

Landscape Images in Amazonian Narrative: The Role of Oral History in Environmental Research

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Landscape and land-use change in the Amazon are most commonly addressed by the standard tools of land-cover change research: remote sensing, demographic methods, and political ecology approaches. These methodologies are used to construct a description of the causes and effects of land-use transitions at broad scales. In contrast, studies that incorporate a very specific, human scale – individuals' memories of the land – have already proven useful for correcting this picture in other regions. Here I evaluate the use of oral histories with ribereño residents of the Muyuy-Panguana archipelago in the Peruvian Amazon, with the primary goal of integrating this information into ecosystem studies.

Oral history approaches differ from other interviewing techniques in that they impose less structure on the conversation, and encourage evaluation rather than merging of the relationship between interviewer and interviewee. In this study individuals, couples, and small groups were interviewed about their personal histories, the formation of their communities, and their perception of culture-nature changes. Conversations progressed

from short, specific questions to more open-ended queries intended to direct the discussion towards the interviewee's personal history in relation to the landscape, and his or her ecological knowledge. I found that the recorded Amazonian landscape narrative exposed through this technique is a blend of environmental factual information and narrative art, and that both elements are useful in conservation and landscape change research.

Some of the factual information in the interviews is difficult or impossible to obtain through more traditional methods. For example, the narratives reveal a more precise history of a prominent river channel in the archipelago. Neither a typical remote sensing analysis using multi-temporal images, nor a study of historical maps, could determine that before the 1970's the channel was sometimes almost dry and could be crossed by people and animals on foot. Through the interviews, I also obtained descriptions of forest successional patterns. The interviewees described processes that echo and sometimes extend the knowledge accessible in the ecological literature. The narrative art demonstrated in these interviews is useful for historical analysis since



Photo: Pinedo-Padoch private collection

many experiences were shared, resulting in structural similarity. In some instances, the narrative includes precise descriptions of change processes. In other cases, the narrative of the floodplain's dynamism is intertwined with mythological figures. Myth can arise alongside a conventional story of forest succession, or to account for more drastic and inexplicable changes in the landscape. As I overcame my bias towards the factual components of the interview and became more attuned to the contexts in which mythology entered the conversation, I found that they often reflected the relationship of the community to specific landscape features, or even my own relationship with the interviewee. The myths can serve as explanations for dramatic events, or to encourage certain codes of conduct in using resources or interacting with the landscape.

Integrating oral historical techniques into conservation research is not only another way to access historical and ecological facts or represent cultural interactions. The narratives also present the conservation goals of the interviewees. The goals of a conservation program are ultimately subjective judgments, and it is important to understand local preferences and techniques in devising conservation strategies. Oral history is especially appropriate for collecting this information, since people are allowed to explore their memories and evaluate their experiences.

Through this freedom preferences and aesthetics enter the interview. Hence, the ribereño oral history is not only useful for understanding ecosystem dynamics and environmental history, but also for promoting a more inclusive conservation agenda for the communities of the Amazon.

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Local Communities and Wildlife Management Reform in Tanzania

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During the past 20 years, community-based natural resource management (CBNRM) has become a central element of efforts to support rural livelihoods and sustain natural resources worldwide, including in Sub-Saharan Africa. The widespread interest in CBNRM is rooted in the empirical failures of strictly centralized natural resource management policies and practices, broader trends in favour of decentralization in rural development and economic policy, and the desire to create stronger synergies between local economic interests and global conservation objectives. The main challenge facing CBNRM efforts, however, is that centralized resource management systems are often historically rooted, and develop their own sets of institutionalized interests. Reforming such systems is inherently challenging, and in many instances efforts to devolve or decentralize authority for valuable resources to local communities have made limited progress.

The historical and contemporary experiences of

wildlife policy and management in Tanzania provide an instructive set of experiences in relation to these broader ecological, economic, and institutional trends and issues. Tanzania possesses one of the world's richest populations of large mammals, which continue to occupy not only state protected areas but many unprotected landscapes as well. Wildlife management has been a prominent social and political issue in Tanzania since the early colonial era, when regulations were first passed to control wildlife utilization and to set up game reserves. Both the colonial and post-colonial state worked to increase central control over wildlife use and over the substantial economic value of wildlife generated by safari hunting and, more recently, by ecotourism. By the 1980s, regulation of wildlife use was entirely subject to state authority, with both foreigners and local people only able to hunt using government-issued licenses. By this time, though, Tanzania's wildlife populations were widely depleted as a result of the declining capacity of state law enforcement and the absence of any local incentives for conserving the resource. Given the

need to address these problems, and influenced by the ideas and interests of foreign donors and international conservation organizations, Tanzania revised its wildlife policy in the 1990s. These reforms called for the devolution of management of wildlife outside the core protected areas to local communities.

During the past decade this reformist narrative has continued, but in a rhetorical sense. The legal and administrative reality has been defined by further expansion of state agencies' authority over wildlife, and the erosion of community rights and benefit flows. This discrepancy between policy and practice is explained by the institutional incentives that state wildlife management agencies have for maintaining control over this valuable resource, while adopting a reformist narrative to legitimize continued support from foreign donors. Donors and NGOs have not possessed the capacity to force the adoption of reforms that state authorities view as contrary to their underlying interests, and there has been very little civic or local-community engagement in the wildlife policy development process since its

inception. Key lessons that emerge from the Tanzanian experience include:

- Natural resource management reforms in Africa face fundamental institutional challenges in terms of devolving authority over valuable resources to the local level.

- Donors and NGOs often promote such reforms without an adequate understanding of the institutional barriers to their adoption, and may therefore fail to develop effective strategies for negotiating such constraints.

- Ultimately, moving CBNRM from popular narrative to institutional practice will require greater grassroots participation in natural resource policy formulation, and popular demand for devolution; in this way, CBNRM is fundamentally tied to broader discourses on resource rights and governance in Sub-Saharan Africa and throughout the developing world.

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Landowner Experiences Regarding Biodiversity Outside Protected Areas in Kenya

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Substantial biological diversity exists on lands outside protected areas and its survival depends on the goodwill of people who own those lands. To ensure that these landowners contribute to biodiversity conservation efforts in mutually beneficial partnerships, it is important to understand their socio-economic backgrounds and historical heritage, their land-use patterns and expectations, and their biodiversity education needs, as a basis of formulating conservation policies that do not exclude them.

In Kenya today private landowners receive only minor direct benefits from wildlife. With no compensation to mitigate wildlife damages, public attitudes toward

wildlife are very unfavourable, especially among landowners who practice small-scale farming and pastoralism. The goal of this study was to explore some of the issues arising from interactions between local landowners and wildlife in a prominent wildlife area in Kenya. I conducted interviews with 377 private landowners of three categories, small-scale, pastoralist and large-scale, in Laikipia District of north-central Kenya. The results give us a glimpse of important landowner perspectives regarding conservation and biodiversity in Laikipia. These can provide some direction for wildlife policy analysis and other conservation needs, including focus points for further research.

Landowners in Laikipia differed in many respects regarding

benefits from wildlife, wildlife damage and mitigation, and possible solutions, depending on their economic backgrounds, land parcel size and land use, traditional history, and knowledge about biodiversity. Regardless of ownership type, over 90% of all reported cases of threats due to wildlife, and injuries and deaths caused by wildlife, were attributed to one animal, the elephant. The remaining 10% of cases were attributed to buffalo, lion and hippopotamus, in that order. Many landowners routinely reported damages to the Kenya Wildlife Service (KWS). Of the small-scale landowners, less than 30% of those sampled reported damage and up to 94% of them used an assortment of methods to keep wildlife away. Amongst small-scale landowners

and pastoralists the most favoured methods of deterring wildlife were the traditional ones. These included lighting bonfires, and beating iron-sheets or cracking whips to make a sound. The large-scale land owners primarily preferred shooting in the air using firearms to deter wildlife. Compensation for wildlife damage was a major issue in Laikipia, and all landowners felt strongly about the initiation of some form of government compensation scheme. According to KWS, no wildlife crop or property damages are compensated at this time except cases of wildlife-caused human death, which is compensated at a meagre US\$ 215.

Considering benefits from wildlife, more than half (67%) of all small-scale landowners believed they gained nothing directly; 19% of pastoralist and 4% of large-scale landowners concurred with this

view. However, many landowners appreciated the role of wildlife in general, and the importance of conserving biodiversity for foreign exchange, for aesthetic reasons, and as a reservoir of genetic diversity. Among the wildlife utilisation methods favoured, landowners highlighted the need for programmes in wildlife cropping, safari hunting, ecotourism, and game farming. The existing wildlife utilisation programme in the district was unpopular with a majority of landowners particularly due to delays in the derivation and sharing of benefits, lack of landowner commitment to programme meetings and deliberations, general illiteracy among most landowners, organisational logistics characterised by low managerial capacity and poor operational skills, existence of more economical and dependable alternatives, and the uncertainty of the current wildlife utilisation programme.

With interactions between landowners and wildlife expected to increase in the future, some preventive and management measures that emphasize direct wildlife benefits, compensation for property damages, problem animal control, investment in development projects, and biodiversity education must be incorporated (Table 1). Those can be combined with support for some of the effective traditional methods of wildlife deterrence, provision of incentives including cash and development projects tied to wildlife conservation and training opportunities, devolution of partial ownership responsibilities to landowners, and improving access to biodiversity education materials and opportunities for local landowners.

To achieve success in biodiversity conservation outside protected wildlife areas in Kenya and elsewhere, multiple partnerships

Percentages (with 95% C. I.) of landowners advocating various solutions to wildlife problems in Laikipia District of north-central Kenya. Relative preferences for various solutions differed among categories of landowners.

	Small-scale (N=279)	Pastoralist (N=83)	Large-scale (N=15)	χ^2	p
Benefits to landowners	95 (88-99)	90 (82-98)	100 (93-100)	4.01	NS*
Keep wildlife away	78 (72-84)	32 (27-37)	23 (20-28)	71.64	<0.001
Compensate for losses	72 (66-78)	88 (81-95)	68 (62-72)	10.43	0.022
More ranger outposts	41 (36-46)	15 (11-19)	8 (4-12)	28.42	0.009
Developmental assistance	38 (33-43)	45 (39-71)	12 (9-15)	5.98	0.018
Biodiversity education	12 (8-16)	9 (6-12)	85 (78-92)	43.52	<0.001

* Not Significant