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Law, Colonialism and Environmental Management in Africa

Annie Patricia Kameri-Mbote and Philippe Cullet

■ Introduction

The African continent is today facing severe economic and environmental crises.¹ While some of them can be traced back to the colonial era and have had lingering effects, others have been linked to more recent developments, such as population growth and global economic trends. The most critical environmental crises in Africa include deforestation, desertification, soil erosion and the decline in biological diversity. These directly impact on food supplies, as demonstrated by the increased frequency and magnitude of famines.² Since most African people live in rural areas, they depend directly on the extraction and exploitation of natural resources such as food, water and fuel wood to satisfy their basic needs.

Most African countries experienced colonial rule from the late nineteenth century. Colonialism had the general effect of removing large tracts of land from people's control, without taking into account that commonly owned land was part of an effective integrated resource management system. This, in turn, led to a decreasing sense of trusteeship towards future generations and a reduction in the sense of equity that had previously constituted a basis for inter-personal relations among members of families and communities. At the same time, increased population growth forced people to adopt unsustainable environmental management practices, which has brought about the now popular idea that poverty destroys the environment.

One of the main challenges facing African countries is to rid themselves of colonial laws governing natural resources which are chiefly oriented towards the extraction of resources. Colonial natural resource management was premised on the central role played by the state, and this dominance raises issues of access and control by people, particularly rural communities directly depending on surrounding natural resources for their livelihood.

This article examines the impact of the removal of control over, and access to, environmental resources from

local communities, brought about by colonialism, on both intra- and inter-generational relations. The article considers the impact of the introduction and strengthening of the concept of private rights, which led to the enclosure of common areas ancestrally managed by communities, thus removing such areas from community control. In this context, the privatization of rights to natural resources resulted in reduced access to those resources by the local communities. Further, the enclosure of common resources by, and for, the benefit of the state and certain individuals, which had previously been sustainably managed by local communities, has contributed to the ecological crises currently discernible in Africa. We argue that the capacity of African people to solve their environmental problems is dependent upon the regulatory framework governing access to natural resources. This currently still draws heavily on colonial laws and policies. Moreover, successful environmental management policies should recognize the important role of local communities in both exploitation and conservation, thus broadening the range of crucial actors and interests.

■ Environmental Law and Colonialism in Africa

The motives for colonization of the African continent included increased access to natural resources for industrial development in Europe. Colonial administrators were also concerned with making colonies self-sufficient economic units that would not be economically dependent on the metropolises. Colonial laws and policies relating to natural resource management were thus chiefly concerned with facilitating the extraction of raw materials from colonies for the metropolises and exploitation for local economic development.³

The colonizers considered the annexation of territory crucial to the achievement of their objectives. In some cases, however, political authority in and of itself did not ensure access to land. In Kenya, for instance the declar-

ation of protectorate status fell short of the needs of the colonial administrators and potential settlers in so far as it gave them no authority to deal with the land as they pleased. Land rights could still only be acquired from the indigenous population through conquest, agreement, treaty or sale.⁴

Regional Environmental Regulation

Environmental conservation as such was not known in pre-colonial African societies that lived in symbiosis with their surrounding environment. Conservation concerns were nonetheless introduced into African laws as early as the 1900s.⁵ This stemmed from the need to preserve Africa's wilderness in its perceived pristine condition, since the developed world saw it as one of the very few truly natural areas in the world. These concerns emerged as a result of declining wildlife populations, partly attributable to widespread sport hunting carried out mainly by Europeans.⁶ Further, it was assumed that African people exploited natural resources with no regard for its conservation.⁷ The environmental movement in Africa then was not driven by local people's concerns but by environmentalists from developed countries who found it easier to promote conservationist measures in dependent territories than at home where the environment had already been seriously affected by industrialization.⁸

The most notable international agreement applicable to conservation in Africa under colonialism was the 1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State (1933 London Convention) signed by the colonial powers.⁹ It was replaced by the 1968 African Convention on the Conservation of Nature and Natural Resources (1968 African Convention) signed by the governments of the newly independent African countries.¹⁰ The latter was hailed as the most comprehensive multilateral treaty for the conservation of wildlife yet negotiated in Africa.¹¹

The 1933 London Convention

The first steps towards the conservation of wildlife in colonial Africa were taken in 1900 when the Convention for the Preservation of Wild Animals, Birds and Fish in Africa (1900 Convention) was signed in London.¹² Its aim was to halt the decline in wildlife populations partly attributable to widespread sport hunting carried out mainly by Europeans.¹³ Indeed, Lyster notes that the 1900 Convention was geared towards preserving a good supply of game for trophy hunters, ivory traders and skin dealers.¹⁴ Its emphasis was primarily on large mammals, the establishment of nature reserves and the prescription of certain hunting methods.¹⁵ It is noteworthy that the 1900 Convention considered certain animals dangerous to humankind and therefore undeserving of the same protection extended to the beneficial animals.¹⁶

The 1900 Convention was superseded by the 1933 London Convention, which is premised on the idea that nature preservation could best be achieved through establishing areas where human activity would either be reduced or prohibited. Though it abolished the concept of non-protection of harmful species, the 1933 London

Convention emphasizes the preservation of supplies of economically valuable species for trophy hunters.¹⁷ It prohibits the hunting, killing or capture of fauna and the collection or destruction of flora in reserves and parks. Further, it calls for the creation of buffer zones around parks and reserves where farmers carry out activities at their own risk and are not allowed to interfere with the animals found within the zones.¹⁸

In general terms, the 1933 London Convention proved to be a far sighted agreement providing some security for wildlife and their habitats, though its effectiveness was limited by the failure of the parties to take legislative steps to give effect to the agreement's provisions at the domestic level. Moreover, the few parties which took such steps rarely enforced the laws.¹⁹

The 1968 African Convention

With many African countries gaining independence from their former colonial masters in the 1960s, the need for a new conservation initiative arose to provide the basis for national legislation as well as to co-ordinate conservation measures across frontiers. The 1933 London Convention was perceived as a good starting point for the negotiation of a new agreement. Thus, the 1968 African Convention, negotiated under the auspices of the Organization of African Unity and the World Conservation Union (IUCN) adopted many of the principles of the 1933 London Convention. It is predicated on, and advocates, a conservationist approach which draws largely on a western conservation ethic that does not focus primarily on integrated management principles based on the recognition of the needs of the people living in, or near, the protected areas. The 1968 African Convention not only advocates the retention of existing conservation areas but seeks to further extend such areas.²⁰

A fundamental objective of the 1968 African Convention is to require the parties to adopt the measures necessary to ensure the conservation, utilization and development of natural resources in accordance with scientific principles and with regard to the best interests of the people.²¹ A second objective is to protect endangered species and their habitats.²² Article X of the Convention specifically requires the Parties to establish conservation areas to protect those ecosystems which are most representative of, and in any respect peculiar to, their territories. It also requires the Parties to ensure the conservation of all species and especially those listed in the annex to the Convention.

The Convention also contains provisions on the protection of habitats outside protected areas, on education regarding conservation, on research and on the need to integrate conservation into development plans.²³ With respect to the latter, parties are required to ensure that the conservation and management of natural resources are treated as an integral part of development plans, giving full consideration to ecological, social and economic factors.²⁴ Thus, the 1968 African Convention emphasizes the goal of integrating conservation and development, a key theme in modern conservation philosophy.²⁵

The Convention at Article IX urges the contracting parties to regulate and control trade in wildlife.²⁶ It provides

for permits to be issued for the exportation of trophies and specimens. This provision has however been largely superseded by the Convention on International Trade in Endangered Species of Wild Fauna and Flora which deals specifically with the issue of trade in species.²⁷

Although the 1968 African Convention mentions the interests of the local communities, contains provisions on the protection of wildlife outside protected areas, and requires the parties to take the necessary legislative measures to reconcile customary rights with the provisions of the Convention,²⁸ its primary objectives emphasize the conservation of resources with little regard for the needs of human beings who are dependent on those resources for sustenance. The control and management of the protected areas are vested in the state and no mechanisms are envisaged for the protection of traditional rights of people to wildlife and its products.

The effectiveness of the 1968 African Convention is reduced as a result of the lack of an administrative structure to oversee its implementation and of a reporting mechanism to facilitate review of enforcement of its provisions by the contracting parties.²⁹ It is, however, clear that the provisions of the Convention have provided the framework for many national laws. The setting aside of land for wildlife conservation has, for instance, become a hallmark of existing wildlife legislation in some African countries. Thus, 16%, 21% and 25%, of Rwanda, Botswana and Tanzania, respectively, were designated by 1988 as nature reserves.³⁰

■ The Impact of Colonialism on Sustainable Environmental Management

Introduction of Private Property Rights to Environmental Resources

Pre-colonial notions of property ownership in most parts of Africa were centred on communities. Collective arrangements regulated access to and use of resources according to collective communal rules based on cultural norms. These emphasized elements of sustainability and preservation for future generations. Such collective arrangements allowed each user of a resource to be separately entitled to it, but any dealing with the resource would take into account the entitlements of others and was subject to approval by the community as a whole. Communities were often sub-divided into smaller groups, linked to each other by kinship or reciprocity. Typically, these would be the nuclear or extended family regulating production of resources on cultivated land, and the clan or village controlling territory from which resources were foraged by the families from forests, fishing areas, water holes or grazing lands.³¹ It was the responsibility of the heads of these groups to exclude outsiders, to promulgate new rules and to resolve conflicts pertaining to resource use.

Colonialism was premised on the desire to ensure control and access to primary resources for industries in

Europe. In an attempt to civilize the colonized, European concepts on property rights were imported into Africa to foster progress along paths previously taken by most European countries during the industrial revolution. The assumption was that what had worked for Europe could be replicated in Africa.³² Privatization was superimposed by colonial powers upon existing notions of property rights as a result of misconceptions about the nature and role of local systems in resource management.³³

Overall, colonial rule emphasized state control and private ownership as the most effective means of fostering resource extraction and utilization. The assumption was that the assignment of private property rights is a necessary precondition for economic development, for the minimization of land-use conflicts and for reducing the over-exploitation of resources.³⁴ Privatization was viewed as a means to resolve the problem of shared responsibilities over resources. Apportioning the resources among private owners was supposed to give them economic incentives to preserve and maintain the resource base. It was also geared towards helping the poor and landless gain secure rights to resources.³⁵ In fact, this process undermined the mechanisms for preservation that existed at community level and transferred more resources to the already better-off households. Even where the poor obtained private rights to resources, it is doubtful whether their loss of access to common property resources was compensated.³⁶

In some cases, such as with the Maasai community in Kenya, it was erroneously assumed that there were no property rights to the resources since the existing systems ensured access for all members of the communities, with the consequence that no entity exercised absolute control.³⁷ African communal systems of property holding were thus erroneously equated with open access situations where property rights did not exist.³⁸ Under an open access situation, the resources are not owned by anybody and access to them is on a first come, first served basis. This is, however, not the case with communally owned property, which is in many ways similar to private property and only differs from it because of the number of persons who own the property and who have the right to exclude outsiders. Under this common system of property ownership, each user is separately entitled to the resources but all users are subject to strict limits on their use.³⁹ Colonial authorities sought to remedy the perceived shortcomings of African systems of property holding by introducing private and state property rights to promote economic productivity. Common ownership was not considered as a viable alternative.

Land reforms and the introduction of private property rights regimes during the colonial era consequently destabilized Africans' equilibrium with their physical environment. In Kenya, for instance, the communal nature of land holding was perceived by the colonial agronomists as constituting a major structural handicap to the capacity of the colony to generate economic gains for the settlers and the colony. The appropriation by settlers of rights in land amounted to the expropriation of the rights of the indigenous communities.⁴⁰

The effects of the introduction of private property rights were compounded in some countries by the policy of separate development, whereby reserves were established for indigenous occupation away from settlers' lands. This process of enclosure resulted in further pressures on the environment brought about by the confinement of large numbers of people in limited areas. In the process of acquiring land from the indigenous population and granting it to settlers, colonial authorities introduced a state-resource relationship that had until then not existed. This led to the gross undermining and undervaluation of the rights of communities and certain individuals, and the creation of a leviathan and ubiquitous state. The destabilization occasioned by the acquisition of resources by colonial authorities contributed significantly to the breakdown of social, political and economic community structures. On independence, governments moved in to fill the vacuum created by the disintegration of community structures in areas such as property holding.

Introduction of Exotic Species

Another impact of colonialism was the introduction of exotic species into the colonies for the establishment of an agricultural economy based on monocultures of cash crops, which brought about improved yields but undermined traditional food crops.⁴¹ The latter were perceived as inferior and consequently abandoned with negative implications for food diversity and crop adaptability to climatic conditions. This process and the exploitation of timber resources paved the way for massive deforestation. Forests of indigenous trees were cleared to make room for exotic species which grew faster, thus ensuring the continued flow of timber both for use within the colony and for exportation to the metropole. Though the interest in indigenous tree species has been revived in some countries, it has not had as great an impact as would have been expected because of the high demand for land for cash crops and subsistence agriculture due to increased population.⁴²

The Removal of resources from Community Control

People-land relations broken

One of the most profound and lingering effect of colonialism was the disruption of the close relationship between people and land. This relationship is of utmost importance in Africa where most people depend directly on land and its produce for their survival.⁴³ To the Africans, land was neither fungible nor disposable. No single individual had the capacity to take action that would substantially alter the substantive value of the land.

Displacement ensued as a result of the introduction of environmental conservation laws because environmental management was equated by the local communities with restrictions on the use of the land. Local people were, from the inception of colonial environmental policies, excluded and evicted to new areas against their wishes and without compensation for the loss of property and other rights, such as hunting and gathering

from the reserved areas.⁴⁴ In areas where conservation activities were deemed compatible with local land uses human activity was allowed, though in most cases, wildlife and forests were enclosed away from communities.⁴⁵ In this way, environmental conservation policies alienated local communities, which led to their antagonism towards the policies.

Further, customary rights in land were not recognized and community rights were assumed to be usufructuary in nature.⁴⁶ Such rights, Lord Haldane contended, could be extinguished by the action of a paramount power assuming possession of the entire control of a country.⁴⁷ The colonial government eventually appropriated broad powers over the land in the name of its trusteeship mission, thus in effect, vesting property rights over the land in the new supreme authority.

Access to Environmental Resources

In general people obtain access to environmental resources by securing their rights to such resources. The existing legal and institutional mechanisms for accessing environmental resources in most African states emphasize state control and individual rights. Government ownership, in some respects, constitutes a form of private property rights holding, since the rights are held by one central authority. In Kenya, for example, the state owns all wildlife irrespective of whether or not they reside within the protected areas. Observing wildlife is the only activity which is permitted, usually only to tourists. The management and control of wildlife and their habitats is vested in a central body, the Kenya Wildlife Service, which, though autonomous, is under the Ministry of Tourism and Wildlife. Any hunting of wildlife for food or recreation is prohibited and resources, whether financial or otherwise, derived from wildlife belong to the State.⁴⁸ States thus claim exclusive rights to resources through sovereign appropriation.⁴⁹ They may directly control and utilize resources through an administrative arm or grant rights to communities or individuals. Instances of community control are exceptions to the general rule and have in recent times received a good deal of attention.⁵⁰ In many of the African states, rights to environmental resources such as wildlife and forests are vested in the State, while the local communities have limited or no rights of access to the resources. Natural resources outside protected areas are mainly held by individuals and not communities where states have pursued the policy of individual ownership. This is the case in Kenya for forest resources outside of gazetted forest areas.

As already mentioned, under colonialism, the vesting of rights to environmental resources in individuals or the State in many African countries removed the resources from the domain of the local communities who depended on them for a variety of services. For instance, wildlife provided a significant source of protein and forests were a source of medicinal plants for many communities. Once land was taken away, it ceased to be available for these purposes and could also not be used for cattle rearing (an alternative source of protein) leading to adverse nutritional implications.⁵¹ Thus, wildlife and products associated with it were no longer readily

available to the Africans who consequently had to depend on poachers to access those resources.⁵² Similarly, colonial policies placed great emphasis on the reservation of forests and their exploitation for timber production, paying no attention to the needs of the local communities in terms of fuel wood and non-timber forest products such as dead wood and medicinal plants. Independent governments continued this practice.

Generally, privatization had severe impacts upon the poor who rely on common property resources for most of their basic needs and often do not have alternative sources. The overall process had thus the tendency to increase inequalities both within local societies and between the colonies and the metropolises.⁵³

Breakdown of Solidarity

Equity has always played an important role in the management of environmental resources, both within a given generation and among succeeding generations. As the saying goes, 'lands belong to a vast family of which many are dead, few are living and countless numbers are still unborn'.⁵⁴ This saying underlines the importance of both intra- and inter-generational equity in African culture, concerns that have been raised in international environmental law discourses. Two broad principles guide sound trans-generational transfers of resources. Firstly, future generations should not be deprived of their enjoyment of the use of natural resources. Secondly, the quality of the environment should be maintained in such a way that short-term measures do not threaten the long-term sustainability and viability of the ecosystem.⁵⁵ Thus, in traditional property relations among the Maasai, a semi-nomadic, pastoral group found in Eastern Africa, the land is divided among clans in such a way that it constitutes a self-sustaining environmental unit. The Maasai move seasonally between low-lying plains and highland pastures depending on water availability. The use of low-lying plains during the wet season allows for the regeneration in the highland areas and thus sustains an ecologically balanced ecosystem. To ensure that a balance is maintained, the determination of claims to land by clans is predicated on the availability of water for herds during both the dry and wet season.⁵⁶

By removing the management of resources from community control, colonialism weakened the sense of trusteeship that prevented people from depleting resources and the regulatory intra-community structures that helped to control each user's harvest of the common resources. In many communities, the important role of elders and chiefs in the management of community resources through communal rules and traditions that had been passed down the generations was drastically reduced by land tenure policies and legislation that limited the involvement of communities in the management of natural resources.⁵⁷

Erroneously equating concepts of common property resources with that of open access, ensured that even where there was a local interest in maintaining those resources, the communities lacked the means to implement sustainable management principles. This was due to their lack of control over the resources and

because they were not recognized by colonial authorities as capable environmental managers.⁵⁸

■ The Post-Colonial Period

Today, natural resource management laws in Africa are part of an intricate web of international, regional and national legal norms. However, the conceptual and normative framework for environmental management established in the 19th century still draws largely from colonial laws and policies and little has been done to tailor domestic laws to the needs of African countries generally, and local communities in particular.

The impact of colonial rule in the field of natural resource management in colonized countries did not stop at independence. Many post-colonial governments continued along development paths charted out by their former colonial masters, and retained the legal framework established under colonialism, as the pervasive influence of governments in environmental management exemplifies. This has tended to aggravate the social and environmental impacts created by colonial laws. Continued emphasis on cash crop production for foreign exchange has, for instance, subjected African countries to the vagaries of international commodity price fluctuations.⁵⁹

At the local community level, independence did not entail the involvement of communities into the development process and the role of local people in the regulation of natural resources continues to be overlooked to date. Local people have therefore often come to see nature reserves as government property.⁶⁰ This tends to create antagonistic relations between potential users and government officials, and in many cases leads to the former encroaching on public gazetted forests to which they view their access as unjustifiably denied.

The retention of strong ties with former colonizers and other western powers has also had a significant impact on the resource use pattern in Africa. The increased privatization of resources that has occurred at the behest of western-backed multilateral financial institutions exemplifies this lingering influence.⁶¹ However, despite efforts at institutionalizing private property rights, communal notions of property holding have persisted in many parts of Africa even after independence. Moreover, the failure of law and policy to recognize and protect rights of communities has also impacted on the individuals' ability to enforce their rights in the face of competing claims to resources.

Another colonial legacy is the dominance of commercially and scientifically developed seeds which has progressively made the farming community in Africa more outward looking and dependent on external agricultural innovations, with little effort being made to harness the use of indigenous species and breeding activities.⁶²

Finally, the present political systems of many African countries have hampered their ability to mobilize political and national commitment to sustainable environ-

mental management through national laws and public policy. Unrepresentative and repressive systems of government have alienated the majority of the people, including those who live in critical biological diversity sites, while militarism and disintegration of the social fabric has led to widespread disillusionment.⁶³ Further, widespread corruption and mis-allocation of resources have been identified as stumbling blocks in achieving sustainable management, even where laws and policies exist.

Domestic Environmental Laws in Africa

Most domestic laws in post colonial states are a relic of their colonial past. They predate the rational management resource oriented laws that have gained currency in international environmental law, and do not include aspects of environmental management that have only recently come to the fore, such as climate change and conservation of biological diversity. In some countries, for instance, environmental management laws are formulated in line with natural resource sectors such as land, water, forestry, wildlife, minerals, with little cross-sectoral co-ordination. The laws relating to the management of natural resources in Kenya, for instance, were passed with wide-ranging objectives, including conserving natural resources and facilitating the use of those resources. The objectives are characterized by a strong utilitarian ethic, originally geared towards facilitating the conversion of sections of the country into a colonial economy, and an emphasis on state management and control of natural resources.⁶⁴

At the regional level, changes towards a more comprehensive approach of the management of environmental resources is evident in the work of the African Ministerial Conference on the Environment.⁶⁵ At the national level, there have been attempts at making national laws more favourable to environmental conservation.⁶⁶ Some of these laws have targeted communities and individuals as prime actors in environmental conservation. For example, the principle objective of the Zimbabwe Parks & Wildlife Act of 1975 is to confer 'privileges on owners or occupiers of alienated land as custodians of wildlife'.⁶⁷ This is a departure from the king's game concept, whereby the central state authority owns all wildlife and manages all conservation activities. It is an acknowledgement of the fact that efficient sustainable regimes of wildlife utilization are likely to be enhanced by local proprietorship.⁶⁸ Similarly, a new law on Wildlife in Uganda seeks to move away from state management of wildlife resources to community based and economically sound private management of resources.⁶⁹

The system of wildlife conservation established by Kenya's 1976 Wildlife (Conservation and Management) Act follows the classical model of establishing protected areas that exclude other forms of land use. The designated ecological zones are put under public control for the propagation, protection and preservation of wild animal life and wild vegetation. These zones should ideally be subject to minimal alteration or alienation for other forms of land-use activity. Policy documents have emphasized the need to optimize returns from wildlife

conservation while taking into account returns from other forms of land uses for specific ecosystems. Such policies allow for the co-existence of wildlife conservation and human activities but are yet to be reflected in legislation. The wildlife laws had previously sanctioned hunting with firearms. The laws were amended in the late 1970's when poaching threatened to eliminate certain species.

The Kenyan Forests Act 1982 provides the legal framework for the conservation of forests. Its fundamental technique is to vest exclusive control, through the gazetting process, in the government. Thus, under the Act, the government can declare forest areas as unalienated government land. Section 2 of the 1982 Forest Act defines unalienated government land as 'land for the time being vested in the government and not subject to a conveyance, lease or occupation licence and land that is not dedicated or set aside for the use of the public or declared a forest area'. In addition, a forest area can be gazetted as a nature reserve because of its unique flora and fauna, hence demanding special protective measures. The effect of these declarations is to exclude other forms of land-use activities and to vest monopoly rights of management in the state. The use of such areas for settlement, cultivation, grazing, hunting and the removal of forest produce or the disturbance of the flora is prohibited, save under a licence issued by the relevant authority.

The current practice of excluding other forms of land-use from gazetted forest areas may not, however, be sustainable in the long run, since it does not allow for the integration of farmers into forest areas. With increases in population, political pressure to convert portions of such areas for agriculture and settlement purposes has been mounting. While the 1982 Forests Act allows the Minister discretion to excise forest areas – and this has already been done to chunks of forest areas to satisfy the demands of adjacent populations – there have also been several instances of illegal conversions by populations bordering forest areas. The excisions of forest land by the government for grants to powerful politicians also negatively affects forest conservation and management, since it leads to the view that forests are open access areas and amenable to appropriation by anybody.

■ The Missing Dimension in Environmental Management in Africa

The emphasis on privatization of rights to natural resources in both colonial and post-colonial laws and policies has resulted in unsustainable environmental management practices. This can be explained partly by the exclusion of a role for communities in environmental management activities. It has been argued that the development of African environmentalism excluded native communities to a significant extent, leading to the domination of conservation ideas and activities by Europeans.⁷⁰ This western-based environmentalism has been

sustained by independent governments with minimal participation by grassroots communities.

The neglect and distrust of communities as capable environmental managers in the quest for economic efficiency ensures that even where communities previously managed their resources sustainably, their efforts were not acknowledged. In other instances, social, economic and political institutions of communities have been dismantled and their roles taken over by individuals and states.

The role of communities in environmental management has come under close scrutiny as the failure of individuals and governments has become more apparent. The regulatory framework should therefore empower communities to enable them to complement existing actors in natural resource management. Local communities have an important function in the establishment of sustainable management regimes because they often depend directly on the resources for their basic needs. Further, they live in close contact with their environment and thus know it intimately.

In areas where communal management has disappeared altogether, institutional and social networks based on proximity to natural resources need to be recreated. Some ways of doing this would be to train and facilitate the participation of all members of the community depending on their potential and actual roles in resource management. Where communal ownership has been replaced by private property, co-operative ventures between different property owners should be formed to ensure sustainable resource management overall.

In enlisting the participation of communities, it is important to recognize and protect their rights to the resources. Direct ownership by communities should, for instance, be acknowledged and protected under domestic and international law.⁷¹ Community ownership would draw on the mechanisms of self-regulation and minimize the need for direct state intervention, which in the majority of cases have fostered neither conservation nor development.

Conclusion

Natural resources are of the utmost importance for African countries. The local communities depend directly on their exploitation and extraction for their daily needs. This underlines the necessity to incorporate the needs of local communities in environmental management, which is currently lacking in the prevailing conservation and preservation ethos, whose origins can be traced to colonial times.

The internationalization of environmental concerns contributed to international law playing a central role in moulding colonial and post-colonial environmental management policies. While earlier international environmental agreements, such as the 1900 and 1933 Conventions, emphasized conservation measures by states that excluded human activity, recent developments point

towards the recognition of the need for greater involvement of non-state actors and an emphasis on integrated environmental management. Domestic law in African countries has generally been slow to accommodate this trend.

Laws and policies that exclude local communities as actors in natural resource management have proved inept at achieving sustainable and equitable results, as is evident by Kenya's wildlife conservation campaign. This points to the need to enlist community involvement and establish mechanisms to ensure self-sustenance of community activities in resource management.

Notes

1. In economic terms, Africa's share of world trade has, for example, declined from 3.8% in 1970 to 1% in 1989. See United Nations Development Programme, *Human Development Report 1992* (New York, Oxford University Press, 1992).
2. See René Dumont, *Pour l'Afrique, j'accuse - Le journal d'un agronome au Sahel en voie de destruction* (Paris, Plon, revised ed. 1993).
3. See Article 9 of the Décret portant réglementation sur la recherche et l'exploitation des mines dans les colonies et pays de protectorat de l'Afrique continentale, autres que l'Algérie et la Tunisie, reprinted in Adrien Carpentier, *Codes et lois pour la France, l'Algérie et les colonies - Lois et décrets* (Paris, Imprimerie et librairie générale de jurisprudence, 7th ed., 1903). See also Valentine U. James, *Resource Management in Developing Countries - Africa's Ecological and Economic Problems* (New York, Bergin & Garvey, 1991), 2 and Samir Amin, *L'Afrique de l'ouest bloquée - L'économie politique de la colonisation 1880-1970* (Paris, Les éditions de minuit, 1971).
4. See M.P.K. Sorrenson, *Origins of European Settlement in Kenya* (Nairobi, Oxford University Press, 1968).
5. 'Convention destinée à assurer la conservation des diverses espèces animales vivant à l'état sauvage en Afrique qui sont utiles à l'homme ou inoffensive', London 19 May 1900, in Felix Stoerk, *Nouveau Recueil de traités et autres actes relatifs aux rapports de droit international - Continuation du grand recueil de G. Fr. de Martens 430* (2nd series, Vol. XXX, 1904) [hereafter, 1900 Convention].
6. Nomsa D. Daniels, 'Protecting the African Environment: Reconciling North-South Perspectives', *Critical Issues*, 3 (1992), 12.
7. See Alexandre Giraud Jacques Antoine Merignhac, *Traité de législation et d'économie coloniales* (Paris, Librairie de la société du recueil Sirey, 2nd ed., 1925).
8. David Anderson and Richard Grove, 'The Scramble for Eden: Past, Present and Future in African Conservation', David Anderson & Richard Grove (eds.), *Conservation in Africa - People, Policies, Practice* (Cambridge, Cambridge University Press, 1987) 1 at 5.
9. Convention Relative to the Preservation of Fauna and Flora in their Natural State (London), 8 November 1933, in force 14 January 1936, 172 LNTS 241 [hereafter, 1933 London Convention].
10. African Convention on the Conservation of Nature and Natural Resource (Algiers), 15 September 1968, in force 16 June 1969, 1001 UNTS 3 [hereafter, 1968 African Convention].
11. See Simon Lyster, *International Wildlife Law - An Analysis of International Treaties Concerned with the Conservation of Wildlife* (Cambridge, Grotius Publications, 1985). See also Philippe Sands, *Principles of International Environmental Law I - Frameworks, Standards and Implementation* (Manchester, Manchester University Press, 1995), 388 noting that both the 1900 and 1933 London Conventions contained provisions and techniques for international conservation which are still found in modern treaties.
12. 1900 Convention, n.5 above.
13. Nomsa D. Daniels, 'Protecting the African Environment: Reconciling North-South Perspectives', *Critical Issues*, 3 (1992), 12.
14. See Lyster, n.11 above at 112.
15. See Articles II (1), (2), (3), (8) and (9) of the 1900 Convention, n.5 above.

16. See Article II(13) and (15) of the 1900 Convention, n.5 above. Examples of dangerous animals include lions, leopards, wild dogs and spotted hyenas; dangerous reptiles include crocodiles, poisonous snakes and pythons; and dangerous birds include all birds of prey except owls and vultures.
17. See Lyster, n.11 above at 113.
18. See Article VIII, IX and X of the 1933 London Convention, n.9 above.
19. Norman Myers, 'The Cheetah in Africa under Threat', *Environmental Affairs*, 5 (1976), 617 at 622.
20. Article X (1), 1968 African Convention.
21. Article II, 1968 African Convention.
22. Article VIII (1), 1968 African Convention.
23. Articles VI (1) (b) – (e), XII, XIII and XIV, 1968 African Convention.
24. Article XIV (2), 1968 African Convention.
25. See generally IUCN/UNEP/WWF, *Caring for the Earth – A Strategy for Sustainable Living* (Gland, Switzerland, 1991).
26. Article IX (1), 1968 African Convention.
27. Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington), 3 March 1973, in force 1 July 1975, reprinted in (1973) 12 ILM 1085.
28. Article II and XI of the African Convention, n.10 above.
29. Lyster, n.11 above at 126.
30. Edward B. Barbier, 'Community-based Development in Africa', in Timothy M. Swanson & Edward B. Barbier (eds.), *Economics for the Wilds: Wildlife, Diversity and Development* (London: Earthscan, 1992), 103 at 107.
31. Madhav Gadgil, 'On the Diversification of Common Property', in Fikret Berkes (ed.), *Common Property Resources: Ecology and Community – Based Sustainable Development* (London, Belhaven, 1989), 240.
32. Michael R. Dove, 'Center, Periphery, and Biodiversity: A Paradox of Governance and a Developmental Challenge', in Stephen B. Brush & Doreen Stabinsky (eds.), *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights* (Washington, Island, 1996), 41.
33. Vandana Shiva, *Ecology and the Politics of Survival* (Tokyo, United Nations University, 1991), 14.
34. John Quiggin, *Private and Common Property Rights in the Economics of the Environment* (Canberra, Centre for Resource and Environmental Studies, 1984), 23.
35. N.S. Jodha, *Common Property Resources – A Missing Dimension of Development Strategies* (Washington, The World Bank, 1992), 31.
36. Jodha, n.35 above at 33.
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42. Kihika Kiambi & Monica Opole, 'Promoting Traditional Trees and Food Plants in Kenya', in David Cooper et al. (eds.) *Growing Diversity: Genetic Resources and Local Food Security* (London, Intermediate Technology, 1992), 53.
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44. E. J. Milner Gullan & Nigel L. Williams, 'Illegal Exploitation of Wildlife', in Swanson & Barbier (eds.), n.30 at 195.
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46. Chhatrapati Singh, *Common Property and Common Poverty – India's Forests, Forest Dwellers and the Law* (New Delhi, Oxford University Press, 1986), 14.
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51. Henri Nsanjama, 'Introduction', in Dale Lewis & Nick Carter (eds.), *Voices from Africa – Local Perspectives on Conservation* (Washington, WWF, 1993) 1 at 3.
52. 'Arrêté créant une réserve forestière en Casamance (Réserve de Baghanga)', 1615 *Journal officiel de l'Afrique occidentale française* 513 (1935).
53. N.S. Jodha, 'Common Property Resources and Rural Poor in Dry Regions of India', *Econ. & Pol. Wkly.*, XXI/27 (1986), 1169 at 1172.
54. Cited in Martin Chanock, 'Paradigms, Policies, and Property: A Review of the Customary Law of Land Tenure', in Richard Roberts & Kristin Mann (eds.), *Law in Colonial Africa* (1991), 61 at 64.
55. See Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (Tokyo: United Nations University, 1989).
56. See Njeri Karuru, 'Property Inheritance Patterns in Relation to Gender: A Study of Some Communities in Kenya' (26 March 1996) (mimeographed paper presented at the East African Regional Symposium on Common Property Resource Management, Kampala, 26-28 March 1996, on file with the authors).
57. Nsanjama, n.51 above at 3.
58. John Mugabe, 'Technology and Biodiversity in Kenya: Technological Capabilities and Institutional Systems for Conservation', in Anatole F. Krattiger et al. (eds.), *Widening Perspectives on Biodiversity* (Gland, IUCN – The World Conservation Union, 1994), 81.
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67. See Government of Zimbabwe, Parks and Wildlife Act, Act No.14 of 1975 as amended in 1982.

68. Simon Metcalfe, 'The Zimbabwe Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)', in David Western et al. (eds.), *Natural Connections – Perspectives in Community-Based Conservation* (Washington, Island Press, 1994), 161 at 164. See also Marshall W. Murphree, 'Decentralizing the Proprietorship of Wildlife Resources in Zimbabwe's Communal Lands', in Dale Lewis & Nick Carter (eds.), *Voices from Africa – Local Perspectives on Conservation* (Washington, WWF, 1993), 1 at 3.
69. See John Ntambirweki, 'The Common Property Regime in Uganda in the Context of the Emerging Environmental Law', presented at the East African Regional Symposium on Common Property Resource Management, Kampala, 26-28 March 1996, (on file with the authors).
70. Daniels, n.6 above at 14.
71. This has been proposed in Article 29 of United Nations Commission on Human Rights Sub-Commission on Prevention of

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