



número 14 (segundo semestre 2006)
number 14 (second semester 2006)

Revista THEOMAI / THEOMAI Journal
Estudios sobre Sociedad, Naturaleza y Desarrollo / Society, Nature and Development Studies

Issn: 1515-6443

The presevation plus approach: linking preservation and poverty reduction

By Lucio Munoz

Introduction

Actions directed at saving the remaining natural resources, be it forests, biodiversity, or whole ecosystems should be expected to increase as levels of environmental degradation increase. This expectation is consistent with the comment of Dudley et al(1999) that there is an excellent outlook for protected area increases; and with information indicating that since 1962 protection of public areas has increased tenfold(Molnar 2005). For example, most countries have already protected or are planning to protect a percentage of their resource base, and pressures from NGOs seeking maximum protection are right now strong. Conservation International reports that in 2005 it has projects in 40 countries(Seligmann 2005). Also, the conflict between social goals and preservation goals should be expected to increase as the levels of natural resources available for traditional social uses decrease. For example, as environmental stakeholders press for more resource protection, social stakeholders will press for their right to exploit their available resources, especially, sustainably. This should not be a surprise as the conflict between conservation and the people or communities affected by it is known(Wright 1996; Stolton and Dudley 1999) and it is now more widely recognized(Molnar 2005).

The need to reconcile social and preservation goals

It is accepted that poverty is one of the biggest threats, if not the biggest, to preservation goals(Shah 1995; Primack et al 1998); it has been shown that low income is more likely associated with poor environmental performance(Esty et al 2006); and it is known that donors and policy makers have come to the conclusion that they must deal with poverty issues now in order to be able to put in place an effective global environmental and governance policy(Richards 2003). It is also accepted that preservation is a special form of conservation where the whole ecosystem is set aside and protected forever(Swinnerton 1991). Hence, if preservation goals are either directly(by taking remaining resources expected to be of social use for poverty reduction initiatives out of the social domain) or indirectly(by forcing poverty forces to work more intensively in areas where exploitation has already taken place or is under way) increasing poverty pressures, then they are nurturing processes that in the long-term will seek their destruction. It is reported that when



preservations are created and people are displaced, dealing with poverty issues becomes more difficult and human pressures on the environment where they are relocated becomes even more intensive and damaging (Schmidt-Soltau 2005). More over, it is known that conflicts flourish when strong social competition for available ecosystems exist, even when they are under increasing degradation or disappearing (Earle 2005). Environmental stakeholders must find then ways to reconcile poverty with preservation goals to avoid what it appears to be the ongoing nurturing of enemy forces. This need appears to be consistent with current plans in developed countries to give more attention than before to social and environmental linkages (OECD 2004); with comments made by officials from the United Nations with respect to the current need to address poverty issues in order to be able to achieve environmental sustainability (UN 2005); and with the formal recognition in 2005 that the linkages between environmental health and poverty are in fact a critical issue (UNEP 2006). It is also recognized now that reducing poverty levels improves the competitiveness of countries (Perry et al 2006); and therefore, linking preservation and poverty issues has the potential to nurture both good social and economic behavior toward the environment at the same time.

The weaknesses of traditional preservation programs

The main weakness of traditional preservation programs is that they are designed to maximize preservation goals only, not to optimize them with social goals. For example, debt for nature swaps are directly targeted to deal with pure conservation goals and delinked from poverty goals (Hansen 1988); the mission statement of organizations implementing conservation programs such as the nature conservancy leaves social poverty issues associated to those programs out (NC 2003); and this strict focus on environmental goals only is cited in the World Resources 2005 as one of the main challenges being faced by pro-poor development strategies in poor countries right now (WRI 2005). In OECD countries, calls are being made to charge a fee to users of all protected areas to be used for better management (OECD 2001), and no reference is made to using some of the proceeds to improve the social environment around or beyond the protected areas perhaps because poverty there is not seen as a binding concern. Then, the known conflict between preservation and poverty is immersed in the way that traditional preservation programs are designed. It is known that the planning of environmental sustainability programs and their monitoring and evaluation and their potential business opportunities are being implemented separated from poverty reduction goals. For example, the United Nations does not directly calls for the linking of poverty eradication programs to environmental sustainability efforts when developing the Millennium Development Goals (UN 2005); environmental monitoring and evaluation is not associated to poverty issues, just focused on specific environmental issues (Esty et al 2006) or priority areas (UNEP-GEF 2004; UNDP-GEF 2005); and green business opportunities are not connected to poverty reduction programs and may only help the bottom line of big industry players as seen in the Millennium Ecosystem Assessment (MEA 2005).

Moreover, traditional preservation programs are planned and implemented as if their social externalities, especially long-term externalities are either minimal or zero. See that the five-S framework for site conservation used by the nature conservancy is not connected to social/poverty issues (NC 2003). This weakness comes from the fact that preservation programs are an extension of traditional economic only programs. For example, only the value of the preserve at the time the land use change designation is made permanently is included in the settlement, but not the future environmental benefits that the preserve will provide. It is known that ecosystems provide an ongoing flow of services that have a market (MEA 2005), which continue to be provided even after preservations are created and placed outside social use. It is recognized that the purchase of conservation rights should benefit local populations now and in the future (Hansen 1988). On the other hand, the proceeds from environmental transactions usually go directly to the general revenue of national or local governments; and/or they go



directly to the establishment, management and monitoring of the preserves only, not directly to the needed poverty reduction programs around the preserves and if possible, beyond the preserves. However, now calls are being made to use income from environmental management to help the poor in more direct ways(WRI 2005).

While traditional preservation programs may succeed in the short term in stopping social pressures on preserved areas, they may fail in the long-term. Dudley et al(1999) points out that if protection programs are not made consistent with the development needs of local people, they may not persist. Local people in developing countries wish to be able to enjoy the standard of living of developed countries or live out of poverty, but this desire has been left out of local environmental programs(Kirkby and Moyo 2001); and only until as recent as 2003 conservation organizations started to make efforts to include the rights and needs of local people in their programs(Oviedo 2005). For preservation programs to be effective, they must be able to stop social forces in the short-term, and should be able to keep them out preserved areas in the long-term plus they need to provide incentives to social actors to expand preservation programs on marginal areas under active or passive exploitation. This is consistent with Shah's observation that national parks are under increased, internal and external, human pressures(Shah 1995). Hence, effective preservation can only be achieved if we link directly the short-term and long-term benefits of a preservation program to poverty reduction as less poverty is expected to back, not to undermine, environmental and economic goals. It is accepted now that natural capital should be used to overcome the poverty issues undermining environmental sustainability goals(UNEP 2006). Then, the question becomes how preservation programs can be linked to poverty reduction goals, and one way of doing that is pointed out below.

The goals of the paper

This paper has three goals: to define using qualitative comparative means the traditional economic development model and the sustainability model; to point out the preservation and poverty sustainability gaps; and to link this information to traditional preservation approaches and to the proposed preservation plus approach.

The terminology

Table 1 below shows the terminology used to present the ideas of this paper.

Table 1 Qualitative terminology

A = social goals are dominant
a = social goals are passive
B = economic goals are dominant
b = economic goals are passive
C = environmental goals are dominant
c = environmental goals are passive
TEM = traditional economic model
SM = sustainability model
BSG = bi-modal sustainability gap
TPRM = traditional preservation model
PSG = poverty sustainability gap
ESG = environmental sustainability gap



The methodology

Qualitative comparative terminology is used to define the traditional economic development model, and the sustainability model. Then by comparing these two models, the structure of the bimodal sustainability gap is identified. Next, this gap is used to point out the structure of traditional preservation approaches and the remaining poverty sustainability gap. Finally, the structure of the proposed preservation plus approach is highlighted, and some conclusions are provided.

The traditional economic development model

It is commonly accepted that under the traditional economic development model(TEM) only economic goals matter(B) and that social(a) and environmental(c) stakeholders are only passive elements of development, which can be expressed as follows:

$$1) \text{ TEM} = aBc$$

In other words, under the traditional economic development model(TEM), social and environmental externalities are assumed to be minimal or zero.

The sustainability model

It is commonly accepted also that for a sustainability model(SM) to exist, development processes should reflect social(A), economic(B), and environmental(C) values at the same time, which can be stated as follows:

$$2) \text{ SM} = ABC$$

Hence, sustainability requires the conjunctural interaction of social, economic, and environmental agents in dominant form at the same time, and there are not sustainability gaps under sustainability.

The bimodal sustainability gap

The bimodal sustainability gap(BSG) can be found by intercepting the traditional economic development model(TEM) and the sustainability model(SM) as follows:

$$3) \text{ BSG} = \text{TEM} * \text{SM} = aBc * ABC \\ = aA.BB.cC$$

The above model(BSG) says that to achieve sustainability, the traditional economic development model has to address the social or poverty sustainability gap(PSG = aA) and the environmental sustainability gap(ESG = cC) at the same time. Notice that if social concerns and environmental concerns are not considered important under the bimodal sustainability model(BSG), then "aA" and "cC" tend to "a" and "c" respectively. In the case of the economy, since it is in dominant form in both models, then "BB" tends to "B".

The traditional preservation model

Existing preservation proposals are directed to deal with the environmental



sustainability gap only (ESG = cC), be it from the point of view of preservation in general or from the point of view of preserving biological diversity in particular. The structure of the traditional preservation model (TPRM) based on pairing economic and environmental goals can be expressed as follows:

$$4) \text{TPRM} = aA.BB.CC = aA.B.C = aBC$$

The expression above indicates that while eco-economic goals (BC) are clearly stated in traditional preservation approaches (TPRM), social goals or poverty reduction goals (a) are not clearly defined. In other words, economic goals are clearly linked to environmental goals (and vis a vis), but not to social or poverty reduction goals. On the other hand, it can be said that TPRM models are TEM models adjusted to reflect environmental concerns only; and that the social or poverty sustainability gap (PSG = aA) is a common factor in their structure, and therefore, a common source of unsustainability. It can be seen that as long as the goals of traditional preservation programs (BC) are not linked to social goals (a), social actors are going to continue to be an increasing threat to preservation programs.

The proposed preservation plus model

Based on formula 4, traditional preservation models (TPRM) need to address the poverty sustainability gap (PSG) to be truly sustainable. One way of doing this is by recognizing that preservation options represent two types of losses to social stakeholders, a short-term loss and a long-term loss. The short-term loss is the loss of the benefits associated with the land use change when designating specific land areas to preservation uses only. The long-term losses are the ongoing stream of environmental benefits that the preserved area will provide indefinitely into the future, but which were not part of the actual land use change value. For example, debts for preservation/nature swaps recognize only the short-term costs to society, not the long-term costs. Linking those long-term costs to poverty reduction programs around the preserves first, and if possible, spreading them to residents in non-preserved areas is the key to ensure the sustainability of the preserves.

Hence, traditional preservation models (TPRM) need to go the extra step, by addressing the social or poverty sustainability gap (PSG) completely through directly linking the benefits provided by the preserves to social or poverty reduction programs, both in developed and in developing countries. And this is the core aspect of the preservation plus proposal: to eliminate the social source of unsustainability undermining the success of existing and future preserves everywhere by returning to society the full benefits that are lost when preservations are created. By doing this, we are designing and implementing an effective and practical way of reconciling the most pressing social-environmental dichotomy, that of promoting social development/poverty reduction and preservation programs at the same time. Finally, formula 4 suggests that implementing the preservation plus approach raises questions of equity and governance; and therefore, there is a need for future research and discussion focused on how to best implement it, both locally and globally.

Conclusions

Five conclusions are the most important ones based on the discussion presented above. First, there is a pressing need to eliminate the poverty sustainability gap to ensure the sustainability of preservation programs. Second, the poverty sustainability gap cannot be eliminated through traditional preservation approaches as they are only designed to maximize preservation goals. Third, it is in the best interest of preservation programs to be linked both in the short-term and long-term with poverty reduction goals as to avoid nurturing increasingly enemy



forces. Fourth, this linkage of social and environmental goals can only be done if the total value of the benefits lost to society is allocated to ongoing poverty reduction programs around and beyond the preserves. And fifth, the preservation plus proposal requires the elimination of the poverty sustainability gap if we want to achieve the long-term sustainability of the preserves.

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