

Chapter 14

Status and Future Potential of Payment Schemes for Wildlife Conservation in Africa

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14.1 Introduction

This chapter is a review of Africa's 20 years experience in payments for biodiversity services. The multilateral, national policy, legislative and the theoretical underpinnings of market-based approaches have been discussed in relation to some selected cases across Africa where buyers, sellers and intermediary organizations have been identified. This chapter builds upon the premise that when biodiversity is treated as a land use outside protected areas and communities recognized, rewarded or benefit by pursuing particular practices that enhance species diversity and ecosystem resilience, conservation business will be seen as a rewarding enterprise rather than a form of paternalistic approach constraining and limiting opportunities available for rural farmers to meet their livelihood needs as well as environmental goals.

Over the years the state of ecosystems and their services (i.e. benefits freely obtained from nature such as watershed protection, biodiversity conservation, scenic beauty, greenhouse gas mitigation, nutrient cycling and retention) has deteriorated due to population growth and urbanization processes. Degradation processes have constraint environmental services valued by both local residents and external users. This has also been linked to the inability of rural communities in Africa meet the constituents of well-being: to be adequately nourished, remain healthy, consume safe drinking water, and most importantly, earn a secure livelihood. Paradoxically, man has been both an agent and a victim of ecosystems' degradation. In response states have formulated and implemented stringent environmental laws, which have

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advanced segregative approaches with some areas used for intensive agriculture and other areas robed off for conservation. Initiatives have been biased towards promoting increased production of provisioning services² to meet increased per capita consumption and ignoring the potential value of those ecosystems as habitats for biodiversity. Recently there has been a shift of focus to forest related environmental services, biodiversity inclusive either because they are degraded or lost at unprecedented rates.

Biodiversity conservation approaches and the perceptions developed by rural communities during the pre-industrial, industrial and post-industrial epochs are seen as key factors influencing the state of biodiversity and associated services across Africa. Societal norms and regulations continuously shape the interactions between local communities and biodiversity. The use of stringent laws to manage the interface between people and biodiversity has not reduced the tide of biodiversity loss. This can be attributed to the failure to adequately understand the inherent complexity and uncertainty of dynamic processes within the interface between protected and adjacent agricultural landscapes. Poor understanding of ecosystem processes and failure of previous interventions (e.g. protectionism, community participation and integrated development projects) have continued to be the impetus for new and innovative approaches. Recently, payment for biodiversity services has been seen as a promising approach that can: i) raise conservation finance; ii) alleviate poverty; iii) improve biological diversity; iv) reduce human-wildlife conflicts; v) enhance the ability of future generations to benefit from biodiversity services and vi) provide a platform of negotiation between wildlife managers and community members and a more effective and integrative conservation approach.

14.2 Brief Overview of Wildlife Conservation Approaches

In Africa the nature and status of biodiversity conservation depends on the commitment of states to balance ecological, social, economic and political objectives. These are further dependent on the impacts of previous command-and-control biodiversity conservation approaches on societal perception (Ferraro and Kiss, 2001). Conservation proponents argue

² Food, water, timber and fiber

that the failure to identify, characterize and fine-tune traditional and regulatory approaches results in conflicts between communities living adjacent to protected areas and the state. Sharing of wildlife benefits with communities living adjacent to protected areas and the promotion of integrated conservation and development projects have neither resolved human-wildlife conflicts nor balanced social and conservation goals (Kellert *et al.*, 2001; Wells *et al.*, 1999 and Brandon *et al.*, 1998). Ferraro and Kiss, (2002) argued that integrated projects, despite their attractiveness are more expensive relative to innovative payment schemes for biodiversity services.

Through integrated projects, donors provided funding for maintaining a given area in a pristine natural condition, promoting an increase in the number of endangered species; or reducing pressure on parks without influencing how such activities are to be implemented. This failed because there was no sustained financing for participating households. Tax incentives, targeted subsidies and access to specialized niche markets have also been used to promote biodiversity conservation. This however, requires correct design of incentive systems to correctly ensure that they do not have perverse impacts or that ‘free riders’ are excluded from the ‘system’. Due to the failure of community-based models, “new conservation approaches” have been implemented: utilization through extraction and marketing of biological products; utilization through marketing of biodiversity within relatively intact natural ecosystems; subsidies or other compensation for adopting reduced-impact land uses, direct payment for environmental services other than biodiversity conservation and direct payment for the service of maintaining natural habitats for conserving biodiversity (Pagiola, *et. al.*, 2002).

Kiss (1999) observes that project approach focuses on activities rather than results thus establishing perverse ‘donor-recipient’ mentality. As a result ecosystem protection is slowly drifting towards the adoption of pro-poor market based approaches. Pro-poor market-based approaches are widely viewed as having the potential to: i) defray conservation costs; ii) recognize the fact that the rural poor bearing the costs of co-existing with biodiversity; iii) meet social objectives and iv) match the demand of environmental services with the short-term demands of land users within agricultural landscapes. In order to catalyse adoption of

market-based approaches, lessons, experiences and knowledge gained from existing ecotourism-based schemes need to be synthesized.

14.3 Payments for Biodiversity Services

The 2003 World Parks Congress meeting emphasized the need to protect biodiversity beyond the boundaries of protected areas. The congress recommended the use of payment for environmental services approach to achieve the twin goals of poverty reduction and biodiversity conservation. These were meant to encourage landowners to pursue conservation with payment by adopting land uses that will neither promote biodiversity loss nor its degradation (WPC, 2003 and Pagiola, 2004). The question that continues to elude many is, what should the farmer be paid for? Is it for adhering to minimum legislative requirements or for foregoing rights to pollute/damage or their adoption of better-farming practices that are above and beyond what the law demands of the farmer? Should we reward people to obey the law or provide reward mechanisms that the land users self-select themselves into? Either way, reward schemes need to ensure that the farmer understands private and social costs and the potential benefits of adopting a particular intervention and his/her obligations in order for payment to be made. This is however complicated by legal and property rights related bottlenecks. Landowners adjacent to forests, however, view the off-farm impacts of their land uses as ‘externalities’ and they rarely consider them in their land use decisions. As Powell *et al.*, (2004) puts it, advocates for market approaches believe that capturing the financial value of forest services for example, will promote good stewardship and discourage more degrading uses of forests. The utilization of biodiversity within relatively intact natural ecosystems can contribute to biodiversity conservation if it is the only alternative to land transformation. However, biodiversity utilization of income obtained through wildlife related projects, for instance, may not guarantee biodiversity conservation. Kiss (2002) concludes that the incentive of income from wildlife is however not sufficient to overcome the bias towards farming as the primary source of livelihoods.

14.4 From Theory to Practice

Despite the attractiveness and the potential for payment schemes for biodiversity conservation, they are likely to be affected by unclear property rights, huge transaction costs and the potential implications of perceiving most of the environmental services as gifts of nature. Other challenges, which affect payment schemes for biodiversity, include limited capacity, un-enabling policy environment and the transitory nature of wildlife. Contextual factors, nature and extent of the interaction among buyers, sellers and intermediary organizations influence the functioning and longevity of any scheme. However, the scope of conservation activities at the community level is in most cases limited by the existing legislative frameworks, customary laws, capacity and financial limitations. Given this context the requirement of conditionality and promotion of synergies among different stakeholder activities could present challenges to innovators of payment schemes for wildlife conservation.

Wunder (2005) argues that a payment scheme is: a voluntary transaction where; a well-defined environmental service (or a land-use likely to secure that service is being 'bought' by a (minimum one) buyer; from a (minimum one) environmental service provider; and if only the provider secures provision (conditionality). Payment schemes exhibit a quid pro quo characteristic where a service provider gets paid only when he provides a well-defined service and that the service user is satisfied with service provided. In some cases the farmer benefits twice-especially where he or she uses the land set-aside as a foraging zone. It is however worth appreciating other un-quantified costs of livestock foraging with wild game like Wildebeest or from those who are unsatisfied or not participating in the payment scheme. This can be shown using a stylised diagram (Figure 1):

In figure 1, land users receive few benefits from wildlife conservation relative to those from alternative land uses such as pasture for livestock. Use of land for livestock grazing, uncontrolled hunting of wild game for bush meat and elimination of problem animals like cheetahs, leopards and Lions translates to huge losses of foreign exchange from tourism activities. This reduces government revenue and causes ecosystems' instability.

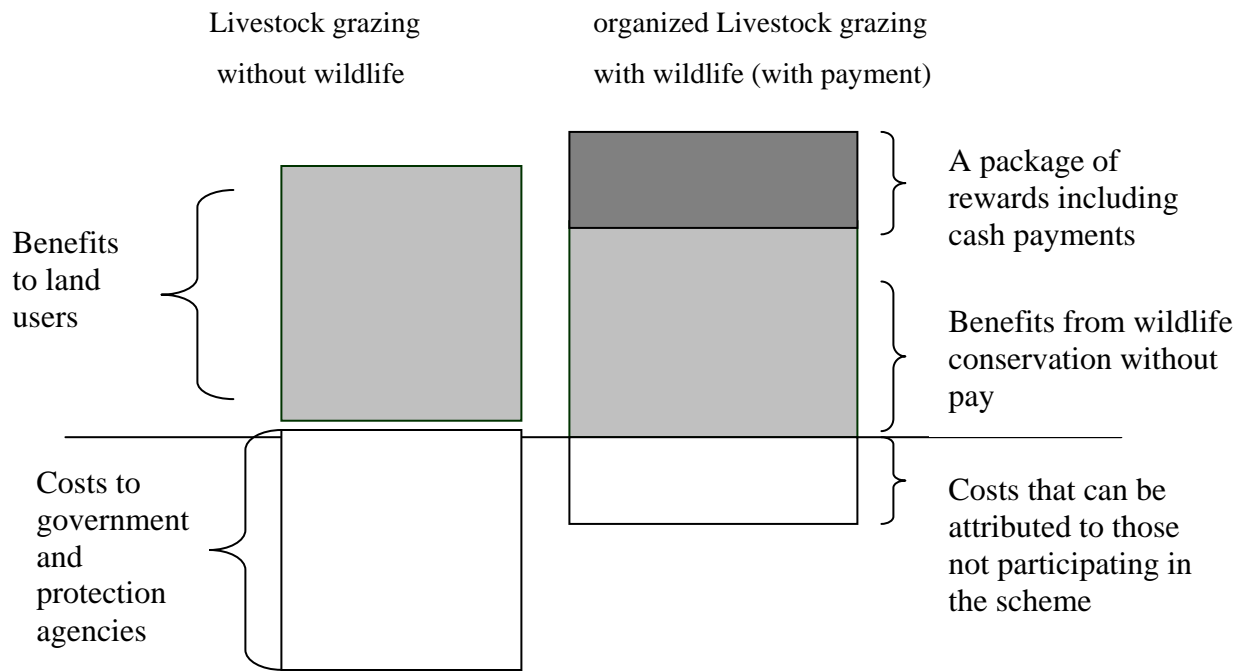


Figure 1: Logic of a PBS scheme within a pastoral setting (Modified from Pagiola, 2006)

Meine van Noordwijk (2005) argues that the most important positive impact that rural communities' can have on biodiversity services is reduction of threat factors³. Man's perception of his role on the control over elements that come with the territory leads to decisions, which negatively or positively affect biodiversity. Maintaining connectivity between protected areas and agricultural landscapes is a challenge as landscape transformation expands into rangelands and forests where most fauna and flora are found. Land use and community dynamics affect the current status and future potentials of biodiversity conservation projects. Rural communities have control over the elements of the territory and therefore exploit the existing natural capital and properties, which come with the territory to meet social and economic objectives. The sustainability of use will depend on the efforts made to ensure that there are no threats and that connectivity between landscapes continues to be promoted.

³ Disturbance of reproductive cycles, habitat loss, over harvesting, pesticide pollution and the impacts of introduced invasive species.

14.5 Case Studies of Payment Schemes for Biodiversity Services across Africa

Over the last 20 years, Africa has accumulated some experience on reward schemes for biodiversity, particularly in the form of ecotourism programmes such as the CAMPFIRE programme in Zimbabwe, community conservancies in Namibia, and group ranch ecotourism in pastoral areas (Il Ngwesi Group Ranch, Shampole Community Trust and Wildlife Lease Program) of Kenya. Despite these experiences, information on the evolution and current status of such projects is inadequate. ICRAF-led scoping study on compensation for ecosystem services (www.worldagroforestrycentre/themes/es) indicated that most PES schemes in Africa are biodiversity projects. This is attributed to the existence of ‘mega fauna’ in Africa’s Savanna grasslands that have sustained international tourism. Dispersal areas adjacent to protected areas regularly visited by tourists are threatened by land use change and are being sub-divided into small land units for either agriculture or settlement. These have raised a lot of concerns both nationally and internationally. Market-based approaches have not only promoted landscape connectivity, but have improved the living standards of rural communities and facilitated wildlife movement between dispersed landscapes. Governments, conservationists, intermediary organizations and local communities have shown that the treatment of wildlife as a land use could promote the achievement of ecological and socio-economic goals.

The continued presence of ‘mega-fauna’ in African savannas is an impetus to the change of the levels of eco-tourism contributions to the gross domestic product (it is ranked third in Kenya). Local communities however, rarely benefit from such earnings. In places where local communities are actively participating and benefiting from tourism-based enterprises, biodiversity conservation and ecosystem resilience has been reported to have greatly improved. This has been possible in some of the group ranches where land is communally owned. In agricultural landscapes, protected areas are under pressure because the thinking of most farmers’ is influenced by short-term economic interests, while the benefits of biodiversity conservation are long-term, indirect, diffuse and not benefiting immediate

landowners. The failure of government and wildlife managers to balance the farmers' interests with conservation has affected agro-biodiversity.

In arid and semi-arid areas in Zimbabwe, Kenya, South Africa and Namibia, communities have been engaged in the protection and provision of biodiversity conservation services. Such biodiversity conservation initiatives are either community driven or joint initiatives between government and rural communities. In South Africa, 150 sites totalling 215,332 hectares have been registered by the natural Heritage Program for conservation protection (Kiss, 2002). Group ranches in Kenya, after realizing the value of nature-based tourism adopted best land use practices that led to increased number of wildlife within their ranches. Payment for biodiversity services in Il Ngwesi Group Ranch was driven by: i) the potential short-and long-term impacts on vegetation regeneration and return of wildlife, ii) income from nature-based tourism and iii) positive leakage effects from other experiences⁴. So far 6500 acres of communal land is used as a conservation area. Controlled grazing and improved security have enhanced human-wildlife co-existence, reduced poaching, increased investment in water supply infrastructure for both wildlife and human consumption; improved education opportunities for members' children and safer wildlife areas. The return of wildlife has provided a worthwhile experience for tourists and hence increased earnings for the Group Ranch. Ecotourism based activities (e.g. the Group Ranch's Ecolodge) provides income and employment opportunities for members (500 members have benefited). This project has gained popularity and recognition land tenure complications associated with communal land have been overcome. The project has had short-and long-term impacts: i) tightly controlled grazing has led to regeneration of fauna and flora; ii) a community eco-lodge has been built and provides direct benefits to the community through jobs, and the income from the lodge supports 500 households that belong to the group ranch; iii) lasting ecological impacts for both the people and the ecosystem; iv) Promoting innovation and replication of the same approach in other places; v) Promoting leadership and community empowerment; and vi) achieved gender equality and social inclusion.

⁴ Borana Group Ranch and Lewa Conservancy

The evolution of the Il Ngwesi scheme can be attributed to bonding capital, external influences and land degradation impacts from increased numbers of livestock. It may not be a classical payment scheme, but it offers lessons that can inform the design of reward schemes for biodiversity conservation. Nairobi National Park (NNP) is the only park in the world located 20km from a city centre. As the city expands the park gets under immense pressure. Most of the dry-season grazing areas have been converted into human settlement (e.g. Ngong Forest) and remaining dispersal areas are under threat from urbanization and the need for housing to meet the shelter needs for the 4 million Nairobi residents. Currently, dispersal areas to the south of the Park (Kapiti Plains and Kitengela) are under immense pressure from the expansion of Nairobi City and change of land use within the Kitengela area.

Kitengela and Kapiti plains connect NNP to the Serengeti Ecosystem. The Kapiti plains have been treated as a group property until 1987 when it was subdivided and titled. This gave land users the authority to decide what to do with their land. Due to the area's proximity to Nairobi City, land market developed and catalysed the sub-division of communally owned land into quarter plots and sold to private developers who are profit-oriented. Increased populations, fencing of private property and urbanization have therefore reduced the connectivity between Nairobi National Park, the larger ecosystem and Serengeti. Given the potential impacts of this loss of connectivity, an innovative mechanism for compensating people for limiting fence construction and keeping their land open to wildlife in Kitengela was started in 2000. Intermediary organizations, which got involved in its design and establishment included Friends of Nairobi National Park, the African Wildlife Foundation, Africa Conservation Centre, International Livestock Research Institute (ILRI) and the Wildlife Trust of America.

Currently, there are 117 participating families and 8500 acres of land are under the lease program. In the case of poor households, the income obtained for participating in the lease program constitutes more than 80% of their gross income during drought years. In return for agreeing not to fence, quarry, cultivate or subdivide the designated area of land, and to actively manage their land for wildlife and sustainable livestock grazing, they are paid US\$ 4 per acre per year. This arrangement is formalized through a written contract between the individual landowner and the Wildlife Conservation Lease program. The average participating

household earns US\$ 400-800/year. Payments have been used mostly to support education of children coming from the participating families and are one of the reasons for its strong success. Most of the income is managed by women and mainly used to pay school fees for Maasai girls. The project has illustrated that:

- i) There is a strong link between direct financial payment and conservation;
- ii) Timing of payment to land users has the potential for yielding high economic and social benefits;
- iii) Payment plus livestock earnings are strong disincentives for crop farming;
- iv) Use of community 'champions' improves the success of the scheme; and
- v) The mechanism requires an information database for organizing and running the project.

Modalities for facilitating the participation of households in the lease program, monitoring and evaluation include: i) surveying the land to confirm that it lies within the primary wildlife dispersal areas; ii) checking titles to verify land ownership; iii) estimating exact number of acres to be considered for the lease program; iv) payment fees in three tranches; v) field representatives of the African Wildlife foundation are based in the field to monitor compliance; vi) program's statistics and payments are recorded; vii) a collective forum (Kitengela Ilparakuo Landowners Association) facilitate greater community participation and discussion of issues and viii) formalizing contractual agreements is strictly between the Wildlife Foundation and individual landowners and households.

The upfront funding for the design, implementation and operationalization of the lease program was provided by the Wildlife Trust of America. This affects the program's sustainability because alternative sources of funding have not been explored. The possibility of Nairobi residents funding the program is being explored by the International Livestock Research Institute. The chances of its success are minimal because of the low values that Nairobi residents attach to wildlife. Additionally, many specialists argue that the levels of current payments are very low. This may not be good enough to sustain the program.

Il Ngwesi Group Ranch and Wildlife Lease program although having evolved along different pathways, emphasize the adoption of best land use practices in order to either attract wildlife or promote floral regeneration. Il Ngwesi Group Ranch is viewed as being sustainable because of investment in ecotourism-based facilities, community's culture of promoting collective action and existence of strong local organizations and community regulations relative to the wildlife lease program.

The interface between forest ecosystems and rural communities living within forest margins and the interplay with stringent laws has always been seen as a source of problems. Kipepeo project has used rewards/payments to balance forest conservation and the interests of rural communities. In 1993, the East Africa Natural History Society and National Museums of Kenya initiated the Kipepeo project to address wildlife-human conflicts and population pressure on Arabuko/Sokoke forest. Initial funding was received from United Nations Development Programme (UNEP) (US\$50,000), Global Environment Facility (GEF) (US \$25,000), Brookfield Zoo (US\$4,000) and IUNC Netherlands (US\$57,000). The project was aimed at linking conservation and development through sustainable utilization of butterfly biodiversity for the benefit of surrounding rural communities. Since the inception of the project 152 households from Roka, Matsangoni, Mida and Mijomboni have benefited from the project. Participating households have organized themselves into 8 self-help groups, each with 2 representatives who are now licensed to collect butterflies from the forest. The self-help groups have established parallel project-producing pupae for export. Revenues obtained by selling pupae have improved people's livelihoods. The success of the project is however affected by seasonality, cash flow problems and difficulties associated with export trade. The likely de-gazettement of the Kararacha Forest is likely to undermine the project and initiative by rural and forest dependent communities.

Zimbabwe's Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) provides knowledge, skills, lessons and experience for the design and adoption of payment schemes for biodiversity. CAMPFIRE approach is premised on the belief that unless people who live adjacent to wildlife benefit from such a resource, they may adopt other land uses, which will replace wildlife in the long-run. CAMPFIRE focused on the long-term

development, management and sustainable use of natural resources (wildlife, woodlands, water and grazing) in the communal farming areas of Zimbabwe. It promoted sustainable use for wildlife as a source of income for local communities. Political interests and tensions persisted between the period of legislative change (1982) to the time of formal articulation (1986) and its implementation (1989-1991). The government devolved authority to the level of District Councils which were responsible for distribution of revenues collected to: i) rural communities (not less than 50%); ii) wildlife management (habitat management, fire control, monitoring, hiring of game scouts) (35%); and iii) District Council retains 15 % as administrative levy. Modes of commercialisation promoted through CAMPFIRE included concession to safari; joint-venture partnerships and locally controlled enterprises. Murombedzi (1999) observes that substantial income accruing to farmers from CAMPFIRE were instead used to expand agriculture into wildlife areas reducing land available for conservation purposes and this could potentially affect the programme.

CAMPFIRE main actors include producer communities; the District Councils; eco-tourism operators and CAMPFIRE Collaborative Group comprising the academia, government, and non-governmental organizations. Others include USAID, which contributed \$28million between 1989 and 2003 to support the formation of CAMPFIRE (Child *et al.*, 2003). Appropriate policies were also instituted for the implementation of the CAMPFIRE approach. Under CAMPFIRE safari operators buy the rights to bring sport hunters or eco-tourists into concession areas either to hunt a set quota of animals, or to track, observe and photograph animals, or simply to enjoy the scenic qualities of the area. Frost and Bond (2002) analysed CAMPFIRE project in light of market-based approach and concluded with eight lessons for PES innovators: i) form should follow function, ii) objectives can change, iii) be flexible, iv) recognize the complexity of the institutional landscape, v) success and failure are relative, vi) complexity can be distracting, and vii) High uncertainty increases transaction costs as important lessons which can inform the design or scaling up of payment schemes in Africa.

In South Africa, land management and administration has over the years affected biodiversity conservation and reduced the potential benefits of biodiversity to rural communities. Political changes, land redistribution process and empowerment of local communities are expected to

promote the use of biodiversity to reduce poverty and diversify of livelihoods. Two cases that depict these scenarios are: where rural communities have been granted tenurial rights (Makuleke) and where they have not (Manyeleti). Manyeleti Game Reserve is located in the Northern Province and bordered on three sides by Kruger National Park, the Sabi Sand and the Timbavati. The government made concessions available to the private sector and facilitated private sector investment in tourism facilities. Concessions involve invitation of bids, their evaluation and awarding of concessions. Implementation of the concession and associated conditions is done with support from the Phalaborwa Spatial Development Initiative. The concession agreements are for five years and can be renewed only once. This discourages the investor from providing tourist products of good quality. The concession is entered between the former Ganzankulu homeland government and the private developer. In order to achieve key policy objectives concerning tourism, job creation, economic empowerment, land reform, land rights and good environmental management, the government enters into agreement with tour operators on behalf of the people. Environmental management is provided for in the National Environmental Management Act of 1998. The members of the local community however do not receive direct benefits from the commercialisation of the Reserve because such a decision is made by parliament. Funds collected go to a central pool and parliament would decide how the funds would be used. This is injurious to the commercialisation program. In this deal, the government as landowner remains the principle contracting party and simply makes development rights available to the private sector on concession basis. Until formal land rights are established, the neighbouring communities have no legally enforceable claim to the concession fee. There are therefore, minimal direct benefits from such a concession process, except employment for the members of the local community. On the other hand, Makuleke tourism initiative is different from the Manyeleti experience because it is a community-based initiative that resulted from land acquisition by the community through South Africa's land restitution process. Makuleke community has invested in tourism activities after acquiring full land rights. The community has developed 7 high value game lodges. This was necessitated by the Corridor Company, the Community-Public-Private Partnership (CPPP) and other donor organizations. In these two cases, wildlife is the main biodiversity resource but exhibiting tenurial differences. Unlike CAMPFIRE, Manyeleti and Makuleke community-based projects are in their inception phases.

Namibia has successfully integrated wildlife land-use options into the livelihood, development, and conservation strategies of Namibian communities through the establishment of conservancies. This was necessitated through Namibia's Government Notice No. 151 on Promulgation of Nature Conservation Amendment Act of 1996, which granted rights of ownership over huntable game, to revenues from the sale of game/ products and rights to tourism to the local communities. The Act also provided for the requirements that a conservancy must meet. According to the legislation, conservancies require: i) defined membership, ii) a representative management committee, iii) a legally recognized constitution that makes provision for the development of a wildlife management strategy and an equitable benefits distribution plan; and iv) defined boundaries. The granting of these rights by the government led to the growth of conservancies from 7 in 1998 to 29 registered in 2003 while participating households increased to 60 (WWF *et al.*, 2002). The spirit of the creation of conservancies was well expressed by President Sam Nujoma in 1998 during the launch of community conservancies as:

“Instruments of empowering local people to make their own decisions about their resources, while enabling them to benefit from these resources. Conservancies should be seen as creating an institutional infrastructure in helping to diversify rural economies”.

Some of the principle tools that have been used to acquire land for conservation purposes are land purchases, easements and land leases. However, land acquisition for biodiversity conservation purposes is limited in Africa unlike in Latin America. This can be attributed to problems related to land law and land tenure. In some countries, land has been acquired for biodiversity conservation purposes. Kiss (2002) cites cases of land acquisition for conservation and includes:

- i) acquisition of the title to the Manyara Ranch (adjacent to Lake Manyara National Park) by Land Conservation Trust so as to enhance the use and benefits to the community while maintaining critical wildlife corridors;

- ii) Acquisition of land by the Wildlife Trust through negotiation with the local Maasai landowners to maintain vital wildlife migration corridors south of Nairobi National park; and
- iii) The making of contractual arrangements between South African National Parks and private, communal or municipal landowners to incorporate their land into national parks (e.g. Richtersveld National Park which is 100% contractual park, the Cape Peninsula National Park and the Agulhas National Park).

In Burkina Faso, under a recently approved GEF-financed project (PRONAPE), local communities are expected to become concessionaires on government-owned land in exchange for good land stewardship (Kiss, 2002). The participating communities will contract with safari hunting and tourism operators to earn revenues. The project will provide direct payment for land stewardship into a community trust that can be source of funding for promoting particular land use practices.

Table 1: Summary of some biodiversity projects examples in the region

Project name, unique characteristics, date started and evolution	Biodiversity-related environmental services provided and practices	Supplier (Service modifier)	Buyer (Service demanders)	Instruments adopted to effect the mechanism	Impacts of the mechanism	Payment	Cultural/policy context
<p>IL Ngwesi Group Ranch (1996)</p> <p>-A partnership</p> <p>-Locally build</p> <p>-Innovative & transferable</p> <p>- Exhibits leadership, empowerment, gender equality and social inclusion.</p> <p>-. Evolved out of the experiences of Lewa and Borana experiences</p>	<p>-Grazing is tightly controlled, hence regeneration of flora and fauna,</p> <p>-Wildlife always return, hence visitors to the Il Ngwesi Lodge.</p> <p>-Income to the community.</p> <p>-Water is provided for both livestock and wild game.</p> <p>-Security is provided by Group Ranch</p>	<p>-Il Ngwesi community who have organized themselves into a membership Group Ranch and pursued best land use practices</p> <p>-Group Ranch members jointly developed and provided eco-tourism based enterprises and services</p>	<p>Tourists and the public</p>	<p>Payments by tourists who visit the Ranch to view wildlife</p>	<p>-Regeneration of flora to attract back wildlife, hence tourists</p> <p>-Increased income for members</p> <p>-Employment opportunities</p> <p>-Provision of education to the girl child</p> <p>-Gender equity and empowerment</p>	<p>-Sharing of benefits based on income earned,</p> <p>- Many girls have been facilitated to go to school and others offered employment</p>	<p>-Wildlife Management Act (Cap.376) – ACT supports large-scale ranchers</p> <p>-Maasai culture promotes collective action</p> <p>-Lack of policy on rangeland resources</p>
<p>CAMPFIRE</p> <p>Started in 1980</p> <p>Reference: Frost and Bond, 2005</p>	<p>Adopted wildlife management as a land use in fragile and wildlife habited rural areas and in large-scale ranches-</p>	<p>Rural communities, safari operators/companies</p>	<p>Zimbabwe sport hunters, tour or safari operators</p>	<p>-payments made through an intermediary government agency</p> <p>-concession, -leases and</p>	<p>-Pursue of biodiversity conservation as a land-use</p> <p>-Increases income to communities (50% goes to</p>	<p>-RDCs provide overall coordination of buyers & sellers</p> <p>-50% of income</p>	<p>1975 Parks and Wild Life Act, diverse culture and political upheavals-</p> <p>CAMPFIRE has transformed itself and has</p>

	promoting sport and trophy hunting			-trophy fees	communities) - Trophy hunting to achieve carrying capacity -Not allowing cultivation	obtained go to participating households -Tourism enterprises provide employment to local communities	been resilient despite political upheavals in Zimbabwe
Direct payments as a mechanism for conserving important Wildlife Corridor links between Nairobi National Park and its Wider Ecosystem: The Wildlife Conservation Lease Program	-Dispersal area for dry season wildlife grazing -Conservation Management Practices: No fencing, quarrying, cultivation or subdivision and management of land for Wildlife migration and grazing	The Local Landowners-local communities living within Kapiti Plains dispersal areas and wildlife corridors	Friends of Nairobi National Park, African Wildlife Foundation and Kenya Wildlife Service	For agreeing not to fence, quarry, cultivate or sub-divide their land for housing development the landholders are paid	-Induce landowners to leave their land for wildlife grazing (use the same to graze livestock as well) -Improved income levels -Reduce human-wildlife conflicts -Capacity building	-Direct cash payments to participating households (4\$per acre) -Average household earns between 400-800\$ per year -Paid three times a year- a week to beginning of every school term	Policy and regulatory 'terrain' is contradictory because of the several laws operating within the project: Wildlife Act (Cap.376) Agric Act (Cap.318), EMCA, 1999
Community Based Natural Resource Management (CBNRM) of Namibia and is strongly supported by the	-Adoption of wildlife as a land use and hence increase in nature-based tourism -No grazing or controlled	Rep. Governance Bodies formed by the communities, NASCO, MET, WWF, USAID & DFID -NASCO is the main intermediary	-Tourists -Rights to bring sport hunters are sold to tour or safari operators Funding:	-Payments flow through NASCO; -Direct payments and extension services for group	-Improved ecological and wildlife management -Poverty reduction -Improved governance at	-Tour operators, Hotels lease land from community and then sell biodiversity services to	Framework for establishing conservancies were legislated in 1996

government. Started in 1996	grazing within conservancies -Controlled hunting within conservancies	organization	WWF, USAID & DFID	members -Indirect payments through employment opportunities & tourism related enterprises -Is a more sustainable project	different scales	tourists -Tourism enterprises provide employment	
Arabuko / Sokoke Kipepeo Project Started in 1993	-Protection of butterflies' habitat -Collection of butterflies and rearing of pupae	Local community (from Roka, Matsangoni, Mida, and Mijomboni)	Pupae is sold to Europe -Tourists who enjoying watching birds, and monkeys	-Payment for butterfly collection, pupae rearing and eco- tourism activities	-Inducing households to value, collect, and rear butterflies & protect forest ecosystem -Increased household income and empowerment	A dollar per pupae (sometimes paid on delivery or after exports to Europe)	Forestry Act 2005; Water Act, 2002, Agriculture Act (Cap 318) and EMCA, 1996. ACTS either synergise or contradict one another.

14.6 Payments for Biodiversity Services: Context of Multilateral Agreements

The ‘Convention on Biological Diversity’⁵ was negotiated under the patronage of the United Nations Environment Programme (UNEP) and opened for signature at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in June 1992. All member countries, Kenya included were required to take measures to ensure that the goal of biological conservation is achieved through coordination and cooperation between international governments and their respective civil societies. The Convention calls for adherence to, and the fulfilment of, the basic prescriptions on the part of all participating parties⁶ which include: the development of national policies and legislation that uphold the cause of sustainable resource use; the establishment of protected areas and conservation facilities; the creation of training and research programs, as well as the promotion of public education in the field of biodiversity preservation; promotion of biotechnology transfer and international informational exchanges; enhancement of international cooperation between the developed and developing countries in terms of access to their genetic resources for environmentally sound uses and supply of scientific and financial support to each other.

The three pillars of the CBD are conservation, sustainable use and benefit sharing. Benefit sharing approaches are mainly aimed at local communities’ benefiting from genetic resources and other components of biological diversity as echoed by the Convention:

“...as far as possible and as appropriate, adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity.”(CBD, 1992)

The Convention however pursues a narrow approach for sharing of biodiversity resources. A broader approach will not only encourage benefit sharing, but promotion of pro-poor market-based instruments to provide a framework for sharing resources. Governments are expected to collaborate with the private sector, research institutions, international organizations and local

⁵ ‘Biological diversity’ or biodiversity is defined as the variety and variability of all species of plants

⁶ Since 1992, over 175 countries have ratified the convention

communities to carry out national assessments on the state of biodiversity, develop national strategies to conserve and use biological diversity and conduct research into the benefits of biological diversity. States are also empowered by the Convention to adopt economically and socially sound measures that act as incentives. This is a policy window, which can be explored and used effectively for the adoption of payments schemes for biodiversity services. This will only be relevant if linked to other relevant conventions. Tapping into the CBD's financial mechanism as a source of funds for establishing a payment scheme, would provide opportunities to address the 'command-and-control' connotations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). A modest compensation obtained from conserving the habitat of an endangered species that is paid yearly is more lucrative than a one-time payment wrongly obtained by selling either a component of or an endangered species.

14.7 Policy and Legislative Terrain affecting Payment Schemes

Kenya's wildlife policy promotes conservation of wildlife in parks/reserves, wildlife sanctuaries and within trust, private or government lands, but does not recognize wildlife outside protected areas (Kenya Wildlife Service, 1996). Kenya Wildlife Service also has no control over land use changes outside protected areas. The Wildlife Management Act (Cap. 376) falls short in providing legal mechanisms for management of wildlife outside protected areas, effective management of wildlife populations to avoid ecological imbalances, subdivision of wildlife dispersal areas, provision of incentives for wildlife conservation and human activities on land with multiple uses. The lack of control of land use change has been a major challenge in the design of the Nairobi Wildlife Lease Program. Due to lack of a comprehensive land use plan, developments have sprawled within wildlife dispersal areas.

Despite the importance of rangelands and their associated resources, Kenya: i) does not have coordinated policy and institutional arrangements for rangeland resource management; ii) hasn't recognized traditional land use practices; iii) poorly enforces provisions of the Agriculture Act (e.g. cultivation on slopes and on fragile soils) and iv) frequent inter-and intra-community conflicts affect rangeland resources. There are also overlaps in the existing

legislation creating conflicts in law enforcement. The agriculture Act (Cap.318) advocates for more forestland to be brought under cultivation in order to meet food sufficiency targets. This conflicts with the Forest Act, 2005 and the Environment Management and Coordination Act 1999. These contradictions have influenced the operations of the Kipepeo Project in Arabuko/Sokoke Forest in Coast Province. However, there are beginnings of synergies between new environmental laws across Africa. Kenya's Water Act, 2002; Forest Act, 2005 and the Environment Management and Coordination Act, 1999 synergize one another in different aspects. These Acts recognize the importance of ecosystems in providing important ecosystem services and set provisions for their management. They provide for decentralized natural resource management and recognize the important role that incentive mechanisms can play in reverting resource degradation.

In Namibia, the government notice No. 151 on Promulgation of Nature Conservation Amendment Act, 1996 gave enormous rights to local communities to form, manage and benefit from wildlife conservancies. It also provided institutional structures for management of such conservancies at different levels. The Namibian Nature Conservation Amendment Act amended the provisions of the Act so as to empower local communities. The introduction of the 1975 Parks and Wildlife Act in Zimbabwe granted landowners the right to use wildlife on their own land. This was limited to large-scale ranches owned by Europeans. After independence the right to wildlife use was extended to cover communal lands. The Act was amended in 1982 to provide appropriate authority to local communities to utilize wildlife for commercial purposes. Additionally, the effectiveness of biodiversity projects is influenced by the degree of collective action or group dynamics.

14.8 Conclusion

Despite the existing inherent inadequacies of the schemes examined in this paper, they however provide opportunities and lessons for the design and establishment of more PES projects in Africa. They illustrate the untapped potential of rural communities in the management of biodiversity. Project innovators must be cautious not to raise any expectations at the initial stages of the schemes. The windows of opportunity provide by policy, interest

from donors and partners enhance adoption of payment schemes for biodiversity so as to achieve the twin goals of poverty alleviation and conservation.

14.9 Review Questions

- i) Although a payment for biodiversity scheme is voluntary, how can it be made pro-poor communities in Kenya?
- ii) Using practical approaches discuss how landscape approaches such as agroforestry can be mainstreamed in biodiversity conservation in Kenya?

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