

Valuation, Local Incentives, Benefit Sharing and Community Enterprise

Examples from East Africa

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Introduction

The primary focus of economics in biodiversity conservation is two fold: a) to demonstrate that biodiversity has an effective or potential source of economic value and b). to capture the benefits and costs of conservation and their distribution. The former justifies the conservation of such biological resources, especially among decision-makers, which want to know the value of the contribution of biological resources to a country's social and economic development. This is in addition to justifying government action, often through incentives for conserving resources. The helps in asking questions such as what are the costs and benefits? Who gains and who loses?

To realize the two applications of economics described above in biodiversity conservation, monetary valuation is essential. Valuation in this case is defined as the placing of monetary values on environmental goods and services. The goals of valuation include:

- To contribute to analysis of impacts of macro-economic policy;
- To demonstrate the importance of environmental policy. e.g. use of revenue sharing and multiple use policies;
- To eliminate the notion that the environment is a free good because of the absence of markets;
- To provide information about the value of nature's products;
- To identify the value various stakeholders place on goods and services, the beneficiaries currently being served and those groups, which would derive additional benefits from their alternative uses of protected areas and wildlands.

This paper therefore looks into:

- How valuation can be conducted and applied to calculate these costs and benefits, and identify incentives for conservation;
- Why communities have few incentives to conserve natural resources;
- Types of economic solutions and incentives that can be applied to overcome these economic imbalances.

Valuation in a subsistence economy

Participatory environmental valuation (PEV) technique can be applied in valuing forests, whose products such as non-timber forest products are not traded in conventional markets and yet are important to local livelihoods of the

communities. PEV methodology is used as a bridge between local economic systems and cash values and elicits information about forest use and values at the subsistence, non-market level.

The methodology involves:

- Establishing a range of forest activities the local community is involved in.
- Using pictures to refer to different forest products, the definition of a numeraire. Instead of cash, PEV uses a numeraire for valuation of a commodity, which forms part of the local socio-economy, has wide local significance as an item of value, and can easily be translated into a monetary amount. This is different between different forest using communities. For example:
 - a. in Oldonyo Orok participants defined a young castrated bullock as numeraire - a component of the local economy.
 - b. in Uganda, among the Bakonjo- A number of bags of beans was used to determine how much has been lost by denying adjacent communities access to land in the forest reserve but it is now a national park-Rwenzori Mountain National Park.
- Determining the relative importance of different products. A ranking exercise is performed on the picture cards representing forest activities. Respondents order the cards according to the perceived importance, and elaborate on why, when and how forest activities are carried
- Establishing values by distributing counters such as beans, seeds or stones between the cards representing forest activities and the numerarie commodity - gives an idea of the value of different forest uses relative to each other and to the numeriere
- Stating the purchase price of the numarieres commodity, which provides the means for forest products to be translated into cash amounts.

Table 1 below gives an overview of the costs and benefits borne by the local communities living adjacent the Rwenzori Mountain National Park (RMNP), Uganda

Through valuation, mechanisms or incentives to redistribute benefits and offset costs in favour of local communities to reduce their propensity to exploit wildlife are sought. This is contrary to the protectionist or exclusionist policies

inherited from the colonial era and perpetuated by post-colonial governments to the disadvantage of the local communities. Such policies helped to worsen the socio-economic conditions of the local communities in biodiversity rich areas due to:

- Scarce sources of employment, income and subsistence
- The level of benefits generated from any activity being few.
- Poor infrastructure attributed to the remoteness of most these wildlife rich areas.
- Limited access to markets, in part due to poor infrastructure
- Isolation and insecurity in certain areas.
- Weak support for rural enterprise development
- Lack of skills and entrepreneurial experience outside livestock trading

Table1: Overview of economic benefits and costs accruing to the local community from the Establishment of Rwenzori Mountain Nation Park

Method used	Annual Mean Value Per Household US \$	Aggregate(Annual) US\$
A. Benefits	40	691,660
B. Costs		
1. Opportunity cost		
Timber		306,000
Agriculture		317,610
Livestock		105,470
Forest products	69.4	1,030,510
2. Crop damage	240	209,124
<i>Sub-total</i>	110	1,969,594



Indirect methods of distributing wildlife benefits

Compensation schemes

Kenya Wildlife Service (KWS) tried such a scheme, but it failed because it was abused. Only a few of the actual victims benefited which led to hostility to wildlife and conservation activities. The actual beneficiaries were the state, local government (County councils in wildlife areas) and the large-scale private sector.

Revenue Sharing

This is where a proportion of revenue earned by the state is returned to the local communities through indirect benefit sharing arrangements and grass-roots development activities. It is a short measure that builds partnerships between local

communities, wildlife agencies and other key players such as the donors. It can be applied with other elements of community conservation programs.

This is normally done through agencies such as the Kenya Wildlife Service (KWS), the Uganda Wildlife Authority (UWA), Tanzania National Parks (TANAPA) and the Wildlife Division (WD), Tanzania. The revenue is earned from national parks and game reserves under management. The beneficiaries are people who live on land to which animals migrate seasonally.

With such an socio-economic background, the local communities have little incentive to conserve wildlife on their land, because they cannot afford to do so.

Incentives for redistribution of benefits and offsetting of costs to local communities

Direct and indirect methods are available to offset the costs of conservation on behalf of the local stakeholder groups.

For example, in 1991, KWS initiated and implemented a revenue sharing program in 36 districts with mostly parks and reserves. About 335 projects were supported around 22 parks, with a total value of KShs104 (Over 1.7 million). Technical assistance was provided to address legal issues (registration), capacity in enterprise skills, developing cost recovery mechanisms, tourism and management to augment revenue sharing support.

In Uganda, revenue sharing is enshrined in the Wildlife Statute (1996), where 12 per cent of the gross revenue generated goes back to the adjacent communities in the parks. This policy may not work because only Bwindi Impenetrable National Park (BINP) can sustain itself and support the revenue sharing program.

In Tanzania, 25 per cent of the total hunting revenues is in principle meant to support community development programs within hunting blocks. However, none is returned because it's retained in the District headquarters to meet 'administrative and operational' costs. These funds would do much to support the local community's development projects if it was channelled back to communities within hunting blocks.

Benefit sharing

Benefit sharing aims at overcoming inequities in wildlife benefit distribution and it involves:

- Permitting limited wildlife resource utilisation
- Creating employment opportunities for local people
- Generating of income.

This operates in protected areas and buffer zones, and revenue is generated through entry charges, sales of wildlife products, levies on hunting and other wildlife-based activities. Between 1992-1997, a USAID grant worth \$ 7million funded the Conservation of Biodiverse Resource Areas (COBRA) through the KWS. Its goal was to promote socio-economic development through conservation and sustainable management of Kenya's natural resources. Some local communities

Box 2

IL Ngwesi lodge is a 12-bed self-catering tourist lodge established on the IL Ngwesi group ranch by community members with external assistance. The lodge started operations in December and by November 1998, local benefits were already evident and changing land management practices. These benefits include:

Financial impacts/benefits

- Employees 50 people-23 in Cultural Boma and 26 in the lodge earning about KShs2,142, 000 at an average of KShs 86,100 per worker over the period
- Casual earnings KShs 1.8 million
- Collective income of KShs 1,000,000

Livelihood Impacts

- Improved security
- Improved grazing and rangeland management
- Establishment of seven pre-primary schools and renovation of educational and infrastructure facilities in the group ranch
- Transfer of skills and empowerment of the Group Ranch Management Committee
- Development of alternative livelihood options-irrigated agriculture and retail business
- Establishing linkages for Group ranch members, including international agencies, NGO's and neighbouring private ranches like Lewa Downs Conservancy

Conservation Impact

- Secured a safe corridor for about 180-300 elephants moving between Laikipia and Samburu Districts from Lewa Downs Conservancy through IL Ngwesi Group Ranch
- Secured about 8,700 hectares under conservation

like the IL Ngwesi Group Ranch members in Laikipia District benefited from this project (see box 2). This demonstrates of how, in some places communities

who have wildlife on their private land can earn money through their own enterprises on a long-term sustainable basis.

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Limitations of benefit sharing

- Only address the economic issues involved in community wildlife conservation
- Local economic forces motivating wildlife loss are not addressed. Broad benefits are not enough to change the behaviour of the local community it only changes attitudes for a while. This does not address why people engage in economic activities, which destroy wildlife

Community Enterprises

This spans beyond generating national economic benefits, government revenues and community benefits. It involves maximizing wildlife values and using them as a direct means

of livelihood support, which forms an important part of such approaches to community conservation. The form of benefits range from direct financial impacts, social and institutional development to diversification of existing livelihood strategies including markets.

The involvement of the local communities is either on its own or through joint ventures or partnerships with the private sector (see box 2). The argument is that the private sector has the capital and entrepreneurial skills for investment, while the local community has none but has the land that could be ideal for investment. All that there is for the two parties to partner together through either direct or brokered relationships by a third party or NGO. An example is the Conservation of Resources through Enterprise project (CORE), which is a coalition of four partners including AWF, SAMED, Price Waterhouse Coopers and African Centre for Conservation (ACC).

The Way Forward

The way forward to reducing the economic imbalances arising from conservation calls for institutional and economic solutions.

a. Institutional mechanisms

- devolving user rights to the local community thus giving them bargaining power to negotiate with the private sector for favourable terms
- Improving the investment climate for the private sector to participate in enterprise development. This facilitates businesses in general.
- Improving the general tourism infrastructure and services and marketing
- Increasing resident's awareness of their full rights as wildlife trustees.
- Establishing unified organizations and fair, transparent management in

local communities to facilitate partnering with the private sector to obtain capital, trained management, and marketing links

- Promoting participatory processes for decision-making with stakeholders regarding resource use.

b. Economic

- Providing economic incentives such as tax relief, or holidays to potential private sector investors investing in remote areas with poor infrastructure
- Funding mechanisms such as debt-for nature swaps and biodiversity prospecting. The debt-for nature swaps could be used to finance the conservation of forests. Biodiversity prospecting would have to involve industry and foreign governments, from which local community could benefit from the property right if it's ever successful.
- Using trusts and endowment funds, particularly if the forest provides global benefits. E.g. the Bwindi-Mgahinga Trust FUND (MBTF) and the arrangement made by a Netherlands power utility and the Uganda Forest, which channels funding for global carbon offsets demonstrates the role international funding sources could play in offsetting the costs of conservation
- Introducing market based incentives in the conservation of forests through nature tourism. This creates jobs/employment opportunities, but also involve the local community in conservation programs and income generating activities.

Box 3

Located in Koiya, Laikipia district, the area to be conserved is 500 ha. The private sector partners is Loisaba –Wilderness Guardian Company. After community mobilization activities an agreement has been reached.

Activities to date and plan of action

Based on indicator and outputs

- EDF proposal developed and ratified by PSC subject to agreements being finalized
- Meetings held at community, group and group ranch levels for developing proposal
- Trust deed developed with the community
- Title deed secured for the Koiya Group Ranch
- Training undertaken constitution development, duties and rights of members and the committee, and on the business concept.
- Total beneficiaries 3,000; 1,500 registered
- Members registered and resources up Kshs 150,000 mobilized for the business
- Potential income for year 1, US\$ 43,330
- Organizational capacity assessment done by Pact.
- 2 spin-off enterprises identified, trained and functional