

Findings

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Wildlife Economics : Case Studies from Ghana, Kenya, Namibia and Zimbabwe

Between 1970 and 1992, the World Bank assisted financially in about 15 wildlife-related projects in Sub-Saharan Africa. The lending volume was US\$ 368 million or about 1% of the Bank's total lending during the same period. While geographically, these projects have been concentrated in East Africa, especially Kenya, the others are located in Somali, Malawi, Botswana, Cote d'Ivoire, Zimbabwe, Ghana, the Central African Republic, Burkina Faso and Mali. Little, however, has been published on the economics of wildlife. A new study, *The Economics of Wildlife: Case Studies from Ghana, Kenya, Namibia and Zimbabwe* seeks to address this gap and outline the lessons learned. The case studies focus on 4 major themes : (i) the financial and economic viability of wildlife; (ii) the significance of wildlife as meat or "bush meat"; (iii) policy implications and (iv) environmental impact. Evidence in this last area, however, remains qualitative and anecdotal. A critical hypothesis of this study is that the property rights structure is a key factor in determining the choice between wildlife and livestock utilization.

Ghana

Prior to the 1920s, communities in Ghana managed their wildlife resources through traditional rules that protected some species and regulated exploitation. The establishment of protected reserves was introduced in the colonial era. New policies were introduced subsequent to independence to manage wildlife resources more efficiently. The increased demand for resources has led to the overexploitation of wildlife and extensive modification of wildlife habitats. About 70% of the country's original 8.22 million ha of closed forest has been destroyed, and the deforestation rate is put at 220 square kilometers (sq km) per annum. Most wild animal species

are believed to be seriously depleted and at least 18 of the 222 mammalian species recorded in Ghana are under threat. This current rate of exploitation forest and wildlife resources is unsustainable.

Findings and recommendations

Economic and financial analyses of the situation indicate that private wildlife ranching is superior to publicly-managed wildlife ranching in terms of profitability. Also, small-scale wildlife farming is more profitable than the large-scale option. Small-scale grasscutter (the most popular bush meat in Ghana) farming shows the best returns, followed by poultry and rabbit. The study suggests that support should be given to small-scale wildlife domesticated activity in terms of breed development, credit and technical information.

Encouraging such profitable activity would enhance the income-earning capability of most people and lead to a viable way of increasing the protein intake of rural dwellers, who constitute about 65% of the population of approximately 16 million.

The government adopted the Ghana Wildlife Conservation Policy in 1974. The main deficiencies of this policy were twofold : its strict protectionist approach and its failure to involve local communities in managing their wildlife resources. A revision of this policy is currently under discussion under the Government of Ghana/World Bank Forest Resources Management Project. The draft revised policy is based on the conviction that Ghanaians have the right to resources needed for a reasonable standard of living and the right to derive economic and other benefits from wild species. Greater emphasis is placed on conserving the country's wildlife resources for the benefit of local communities and the contribution that these communities can make towards the effective management of Ghana's wildlife resources.

Kenya

Conservation for conservation's sake was the primary goal of the colonial administration , as embodied in the Royal National Parks of Kenya Ordinance in 1945. This seemed to be reflected in the Wildlife Conservation and Management Act passed in 1976, more than a decade after independence. By the late 1980s, agency understaffing and poor management had contributed to reductions in the country's elephant and rhino populations by 85 % and 97 % respectively. Another major factor has been the country's high population rates, with some of the fastest rates of population growth in areas around parks and reserves. For example, there has been a 7% per annum population growth in recent years in the Masai Mara dispersal area. Further, one of the strongest threats to wildlife areas is the subdivision of communal land. The pattern of land tenure in Kenya is of conversion from communally-owned land , with open access for all community members, to private ownership (long-term leases, gazetted or commercial ranches, private title deeds.)

Findings and recommendations

In Kenya, there has been virtually no economic valuation of the costs and benefits of wildlife utilization. This study therefore fills, to an extent, some of the gaps. The Kenya experience

indicates that wildlife utilization is unlikely to be a competitive land use in agroclimatic zones with a high potential for crop production and livestock rearing. The report identified 4 specific districts where there should be focused efforts to conserve and utilize wildlife. The study suggests that cattle and other domestic stock be combined with other wildlife operations for maximum range use. A rapid and dramatic move to game ranching or cropping would overwhelm the market and is not realistic in terms of subsistence uses of domestic stock (in the case of pastoralists) and management capabilities on commercial ranches. Thus, strategies for enhancing returns using wildlife to complement livestock are likely to be the most successful. The Kenyan study further argues that the investment of returns from wildlife and tourism in job creation and social welfare projects has proved to be the most successful system of distributing revenues. Income paid in cash to group ranch management has not been wisely invested or equitably distributed. As regards bush meat, the study found no literature quantifying its consumption. It is, however, sold as a luxury item in butcheries. The Kenya Wildlife Service (KWS) had estimated a possible export demand for some 500 tons per annum, a figure much less than the potential production. This would also necessitate having more cropping companies (there was only 1 in 1989 operating on 3 ranches and producing approximately 45 tons of game meat per annum.)

The government's policy on wildlife management has recently undergone major changes with the pattern of land tenure changing rapidly towards privately-owned parcels of land on which the owner can influence the diversity and distribution of flora and fauna. KWS , however, is still establishing management systems and experimenting with wildlife utilization options. The study recommends that the government, and KWS, in particular, should consider more of a facilitating and less of a regulatory role with direct involvement.

Namibia

Much of Namibia's land is arid or semiarid and faces severe environmental pressures due to drought and overgrazing by livestock. The first game reserves were established in the then German colony in 1907. Since these areas fell outside the lands occupied by white settlers, the loss of access to these areas was felt most directly by the indigenous population. Under the 1967 Nature Conservation Ordinance promulgated under South African rule, commercial farmers (virtually all white) effectively gained full ownership of the wildlife on their farms. In contrast, hunting was officially prohibited within the designated communal areas. Increased population pressure, a succession of droughts and widespread poaching resulted in a decline in wildlife numbers. Independence in 1990 brought with it a new impetus for the conservation of wildlife. Presently, Namibia has, somewhat unusually, more than 90% of its wildlife, particularly larger mammals, located outside formally proclaimed conservation areas and mainly on agricultural land. About 80% of the larger game species are found on privately-owned commercial farms, which comprise 44% of the surface area of the country but accommodate less than 5% of the national population. In contrast, the communal areas, which comprise 42% of the country and which accommodate 67% of the total population, support around 9% of the larger game species. Statistics indicate a general increase in wildlife numbers in the commercial areas and a decline in the communal areas.

Findings and recommendations

The study indicates that wildlife utilization (combining tourism, hunting and game cropping) offers more favorable returns than commercial and communal livestock farming. However, the scope for outright substitution is limited. Economic factors explain some of this rigidity. Livestock farming in Namibia continues to be favored by policies that permit a large proportion of the costs to be borne by society as a whole. The study recommends the introduction of user charges and the limiting of tax advantages so that the true cost of owning livestock is borne by the owner. The study also highlights the fact that existing legislation presents an obstacle to communities that seek to realize gains in communal areas. Locally-cropped meat cannot legally be sold, nor can communities claim revenue from those who utilize it. Legislative reform is therefore imperative. The study also concludes that an institutional framework needs to be developed in which community representatives, private businesses, NGOs and local government can devise development strategies that effectively utilize wildlife resources.

Zimbabwe

Zimbabwe follows a policy of sustainable utilization and views all its mammals as renewable natural resources to be managed. From 1960, farmers were given permits to utilize and trade in wildlife. The Parks and Wildlife Act was implemented in 1975. It allocated full custodial rights over wild animals (except for "specially protected species") to appropriate authorities (landholders) while the animals were on their land. In the communal areas, where the land is formally owned by the Head of State, authority remained with the state, which became the wildlife custodian on behalf of the peasant farmers on communally-owned land. In 1988, legal control over wildlife resources was granted to districts who applied for it, provided they met specific requirements. In 1993, there were 12 communal lands in Zimbabwe with appropriate authority and more than 19,500 sq km of communally-owned land officially designated to include wildlife in the land use system and managed under CAMPFIRE (Communal Areas Management Programme for Indigenous Resources.)

Findings and recommendations

The study found it extremely difficult to ascertain the value of Zimbabwe's wildlife industry. The consumption of bush meat has been virtually ignored . The consumption of larger mammals is almost exclusively confined to isolated communities with high wildlife and low human populations. The contribution of the wildlife industry to the formal sector is also difficult to ascertain. Published statistics do not separate tourism or wildlife-based industries as a proportion of Gross Domestic Product.

The large sample study indicated that wildlife enterprises in the large-scale commercial ranch sector are often more financially profitable than cattle enterprises. A less regulated economy and a liberalized exchange rate in particular would be helpful in this regard. As far as the individual householder is concerned, under current revenue distribution in communal areas, wildlife is only rarely more viable than subsistence agriculture. An analysis of one of the regions indicates that the best option from an international perspective is wildlife production with improved agricultural output, but with no increase in human population.

Wildlife's low fiscal priority as illustrated by the fact that the Ministry of Environment and tourism accounted for only 0.68 of total government expenditure in 1990-91. Also, the overvalued exchange rate and limited access to foreign exchange has severely limited imported inputs such as vehicles which high-value tourism and hunting demands. Further, most wildlife options in communal areas are land-intensive and absorb few people relative to subsistence agriculture. It is therefore important to develop institutions and technologies that allow wildlife systems to employ or at least accommodate more people without reducing wildlife densities.

These 4 case studies give impetus to the movement towards community-based wildlife projects. Local property rights assignment and financial rewards must be channeled back to local communities and individual farmers. To be able to compete with livestock and other economic activities occupying the same territory, wildlife needs a fair chance and "equal rules of the game". That is an area in which the World Bank and other donors can contribute through their dialogue with borrowing countries.

Jan Bojo. 1996. *The Economics of Wildlife: Case Studies from Ghana, Kenya, Namibia and Zimbabwe*. AFTES Working Paper No. 19. Environmental Policy and Planning, Africa Region. For more information, contact P.C.Mohan, Rm. J3-165 , World Bank, 1818 H Street NW, Washington, D.C. Tel. no. : (202) 473-4114; Internet address: pmohan@worldbank.org
