ON PAYMENTS TO POOR STAKEHOLDERS FOR SUSTAINABLE USE OF PROTECTED AREAS[1] [2]

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1. BACKGROUND

It is well established in the economics literature that public goods are not supplied in sufficient quantities by individuals acting in their own self-interest. Ecosystems and the services they provide (such as biodiversity, climate- and hydrological regulation etc.) are public goods, and their sustainable management and use require special incentives and mechanisms. The incentives and mechanisms go beyond what the conventional decentralized market mechanism can provide. They cover a wide variety ranging from direct payments to indirect ways of supporting actions that link with the stated protected area objectives.

However, in low-income countries it can be challenging to make incentives work. Common challenges to both direct and indirect payment approaches include uncertain or inequitable land tenure, limited experience with enforcement of legal contracts, and limited opportunities for non-agricultural investments and/or employment. Efforts to solve such problems in one designated area may displace ecosystem losses to other areas, payments may be misappropriated or misused, and may create social conflict.

The following provides an overview of the international experience with direct versus indirect incentives to supporting sustainable management of protected areas, gives examples of direct payment schemes, and outlines key issues in the design of them. The focus is on terrestrial ecosystems, though many of the points made are equally valid for marine ecosystems.

2. THE EXPERIENCE WITH INDIRECT VERSUS DIRECT PAYMENT METHODS

Whereas conservation initiatives in high income countries increasingly emphasize more direct incentives such as land purchases, leases, easements, performance payments and tax relief, the choice of low-income countries has typically been the more indirect approaches such as Integrated Conservation and Development Projects (ICDPs) and Community-based Natural Resource Management. With these approaches rural communities are encouraged, e.g. through the provision of sustainable sources of products, income, or social benefits, to manage ecosystems sustainably.

Based on decades of experience with such indirect approaches, there is now a growing recognition that they rarely work, and when they do, they tend to be costly compared to alternative and more direct ways of achieving the same sustainable ecosystems management objectives (see e.g. McShane and Wells 2004, Kiss 2004).

For one, experience has unsurprisingly shown that people are more likely to incorporate new sources of income as complements to existing activities rather than as substitutes for them. This experience was clearly documented in Wells and Brandon (1992), Brandon and Wells 1992, Wells (1992), and other studies from the early 1990s. The flaw is in part due to the fact that technical, economic, social and political conditions needed for indirect approaches to be effective and succeed in reaching the stated target in a cost-efficient way are difficult to establish and monitor in a low income country (Salafsky et al 1999, Roe et al 2000). Michael Wells et al (1998) concluded in a comprehensive review that there was *"a notable lack of successful and convincing cases where people's development needs have been effectively*

reconciled with protected area management". Several studies, e.g. Barrett and Arcese (1998) and Norris and Chao (2002) have found that sustainability is difficult to achieve for conservation initiatives that encourage extractive activities such as non-timber forest product collection.

The institutional complexities of both direct and indirect approaches to manage protected areas in low-income countries should not be underestimated. Indirect approaches are especially vulnerable to inadequate monitoring of ecosystems, to lack of institutions for resolving conflicts coordinating individual behaviour, and to allocating and enforcing rights and responsibilities. Low income nations are unlikely to have the institutional capacity to make contractual agreements so that they can successfully implement an indirect intervention.

A system of direct conservation payments would allow practitioners to focus their energies on designing the appropriate institutions, and not as for indirect approaches, allocate scarce resources to a range of different tasks in order to turn residents in remote rural areas into entrepreneurs who can cater to national and world markets (Conrad and Ferraro 2001). However, it does not automatically follow that developing country governments have the institutional capacity to prepare the required contractual agreements and to manage and monitor money flows in a direct payment initiative.

The overall conclusion on this point is that both indirect and direct payment mechanisms are vulnerable to the institutional complexities, but the obstacles appear to be more insurmountable with indirect systems than with direct ones.

As regards cost efficiency and effectiveness, a direct payment approach will be preferable to an indirect one. This is clearly documented in a number of real world cases surveyed by Ferraro (2004). One of the clearest illustrations is a comparison of the degree of goal achievement by means of direct investment of conservation funds in annual payments conditional on the protection of forests in South Eastern Madagascar, versus alternative indirect interventions. The comparison found that for the funds available 80% of the original forest could have been protected into perpetuity by the direct annual payment modality, whereas this percentage goal achievement drastically dropped to 12-22% if an indirect approach were adopted.

In the same vein, a World Bank appraisal document for the new Costa Rican environmental services payment program (PESP) – a direct approach – estimated that administrative costs were 5% of the budget and the rest was direct conservation payments. In general the World Bank experience from existing direct payment schemes suggests administrative costs in the range of 5% to 25% of the operating budget (World Bank 2000). Conrad and Ferraro (2001) contrasts this to an example from a national park in Madagascar[4] where it was estimated that less than 2% of the budget went to rural residents around the park, 55% went to administrative overhead and international consultants, and the rest to capital expenditures and host country consultants.

Perhaps equally important from the perspective of "enlisting" local support and ownership of the conservation effort is the fact that the poor stakeholders would have received income two-times higher in direct payments that those that could be generated through an indirect intervention. Ferraro (2004) summarises this unsurprising finding by bluntly stating that *" the*

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[4] The Ranomafana National Park Project (Section III)

basic principle is that the cheapest way to obtain something you want is to pay for what you want (e.g. protected rain forest), rather than pay for something indirectly related to it (e.g. capital for improving eco-tourism)".

Experience with direct payment to people for protecting habitat and wildlife from e.g. Costa Rica, Guyana and Kenya shows that this can be most affordable (as low as one US Dollar per hectare per year in the lowest known case) and provides a genuinely promising alternative in marginal areas where other land uses do not generate much net returns to the indigenous people.

The obvious advantage of direct payments is that they benefit poor farmers by improving their cash flows, providing fungible store of wealth, and reducing their vulnerability to external natural shocks (floods, droughts) by diversifying their sources of household income. Ferraro and Simpson (forthcoming) show both theoretically and by means of empirical simulations that in plausible cases, direct conservation payments are more effective at enhancing household incomes and thus contributing to poverty reduction, while at the same time achieving conservation goals. The basic idea is that biodiversity be treated as a valuable commodity and biodiversity protection/sustainable management of such commodities is an alternative land use worth paying for.

This direct payment approach is also compatible with the view that the land holders/resource users decide how best to meet their own goals and aspirations, as contrasted by an indirect approach based on transfer of subsidies conditional on carrying out certain pre-determined activities.

Regardless of whether direct or indirect approaches are preferred and adopted, the practitioner must estimate the strength of incentives required to motivate a private individual to contribute effectively to the achievement of the conservation goals. What is known at present is that a lot of knowledge still needs to be developed before one can estimate with accuracy the required incentives. For one, there is enormous diversity in land quality, market opportunities and land user preferences and beliefs/cultures. What is required would vary significantly between a subsistence-based area as compared to an area where mechanized commercial cropping and a well functioning land market is established. There are, however, a variety of experimental methods that could be used to help determine the reservation prices of rural residents to supply land protection, and understand how these prices are formed, see Ferraro (2004).

3 EXAMPLES OF DIRECT PAYMENT SCHEMES

Above we argued that while the collected experience with the "traditional", indirect conservation approach is vast and somewhat discouraging, direct payment is a promising alternative. However, we also emphasised that the direct payment approach has its own distinct challenges. In fact only a small number of direct payment cases in developing countries exist. This section discusses the promise of direct payment schemes by relating the experience of some of the cases. We start however, with summarising some experience from western countries.

In western countries there are several direct payment programmes in existence, the best known of which are agricultural land diversion schemes. Land diversion schemes involve contracts with farmers to divert land into long-term set-asides or to adopt ecologically sensitive agricultural or forestry practices. One recent example is the payments made to

farmers by the National Farm Authority in the North York Moors National Park in the UK for conserving land (£71/ha), woodland (£55/ha) or improved land (£8/ha) (Lovett et al 2002). Another example is a Dutch direct payment scheme for the protection of breeding birds on farmland (Musters et al 2002). The direct conservation contracting programs account for only a small percent of agricultural support budgets in the OECD, but they are among the fastest growing payments to farmers in high-income countries (OECD 1997). The reason for this growth is thought to be partly due to the schemes' popularity among stakeholders and the opportunities they afford for flexible targeting and adjustment to local conditions.

Of the medium- and low-income countries, Costa Rica is often mentioned as being at the forefront of developing market-based initiatives for ecosystem conservation. Over the last 10 years Costa Rica has created institutional mechanisms through which local, national, and international beneficiaries of ecosystem services can compensate those who protect ecosystems. The Forestry law explicitly recognises four ecosystem services[5] and gives landowners the opportunity to be compensated for the provision of these (Ortiz and Kellenberg 2002). Funds are allocated through the National Forestry Financial Fund (FONAFIFO), which enters into contracts directly with landowners and third parties (e.g. NGOs). The Payments for Environmental Services Program (PESP) aims to protect primary forests, allow secondary forests to flourish, and promote forest plantations to meet industrial demand for timber and paper products. These goals are met through site-specific contracts with individual small- and medium-sized farmers. There are three different types of contracts; forest preservation (US$ 42/year/ha), sustainable forest management, and reforestation. Each category is associated with a fixed annual payment per hectare in time periods from 5 to 20 years (from USD 22-42/year/ha). The most common contract is forest preservation, and there is currently higher demand for contracts than can be met by FONAFIFO. Principal funding sources for the scheme include a tax on fuel sales, payments from private sector firms for the protection of watersheds etc, and international donors such as the Global Environmental Facility (GEF). Important benefits of the programme include the conservation and sustainable use of forest ecosystems on privately owned land outside of national parks and biological reserves. The PESP has a potential for being an important vehicle for forest conservation, but critical reviewers have also warned that the PESP should represent real change in forestry practice and not just a repackaging of old subsidy schemes for the forestry sector (see Rojas and Aylward 2003 for a critical review of markets for environmental services in Costa Rica).

Other developing countries are also experimenting with direct payment approaches for ecosystem conservation[6]:

- The NGO Conservation International has bought concessions to conserve forests on equal terms as logging concessions in the countries of Guyana and Bolivia, and is considering other countries such as Guatemala (Price 2002).
- In Madagascar, conservation contracts with local communities under existing legislation are being designed to preserve forests with high biodiversity. Contracts will be agreed for conservation areas adjoining village-managed sustainable use areas. Payments will be made on a yearly basis and go through a coordination committee. Clear plans for monitoring and enforcement will also include villagers in patrols (Durbin et al 2002).

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[5] Forestry Law 7032 (1996) recognises four services from forest ecosystems: Carbon fixation and sequestration, hydrological services, biodiversity protection, and scenic beauty.
[6] Drawn from Paul J. Ferraro's web collection at http://epp.gsu.edu/pferraro/special/special.htm

- In Kenya, a project aims to provide financial incentives to encourage land owners south of the Kitengela Park to allow wildlife unrestricted access to their land in order to maintain critical migration corridors. Landowners are paid USD 4 per acre per year, approximately the same as the income made from rearing livestock (Gichohi 2002).
- In Mexico an agreement to preserve the western thick-billed parrot was reached between an environmental organisation and a small community. The community will receive $250,000 over 15 years to preserve the nesting habitat of the parrot, by conserving a 2400 hectare old-growth forest near the Cebadillas village in northern Chihuahua.
- The World Bank has initiated several payment schemes for watershed services, for example in the Dominican Republic, Ecuador and El Salvador.

4. DESIGN OF DIRECT PAYMENT SCHEMES

Although direct payment schemes seem to have clear advantages over less direct development interventions, we emphasise again that they are neither easy to implement nor a universal solution to sustainable resource use and biodiversity conservation inside or outside protected areas. An ideal direct payment approach should, like other conservation approaches, have the following characteristics (Laarman 1995):

1. Be relatively simple in the sense that it allows practitioners to focus on a few activities with high probability of success
2. Achieve conservation objectives in the short and the long term
3. Achieve conservation objectives at the scale of ecosystems
4. Provide clear, direct incentives for residents to actively protect the habitat.
5. Deter immigration, and
6. Reduce the social and political conflicts over resource allocation that often endanger ecosystem survival

The potential strong points that can be immediately recognised a priori for a direct payment approach are 1, 2 and 4, though the other points may also be satisfied in a carefully designed direct payment scheme. The design would have to depend on the local situation as regards protected area and ecosystem type and threat, laws and regulations, property rights, institutions for enforcement of contracts and monitoring of performance, and available conservation budgets. However, it is unlikely that a direct approach could be implemented at all if the (formal or informal) judicial system for enforcement of contracts is poor or non-existent.

To design a payment program, practitioners must identify the relevant institutions that would implement the program: From raising and distributing *funds*, through *monitoring* to *conflict resolution*. Potential challenges include adapting the scheme to local traditional institutions, laws and practices, and ensuring that rural residents get their rightful benefits. A direct payment scheme may be vulnerable to manipulation by powerful local individuals for political purposes. Successful implementation requires periodic payments and monitoring in the long term, which needs stable and permanent institutions with local credibility and permanent funding.

Another key issue related to institutions is the type of property rights around or within the protected area. Given differences in conservation objectives and social, environmental and

economic characteristics, there is no correct way of specifying property rights. It is crucial for the scheme to establish clear and enforceable property rights, so that those who invest in conservation are sure to reap the benefits (payments). A problem in some cases is third parties accessing land under contract protection. Direct payment schemes are easier to implement for land that is privately owned. However, coordinating contracting with a common property owner (such as a village community) is no different in principle, but more complicated in practice. Ferraro (2002) considers the allocation of property rights as perhaps the most serious challenge to conservation contracting.

A third important issue in the design of a direct payment scheme is to plan for unintended consequences and so-called strategic behaviour of people in and around protected areas. Poor people, like everybody else, will try to extract as much money from the scheme as possible. This can lead to several unintended effects such as attempts to contract land that would not have been used in the absence of the scheme, overuse of other land areas and resources that are not part of the scheme, exertion of market power to increase the rents paid for conservation land, or land speculation prior to implementation. There are no easy solutions to these problems, other than to specify clear sanctions in contracts and general rules for the scheme.

Fourth, for the scheme to have the intended conservation effects there needs to be substantial and sustained payments to the people giving up land for conservation. As discussed above, and as documented in Ferraro (2002) and other studies, this funding may however not be as large as one may think at the outset. Often the most ecologically valuable land is located in marginal areas where the value of land for alternative uses is low and people are poor. As compared to indirect approaches the local people may be left better off from a direct approach. However, the scheme would need to be carefully designed to realise these local development benefits. One potential problem is the involuntary resettlement of people and unemployment resulting from giving up their natural resource based activities such as subsistence agriculture etc. This may lead to social disruption unless the scheme is able to create meaningful employment outside the protected resources. It is likely that a direct payment scheme would need to be part of a broader package of development assistance to alleviate these potential problems. Another, related problem, is that direct payments to poor households (often headed by men) may lead to suboptimal decisions for the family on how money is spent. The best way to deal with this problem would be to tie a share of the payments to specific development activities in the community (Kiss 2004).

Despite the many complexities in the design and implementation of direct payment schemes for conservation, the discussion in this paper has shown that in many cases the direct approach may be preferable to the indirect approach. The key promise of the direct approach lies in its potential *"to send clear signals to residents that ecologically valuable land is economically valuable"* (Ferraro 2002).

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