enrichment priorities and in the composition of a continued resource management constellation. Villagers have, for example, adapted forest island quality to suit changing socioeconomic conditions and commercial signals — managing them as fortresses during precolonial warfare, extending them for coffee planting when this became profitable, and abandoning coffee in favor of fruit tree and gathering-product enrichment as prices fell again. Urban employment opportunities, youth emigration and more individual economic opportunities have contributed to changes in farming organization, but today’s smaller farm-households use and improve fallows as large compound ones did earlier, and modern women’s individualized, commercial food cropping is concentrated in the forms of upland gardening that upgrade soils and vegetation (Leach and Fairhead, 1995). Village-level authorities have played a continuing, though shifting role within this historically flexible and diverse management constellation. There have been many social and economic changes, and there are many new social and economic problems, but these changes are rendered visible in the landscape largely through changing land use and management priorities, not through organizational “breakdown” and vegetation degradation.

Explaining demonstrable vegetation change also suggests relationships between demographic and environmental change very different from the “rapid population growth-deforestation” relationship upheld by the policy narrative. Despite the problems of recon-
structing precolonial populations, evidence certainly does not support the idea of dramatic population growth or even steady one-way increase. Comparing census data suggests that Kissidougou’s rural population has increased by only 70% since 1917. Growth pockets have been concentrated around Kissidougou town and major road axes, and in many areas population has remained almost stagnant. Precolonial evidence suggests that certain areas had early 19th century rural populations significantly higher than today, and suffered radical depopulation during late 19th century wars. Indeed oral accounts, explorers’ reports, early 16th–18th century documents which mention the region, and broader regional history and archaeology combine to suggest that Kissidougou had relatively high farming populations from the 16th century and long before. There is clearly as little evidence for dramatic population increase in the present century from a low precolonial baseline as there is for dramatic forest loss.

In this context, Kissidougou’s forest increase trends might be supposed to relate to population stagnation or decline. This reversed argument, however, still depends on the assumption that local land use trends to convert forest and forest fallows to savanna, and thus that more people means more forest loss. A counternarrative better fits evidence of local land-use practices and vegetation history: from an earlier situation of greater savanna extent, there has been a broadly positive relationship between the peopling of this region and its forest cover. First, as settlements are associated with the formation of forest islands, more villages mean more forest islands. This relationship has been modified by changes in population distribution and settlement patterns, with greater multiplication of settlements and forest islands during the 19th century when dispersed settlement was a survival strategy, than in the 20th when much population growth has been accommodated through the expansion of existing settlements, and indeed some consolidation linked to depopulation. Still, new settlements and forest formation have more recently been associated with the movement of village sites. Second, greater population density assists the control of fire, both by providing the necessary labor and by creating the demand, filling the landscape with more places (upgraded fallows, plantations, settlement sites) which people need to protect. In certain cases, the density of such protected sites of denser vegetation easily enables the entire exclusion of fire from the territory. The districts where upland savannas have recently ceded to dense forest fallow vegetation correlate broadly with the areas where population has grown. By contrast, low population densities make fire prevention impossible, and are a major factor in the persistence of running fire in the north and of the particular “living with fire” management strategies used there.

Viewing people-environment relations in terms of landscape enrichment-through-use by a diverse resource management constellation responding to changing incentives thus better explains (provides a counternarrative which better fits) demonstrable vegetation and population history. Policies conceived within the degradation narrative have sometimes undermined these relations, as well as created more general problems for villagers. In removing local control over resources, they have sometimes interfered with local management of them. In the north, for example, external fire control and prohibition prevented villagers operating their sequenced management-through-use strategies, forcing clandestine coping strategies and rendering village and plantation protection more difficult. Removal of local resource tenure has reduced villagers’ abilities to profit from past enrichment activities (e.g., in selling their forest island trees for timber) and their incentives for further landscape enrichment. The implementation of repressive environmental policies has in effect taxed rural populations for supposedly harmful activities which were, in fact, benign or beneficial. More recent approaches, which focus on decentralizing resource control by establishing village-level organization and management plans, actually risk undermining the existing flexible, diverse constellation of resource management relations. When initiated by state agencies with considerable foreign support and presence and predefined ideas about environmental dynamics, real decentralization can be undermined. Finally, but by no means least, the investment in “redressing” Kissidougou’s supposed environmental degradation, an investment reaching unprecedented levels amid current aid donor concerns, carries heavy opportunity costs in terms of other more pressing rural development problems left unaddressed.

Vegetation history and its counternarrative of landscape enrichment entail different policy implications, emphasizing support to proven local practices and determinants of change. There are clearly many techniques and land uses that serve to increase forest cover, and which could provide an effective basis for external support. In working with the local ecology of fire, soils, vegetation successions and animal dynamics, these “integrated vegetation management” practices are more locally appropriate, integrated with the social matrix and thus more cost-effective in terms of labor than are the forestry “packages” generally proposed by outside agencies. Given that farming in the region is not inevitably degrading, environmental policy may look to support as well as to “rationalize and regulate” agriculture, specifically to support those upland farming practices which improve soils and allow vegetation rather than concentrate technical effort exclusively on swamps. Fundamentally, rather than increase external intervention in the organization of resource management within villages, the more
important priority is to create the enabling policy and socioeconomic conditions in which local resource management constellations can act effectively. This implies a shift on the part of environmental agencies away from direction (through repression or organizational restructuring as in assisted "community control") toward recognizing and supporting the diverse institutions which are actually engaged in resource management, and toward a more responsive role in providing requested services at the village level.

3. CASE 2: THE ZIAMA FOREST RESERVE

(a) The deforestation narrative

Traveling south from Kissidougou, one enters the Upper Guinean forest region. Within Guinea this region is populous, and there are only two significant intact forest blocks, the northern-most of which is Ziama. Covering an area of about 120,000 hectares, Ziama was designated a colonial forest reserve in 1932, made an international biosphere reserve within the "Man and the Biosphere" program in 1980, and is now the subject of a major World Bank financed conservation project. Policy narratives concerning Ziama reproduce those of Kissidougou to a significant extent, with one major scale exception: changes in the status of a major forest block are at stake, and the conservation concern is partly global.

The Ziama forest is considered to be under considerable threat as an important relic of a once much greater forest cover. As Table 1, drawn from an IUCN report on Ziama, indicates, forest cover in this part of Guinea is now only 20% of what it was "at origin," and the report emphasizes that the forest is regressing rapidly. Apart from the loss of biodiversity (of considerable international concern) this reduction is said to be causing a drying-out of the local and regional climate, evident in drier water sources and courses, thereby increasing forest loss in a vicious cycle that threatens regional agriculture. Regional studies and administrative perceptions are based on social analysis of this deforestation and encroachment on the remaining Ziama reserve. The most detailed and explicit version of the "analysis" is found in a socioeconomic study commissioned by a conservation project (Baum and Weimer, 1992). The assumptions it forwards are stabilized within a narrative not dissimilar to Kissidougou's, involving growing populations of immigrant and indigenous farmers who have lost "traditional" values and organizational forms, and who are seeking and de-wooding forested land.

As in Kissidougou, a strong contrast is drawn between a forest people, the indigenous Toma (Loma), and a savanna people, in this case the Konianke (Mandinka), whose immigration and savanna ways threaten the forest. Thus we read of the Toma that they are "largely fixed in their customary conceptions and habitual mode of life" (Baum and Weimer, 1992). The authors explain that the Toma "historical and social evolution as a people in a forest environment...favours a tendency to contemplation and sobriety." These attitudes supported a lifestyle and traditional society which existed in harmony with the forest. The peripheral geographical situation of the Toma in terms of communication, and the largely uncommercialized nature of past economy, supported these tendencies, so the argument goes.

Nevertheless, it is maintained that the Toma have lost their forest ways: "the forest has largely lost its customary importance, in favour of an essentially agricultural use of space. This evidences, without doubt, profound changes in economic orientation, especially among the Toma, ancient hunters and gatherers" (Baum and Weimer, 1992). The authors are surprised to find that women manage the principal crop, rice, and this serves to reinforce the idea that the Toma have only just learned to farm; it "reflects, without doubt the historical agricultural experience of a migratory farming, on small areas, only partially cleared." This view builds on colonial perceptions that Toma had "a very primitive agriculture, quite anarchic, centred on pluvial rice based on forest clearings...Those of the north have practically destroyed the cover of trees, those of the south, in the valleys and penepanes, are still crushed by the forest" (Portères, 1965, pp. 688 and 726).

Changes in the Toma agricultural economy are linked to the opening-up of the area to commerce and markets and to the need to feed growing populations. Both these trends are linked to the immigration and influence of Mandinka people from the north — immigration which is also central in explaining the area's demographic evolution. The authors present a picture of a long-term, very gradual peopling of the Ziama region through the immigration of Toma people and then brusque changes as Mandinka began to immigrate, now represented by second or third generation migrants. It is said that there were two villages present in the reserve when it was designated in 1932, Boo and Kpanya, having 542 and 370 persons at that time. Boo, which now has a population of some 1,600 is said to have had a population of 500 when it was founded,
giving the impression that while the forest might have been lightly inhabited for long periods by forest people, it is only since the mid-19th century that it has been under a threat which is ever increasing. Immigration into the region is reported to have risen by four to sevenfold in 60 years. This rapid population growth is seen to have created severe land pressure in the areas neighboring the reserve. Assumptions about carrying capacity under shifting cultivation are used to argue that population:land ratios are now “fully saturated,” and this largely accounts for farmers encroaching on the reserved land for farming.

This narrative — concerning a last remaining block of “pristine” natural forest, threatened by recent socioeconomic change and population pressure — provides a powerful justification for conservation. It also entails guidelines for conservation policy. “Original” forest is easily defined as a global or regional heritage, and its conservation by global and regional guardians a moral imperative. The narrative enables reserve administrations to list deforestation problems concerning climate and water as if they had never happened before, and to justify the urgency of conservation using arguments about their irreversibility. Within earlier, colonially derived approaches, the reservation of such forest, often as part of the state’s domain, was acceptably justified with minimal regard for local interests in using reserved land and resources. In Ziama as elsewhere, “policing and patrolling” approaches characterized early forest conservation. More recently, emphasis has been placed on the need to gain the participation, acceptance and support of local populations if conservation is to be sustainable. Since local resistance to and failure to respect the reserve are seen in terms of land shortage and economic pressure, the presumed policy needs are for socioeconomic development and agricultural intensification in the marginal area around the forest, accompanied by restricting of land tenure as necessary, to reduce current and future pressures on the reserve.

(b) The counternarrative

Once again, examination of historical data showing how vegetation, population and society have changed in this region reveal the extent to which the assumptions stabilized within this narrative are ill-founded. In the Ziama case, detailed descriptions come from the published writings of several highly educated America-Liberians who visited what is today the forest reserve in the mid-19th century (Anderson, 1870; Starr, 1912; Seymour, 1859/60). What they saw and described in no way conformed to the enduring image of sparse Toma hunter-gatherer populations living in harmony with an isolated high forest. The two “enclave” villages, now situated within the forests covering the wide Diani river plain, then lay in savannas. The Ziama mountain massif, now considered the heart of the primary forest, was either bare rock or covered “with cane grass and scarcely any tree but the palm” (Seymour, 1859/60). From the top of the massif, Seymour describes the plain as “covered with small bushes and grass, and it gives the country the appearance of an old farm, with palms standing scattered all over it.” The ascription of 19th century identity as “forest people,” however dubious in itself, seems highly inappropriate for these savanna-dwelling Toma of Ziama.

The region had large populations, by all accounts significantly larger, not smaller than today. Thus taking the enclave villages as an example, Anderson (in 1874) considered Kpanya as “very large” (when his account described 2,500 people as small) and Seymour (in 1859/60) estimated Boo to have 3,600 inhabitants. In addition, as the elders of the villages describe, these large villages had many smaller dependent settlements which no longer exist. The region was evidently highly agricultural. Seymour and Anderson describe large savanna farms of rice, maize and cassava stretching as far as the eye could see, and the short falls necessary to sustain large populations. It was also commercially prosperous. Seymour noted 50 looms and five blacksmiths in Boo, and found some women wearing jewelry worth $20-30 at that time. A little further north, at Kuankan, people walked several miles from the mountains to the plain to sell firewood. As Seymour noted, “Firewood is scarce about this large city, but they have a good market, and it would do a person good to see the activity of the little boys, who are the principal traders in this line.” Both enclave settlements had daily and weekly markets, as did all the major towns, distant some eight to 10 kilometers one from another, and these traded in foodstuffs, livestock, cash crops (such as cotton and kola), and artisanal goods of every description. The region was not economically or geographically marginal, but central to busy and long-established forest-savanna trade routes.

Thus in the mid-19th century the Ziama area clearly did not fit the images which today’s policy narratives construct for it. Unsurprisingly, then, its subsequent history also overturns the conventional narrative’s image of unilinear population increase and forest destruction. The story which explains how this region became a “primary forest” reserve within only 130 years of being heavily populated savanna turns, instead, on the wars which affected the area during 1870–1910 (Fairhead and Leach, 1994). Sustained military conflict first with Mandinka groups and then with the colonizing French caused major depopulation and economic devastation. It is this, not the extension of persistently low precolonial population densities, which explains the region’s sparse populations at the turn of the century. On the abandoned settlements, fields and fallows, forest grew. By 1932 the French
colonial administration recognized secondary forest worthy of reservation. That the forest grew so fast suggests that earlier intensive farming and savanna maintenance did not cause irreversible damage to forest vegetation potential; indeed it may indicate the positive legacy of previous local management practices, as in Kissidougou. By the early 1980s, conservationists were failing to distinguish Ziama's forest regrowth from primary forest. Populations since 1932 have not grown by the 400-700% suggested in the socio-economic study. Using the study's own statistics, in the 41 villages in the vicinity of the reserve populations have increased by only 80% since 1932, or 120% if recent influxes of Liberian and Sierra Leonean refugees are taken into account.

It is clear that the stabilized assumptions which social science researchers are using to understand the nature and change of people-environment interactions in Ziama are completely at odds with a more demonstrable counternarrative centering on warfare, depopulation, forest regeneration and land alienation. The latter narrative better encompasses the experience and attitudes of today's Toma inhabitants, whose prominent display on village houses of portraits of ancestors who were killed or who fled during the wars testifies that these past events are not forgotten. It is largely this mismatch of narratives which underlies the failure of the reserve administration to build any constructive relationship with local inhabitants. Instead, their relationships are tense and have at times erupted into violence. Development activities around the reserve have seemed inadequate to calm this conflict and prevent "encroachment" on land within it. Achieving sustainable conservation, let alone a participatory nature, remains a distant and unlikely goal, and much investment has been wasted in the effort.

When today's inhabitants "encroach" they are attempting both to reclaim ancestral lands, and to reestablish control over a once peopled and prosperous, now ex-social domain politically alienated from them. Recognizing this suggests alternative, potentially more fruitful guidelines for policy. If policy makers are to engage sensitively and productively with local communities, then local inhabitants' historical experiences need to be incorporated into policy dialogues and negotiations. Moreover, historically grounded claims to land and political authority need to be recognized and seriously addressed through conservation arrangements which, for example, cede tenurial control to local landholders, within the context of leasing or management agreements which fully recognize the value their lands now have for others.

4. THE REGIONAL NARRATIVE AND ITS ALTERNATIVE

The specific narratives, concerning vegetation change and its social causes used to support policy in Kissidougou and Ziama, are examples of a broader narrative. This broader narrative contains and stabilizes assumptions which have been applied in the specific cases, but which are also written into national, regional and international policy documents.

Thus it was lamented in work incorporated into Guinea's agricultural development policy strategy that: "The north of forest Guinea (Beyla, Kissidougou and Gueckedou) is no longer a pre-forest region, but an 'ex-forest' or 'post forest' region!" Stating the narrative in its perhaps most succinct and pure form, it was asserted that:

This degradation of the natural environment...is the result of an evolution of rural societies little adapted to the rapid structural, demographic and economic changes this century, and above all, these last years...The problem today is the recession of traditional control of the orderly exploitation of space and its resources, which has not managed to follow or adapt to the recent and very rapid change in the rural world. This management becomes insufficient given a brutal increase in population [and] a progressive loss in the power of traditional control, due to the destructuration of rural society, the new amplitude of migration and the push towards agrarian individualism and the monetization of the local economy (République de Guinée, 1989, p. 8).

This narrative is the script of international donors, and one could fill shelves with its versions across Africa and beyond. Focusing on the population component, a recent World Bank policy review argues that:

...traditional farming and livestock husbandry practices, traditional dependency on wood for energy and for building material, traditional land tenure arrangements and traditional burdens on rural women worked well when population densities were low and population grew slowly. With the shock of extremely rapid population growth...these practices could not evolve fast enough. Thus they became the major source of forest destruction and degradation of the rural environment (Cleaver, 1992, p. 67).

This, it is argued, leads to vicious spirals of shortening fallows, land depletion, yield declines, and subsequent migration to marginal lands and forests. Environmental crisis results less from the overall effect of population pressure on resource availability, as a classic Malthusian position would have it, than from the multiple effects of population pressure on the institutions seeking to control resource access and use.

In exemplifying how inapplicable current regional narratives can be to local situations, the Kissidougou and Ziama cases invite a more fundamental examination of the origins and purposes of the regional narrative itself. More than empirical evidence, such narratives depend on - and expose - the field of Western imagination concerning African society; in
particular, they show that stereotypes born of the colonial era are alive and well in the applied social sciences. Whether they are used to justify policies of external repression, or policies of social reorganization and "participatory" development, the narratives justify and make imperative a role for the outsider in the control of rural resources. The broader assumptions which the regional narratives contain can be summarized as follows:

(a) that African vegetation was once "original," consisting of a climax vegetation, i.e., the ultimate stage of plant succession which can exist under given ecological conditions. Prevailing ecological conditions are unchanging, so that what could exist today (e.g., humid forest in the forest and preforest region) did recently exist. Against this most natural vegetation one can judge levels of "degradation";
(b) that African society can be seen, at origin, in terms of a traditional "functional order." Such order was once harmoniously integrated with "natural" vegetation (e.g., as epitomized in the idea of a "forest people" and a "savanna people"). African farming, land and resource-use practices degrade or are at best benign to the original vegetation. Degradation is thus limited only by functional social organization (regulation and authority). From environmental degradation one can diagnose the social ills of organizational dysfunction;
(c) that African rural populations only increase, and do so fast. Population increase is as such environmentally and socially damaging;
(d) that African society is essentially sedentary and subsistence oriented with an anti-commercial sentiment (e.g., in the popular imagery of "anti-commercial" traditional hunters). Money, mobility and trade are modern and lead to socioenvironmental dysfunction. African history consisted of the continuous reproduction of tradition until it began to become "modern," whether with markets and mobility, colonial intervention, or (in some work) the arrival of Islam.

The romantic links forged between these assumptions mean that vegetation change carries very profound moral messages. "Original climax vegetation" and "traditional functional society" provide fundamental baselines, so that whether the concern is about society or the environment, it is possible to judge that something is wrong and assess the extent of damage. From such a vantage point, the imperative is to intervene.

These assumptions, stabilized and sometimes hidden within social science analysis, are destructive and ultimately have no policy relevance. "The hard fact" as Sayer (1992) puts it, "is that most aid projects, and especially those in forestry fail." As the Kissidougou and Ziama cases exemplify, misleading narratives are fundamental to this failure. Moreover, just as for these cases there are counternarratives which better fit the facts of vegetation history, so at a more general level we follow the spirit of the articles in this special section to suggest other assumptions and a stabilizing narrative which better reflect realities surrounding African environments. The parameters of this counter-narrative accord with recent developments in ecological and social theory and, significantly, they do not perpetuate the imperative for outside intervention in local resource control.

While the old narratives held within them a view of ecology which had to explain the disappearance of a natural climax vegetation, newer strands of ecological theory reject the idea of a single environmental maximum. When climate historians suggest that Africa has experienced both long-period, deep climatic fluctuations and changes in climatic variability, the history of vegetation begins to be seen as a history of continual transition, rather than of divergence from a single, once-extant climax. Recent theory suggests that such repeated transitions are likely to be between particular "stable" vegetation states, each determined by a multi-factor complex, rather than by trends in any particular variable. If the transition-causing factor reverts to its pretransition level, vegetation may move to another state, but need not return to its initial one (Sprugel, 1991; Scoones, 1994). Given the multiplicity of interacting factors influencing each state, shifts between them can be triggered by a particular, possibly unique, historical conjuncture of ecological factors. From this viewpoint, there is no basis for identifying a region's fundamental, archetypal vegetation. Vegetation is in continual transition, and its trajectory is determined by the legacy of past vegetation paths and present ecological conditions.

Ideas of environmental optima dovetailed neatly with ideas of static social maxima — of tradition and structure — typical of, but persisting beyond, colonial anthropology. But notions of society with a given social structure and order, maintained by functional adaptation and/or by rules and regulation, are challenged by more recent social theories giving weight to social action, processes and their capacity to shape and determine rules. Such continual structuration, over time and through social change, challenges the notion of a baseline "traditional" societal state. That African social forms have been in constant transition dovetails with the view of vegetation as in continual transition. There is no baseline in terms of how society values vegetation (and therefore no basis for the moral argument that indigenous values once preserved a more "natural" ideal). Vegetation values are shifting in accordance with social, economic and political changes, often of quite a conjunctural nature. The values placed on different vegetation types, conditioned by prevailing social conditions, are also socially differentiated; the high forest and wildlife priorities of today's global conservation planners are very different from the agricultural bush fallow priorities of
today’s Toma inhabitants.
In the West African context, these social and economic transitions have taken place within a long historical context of movement and migration, agriculture and commerce, and political and religious turbulence. The relationship between social and environmental change does not turn on the dramatic increase in any of these, but rather on people’s responses to changing signals within this broader, dynamic continuity. Thus Kissidougou villagers have adapted forest island form to meet changing needs for fortification and different cash crops. Demographic change, rather than consisting always of unilinear population increase, involves periods of stability and decline, of shocks as well as secular trends. Depending on prevailing ecological and economic conditions, the effects of population growth periods can be positive as well as negative.

In the West African forest margin zones, climatic transition appears to have involved rehumidification since the mid-19th century, following a long relatively dry phase (Nicholson, 1979). Where the combination of ecological factors makes conditions marginal for forest, creating a precarious balance between forest vegetation and fire-maintained savanna, people’s activities can make the difference, allowing forest vegetation to develop in grassland. Where people have socioeconomic or political reasons to create forest they do so, in small patches, triggering transitions in small parts of the landscape, as has happened, for example, in Kissidougou. In open savanna and with low population densities, fire is harder to control, but as populations increase and transitions to forest are provoked in more places, fire is reduced and may eventually be eliminated. Agricultural priorities may mean large areas are maintained as bush fallow rather than allowed to develop into high forest. As populations increase further, fallow periods may need to be shortened and some resavannization can occur. But if population is removed at that point, and given the legacy of people’s previous land use practices, the area may develop into high forest, as happened early this century in Ziama.
This regional counternarrative provides different, and more appropriate, guidelines for policy. In presenting socioenvironmental change in a way which better fits local experience, it provides a more effective basis for dialogue and participatory development work with local populations. In removing the baseline link between social and vegetation form, it removes the justification for external intervention in the organization of resource management to reestablish a lost social order, whether by replacement with external control or by the externally promoted “community reorganization” of recent more decentralized approaches. It suggests that more important priorities are to create the enabling policy and economic conditions in which local resource management constellations can act effectively, to support the diverse existing local institutional forms, and to build on the beneficial environmental implications of broader rural development and pricing policies — an approach which now finds support in some regional policy institutions (e.g., ENDA, 1992). Finally, as McNeely argues, “because chance factors, human influence and small climatic variation can cause very substantial changes in vegetation, [the biodiversity for] any given landscape will vary substantially over any significant time period — and no one variant is necessarily more ‘natural’ than the others” (1993). From this perspective, environmental policy can call on no moral high ground in recreating the natural (or the social that went with it). It becomes very clearly a question of social or political choice about what vegetation forms are desirable at any given time in social history, and about ensuring that conflicting perspectives on this — such as between local, global and intergenerational interests — are adequately articulated and addressed.

NOTES
1. This, like all subsequent quotations, have been translated from the original French by the authors.
2. More details of the following historical vegetation analysis are given in Leach and Fairhead (1994).
3. Such alternative social science analysis and its considerable evidence is documented fully elsewhere (Fairhead and Leach, forthcoming; Leach and Fairhead, 1995).
4. For more on the management-use continuum (i.e. the way people use a resource in the way they manage it), see Roe and Fortmann (1982).
5. Further details concerning this case are given in Fairhead and Leach (1994).
REFERENCES


Fairhead, J. and M. Leach, Reversing Landscape History: power, policy and socialised ecology in West Africa’s forest — savanna mosaic, Book manuscript (forthcoming).


