Chapter 18

# Lessons for REDD+ from protected areas and integrated conservation and development projects

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- Forest protected areas (PAs) could become a critically important element of tropical forest countries' efforts to implement and benefit from REDD+.
- There are important similarities and overlaps between REDD+ projects and integrated conservation and development projects (ICDPs) linked to PAs. Like ICDPs, REDD+ pilot and demonstration projects have generated considerable excitement and donor support, and very high expectations among stakeholders.
- ICDPs have generally performed poorly; although the reasons for this are well understood, avoidable mistakes continue to be made in their design and implementation. REDD+ projects should learn from these experiences.

## Introduction

More than 102 000 protected areas (PAs) cover 12.2% of the Earth's land area and provide benefits such as protecting biodiversity and cultural values, and ecosystem services, including carbon storage. PAs support around 1.1 billion people, nearly one-sixth of the world's population, providing them with

food, fuel, fresh water, fibre, shelter and genetic resources. PAs also store over 312 gigatonnes of carbon (GtC) (Campbell *et al.* 2008), around 15% of the terrestrial carbon stock, and cover 13.5% of the world's forests (Schmitt *et al.* 2009). Keeping PAs, especially forested ones, intact is an essential part of the effort to retain forest carbon.

While biodiversity conservation is the primary objective of most PAs, including forest PAs, their management has increasingly focused on relationships with local people. Increasing recognition that it was neither politically feasible nor ethically justifiable to exclude people with limited resource access from parks and reserves without providing them with alternative means of livelihood led to a new generation of projects that reached outside PA boundaries to focus on the welfare of local people by promoting social and economic development, referred to as integrated conservation and development projects (ICDPs) (Wells and Brandon 1992).

Experience with PAs and ICDPs offers important lessons for REDD+. First, PAs can be an effective way of conserving forests, and expanding PAs should be part of the overall REDD+ policy package. Second, ICDPs or similar approaches are a dominant strategy for mitigating threats to forest PAs. Third, ICDPs are relevant to REDD+ projects because both seek to preserve global public goods (biodiversity and carbon) by promoting social and economic development (i.e., livelihood co-benefits). Both PAs and ICDPs are controversial and many of the lessons they provide for REDD+ are along the lines of 'what not to do'. However, there are also promising experiences with ICDPs that provide positive lessons for REDD+.

This chapter briefly reviews the history of PAs and ICDPs, and then addresses three questions:

- What are the key similarities and differences between REDD+ projects and ICDPs?
- Which lessons from ICDP experiences are most relevant to REDD+ projects?
- What roles could forest PAs and ICDP approaches play in REDD+ strategies?

## Evolution and effectiveness of PAs and ICDPs

Although there is still debate about the effectiveness and efficiency of protected areas versus nonprotected areas (Gaston *et al.* 2008), many countries have made global commitments to expand PAs to conserve habitats, ecosystems and biodiversity. The effectiveness of PAs has varied depending on whether the focus is on management (e.g., Leverington *et al.* 2008), the status of certain

species, or changes in land use (Coad *et al*. 2008). Land use data suggest that deforestation is controlled more effectively in PAs than in areas surrounding PAs (Nagendra 2008; Naughton-Treves 2005; Adeney *et al*. 2009; Nelson and Chomitz 2009). There are, however, large differences between regions and between types of PAs; for example, indigenous and community-managed reserves appear to be more effective than other types of PAs in preventing fires (Nepstad *et al*. 2006; Nelson and Chomitz 2009).

Table 18.1 shows that strictly protected areas slow the loss of forest more than other types of PAs in most regions. Overall, rates of forest loss are highest in the neotropics and PAs are effective at reducing losses in this region. Tropical Asia has the next highest rate of forest loss. While PAs do reduce forest loss in this region, the overall loss of forest and carbon is substantial, accounting for about 990 million tonnes of $CO_2$, or about 3% of total emissions from tropical deforestation. Improving management of PAs, especially where forest losses are greatest, such as in the neotropics and tropical Asia, could make a small but vital contribution to reducing overall emissions.

As protected areas have expanded, their actual and potential contributions to society have been intensely scrutinised. This has led to an evolution in the philosophy and practice of PA management. PAs now address poverty, indigenous rights, tenure and a range of other social, economic and political issues (Brandon *et al*. 1998; Naughton-Treves *et al*. 2005). Many of these issues will also affect REDD+ projects. Key questions include the extent to which forest areas managed for carbon will compete with other land uses and livelihood needs; whether REDD+ will impose costs on the poor or provide them with new opportunities; and how conflict between local priorities and national policies can be resolved equitably and efficiently.

ICDP approaches began reaching a critical mass in the 1980s, consistent with recommendations from the 1982 World Parks Congress that communities living adjacent to parks should be supported through local participation, education, revenue sharing, development activities and opening park resources to local use. ICDPs have tried to reduce pressure on or divert threats away from protected areas by providing new livelihood opportunities in sectors such as agriculture, agroforestry and tourism. Many ICDPs also financed community services, such as health clinics and schools, to build goodwill and positive attitudes toward protecting forests. By the 1990s, ICDP approaches had become popular and attracted substantial support from international development agencies and large conservation NGOs. However, they began to fall from favour after early results proved disappointing and critical reports became widespread (McShane and Wells 2004). While the ICDP label is now less common, most internationally funded efforts to strengthen PAs, including

**Table 18.1. Forest area and forest loss in humid tropical forests, by conservation status**

| Realm | All forests | | Strictly protected areas IUCN I and II[1] | | All protected areas | | Total carbon in PAs (Mt) |
|---|---|---|---|---|---|---|---|
| | Forest area (000 ha) | Forest loss 2000–2005 (%) | Forest area (000 ha) | Forest loss 2000–2005 (%) | Forest area (000 ha) | Forest loss 2000–2005 %) | |
| Afrotropics[2] | 185 752 | 0.24 | 9 184 | 0.12 | 22 697 | 0.31 | 7 750 |
| Australasia | 80 775 | 0.81 | 3 998 | 0.92 | 9 616 | 0.67 | 4 893 |
| Neotropics | 620 290 | 2.39 | 44 725 | 0.48 | 156 702 | 0.79 | 48 450 |
| Tropical Asia | 220 964 | 2.17 | 10 014 | 0.96 | 28 185 | 1.33 | 9 255 |
| Total humid tropical forests | 1 107 780 | 1.87 | 67 922 | 0.53 | 217 201 | 0.81 | 70 348 |

Source: Campbell *et al*. (2008)

1 IUCN Categories I and II are the most strictly managed PAs, such as national parks.

2 Afrotropics refers to Africa south of the Sahara desert. Australasia refers to the islands of the southern Pacific Ocean, including Australia, New Zealand and New Guinea. Neotropics refers to the region of plant and animal distribution east, south and west of Mexico's central plateau that includes Central America, parts of South America and the Caribbean. Tropical Asia refers to all Asian countries between the Tropic of Cancer and the Tropic of Capricorn.

conservation at the landscape scale, still implicitly espouse ICDP principles and approaches.

Whether, or to what extent, PAs help or harm people is a highly controversial topic (e.g., Naughton-Treves *et al.* 2005; Brockington *et al*. 2006; Agrawal and Redford 2009). Recent research shows that while people in and around PAs may be poorer compared to national averages, it is not the PAs that have made them worse off (Ferraro and Pattanayak 2006; Sims 2008; Andam *et al*. 2008; Andam *et al* 2009). These studies, however, do not include instances where people have been displaced. Comparable arguments over REDD+ rewards for performance and compensation have already emerged (Sander and Zeller 2007; Shrestha *et al*. 2007).

## Comparing ICDPs and REDD+ projects

Most REDD+ demonstration projects aim either to sell carbon credits directly (through voluntary markets) or to seek rewards from their governments for contributing to national REDD+ goals. REDD+ demonstration projects have already taken several forms (Chapter 21). These range from payments for ecosystem services (PES) (Chapter 17) to more traditional forest management or conservation projects. These latter projects resemble ICDPs, although the areas they seek to conserve are not necessarily PAs.

A REDD+ project in its simplest conceivable form is a formal agreement to provide a stream of payments for meeting agreed upon targets to reduce local deforestation and degradation within a defined area based on the volume and value of reduced greenhouse gas (GHG) emissions. At local levels, this is conceptually similar to the ICDP concept of providing social and economic development benefits for reducing pressure on biodiversity in protected areas, even though ICDPs have rarely included such explicit contracts.

But ICDP and REDD+ objectives differ. ICDPs seek to conserve biodiversity in PAs, while REDD+ projects seek to reduce deforestation in specific areas, not necessarily or even primarily in PAs. REDD+ projects deal in carbon as a commodity in ways that PAs and ICDPs could never do with biodiversity.

Both ICDPs and REDD+ projects are concerned with *permanence.* Neither wants actions in one area to lead to negative effects elsewhere (*leakage*). Both want to reduce immediate threats to forest ecosystems and maintain their health so that they deliver sustainable ecosystem services and provide tangible benefits to local communities. Yet the anticipated scale of financing for REDD+ is much larger than ever imagined for biodiversity conservation, which may not matter for individual projects but will be important at broader scales.

While REDD+ projects are not linked to PAs in the same way as ICDPs are, ICDP experiences provide important lessons for designing and implementing efficient, effective and equitable REDD+ projects. Efforts to build the lessons learnt from ICDP experiences into REDD+ are now being made by the Climate, Community and Biodiversity Alliance (www.climate-standards.org), a partnership involving the private sector, NGOs and research institutes. Partners have implemented projects and developed principles and voluntary standards for forest carbon programmes that respect the rights of local and indigenous people, and also generate significant social and biodiversity co-benefits.

Balancing the requirements of REDD+ (storing carbon) and satisfying the expectations of local stakeholders may prove challenging. A key issue for REDD+ projects already encountered by ICDPs are whether individual households or local communities will be responsible for meeting contract conditions and what effects REDD+ funding will have on local development. Other key issues that a 'basic' REDD+ project that takes the payments for environmental services (PES) approach must resolve are:

- *how to monitor* forest carbon content (or an acceptable proxy) as a basis for claiming payment;
- identifying *who* to pay;
- determining *how much* to pay;
- working out *how to pay* (through transparent and accountable systems or funds) and *how to use* REDD+ payments; and
- how to ensure that REDD+ gains are *permanent*.

Additional challenges specific to REDD+ related to *leakage* and *additionality*, while critically important to REDD+ effectiveness overall, are arguably national or regional, rather than local issues.

While all these issues are important, the question of who should receive payments may be particularly problematic. Those holding rights to forest carbon should be rewarded to give them an incentive not to deforest. But identifying carbon rights holders is likely to be highly controversial. There are often disputes or ambiguity between legal owners (the *de jure* carbon rights holders) and the people, organisations or government agencies that actually manage the forests (the *de facto* rights holders). These tenure issues are explored further in Chapters 11 and 12.

The feasibility of carbon accounting at the project scale for REDD+ schemes is not yet clear. Monitoring changes in stored forest carbon and rewarding the appropriate rights holders might not seem to be difficult, and may involve communities themselves (Chapter 8). But tracking, verifying and rewarding

thousands or tens of thousands of rights holders in countries such as India or Indonesia, or in places where ownership is disputed, poses huge challenges. The bureaucratic complexities may be more than many developing country governance systems can reliably handle. But that concern goes beyond the scope of individual projects.

## Lessons from ICDP experiences for REDD+ projects

Although most proposals for global REDD+ mechanisms do not include standing forests, there are two main reasons why forest PAs and ICDPs should be considered when putting REDD+ into practice. First, countries hope to sell forest carbon credits earned from overall national REDD+ performance on compliance markets. PAs that avoid deforestation or degradation contribute carbon credits to overall national REDD+ credits. Making PAs more effective, including through ICDPs, thus appears a vital component of national REDD+ strategies, particularly as developing countries with the greatest areas of forest also tend to have large protected areas. Second, many early REDD+ demonstration projects share important features with ICDPs, particularly as regards REDD+ 'co-benefits', such as conserving biodiversity and generating sustainable livelihoods. Because of these similarities, ICDP experiences can and should inform REDD+ projects.

A major attraction of the ICDP approach – reconciling biodiversity conservation with social and economic development – proved more difficult than anticipated. The parallel challenge for REDD+ projects is linking carbon sequestration efforts with 1) incentive payments to protect forests, and 2) generating co-benefits. The risk with the former is that a REDD+ project could pay people or organisations lacking the legal rights or the capacity to protect the forest, or that *de facto* owners will be displaced; while the risk with the latter is that local people will not perceive that REDD+ offers a sufficient incentive for protecting forests. Both will be hard to avoid and either could lead to project failure.

With ICDPs, the links between conservation and development were often weak or lacking. Most investments in alternative livelihoods were insufficient and had little effect on the effectiveness of PAs, sometimes even leading to increased forest exploitation. Some studies even questioned whether ICDPs made any ecological or social contributions at all (Barrett and Arcese 1995; Ghimire and Pimbert 1997).

During the 1990s, it became evident that reported ICDP successes were based more on overoptimistic goals and expectations than on an analysis of actual experience, a mostly critical literature emerged and there were clear signs that 'establishing ICDPs that actually work has proven to be rather

more challenging than marketing the concept and raising funds [and] nearly a decade after first popularized, there is still a notable lack of successful and convincing cases where people's development needs have been effectively reconciled with protected area management' (Wells *et al.* 1999). We hope the same will not be said about REDD+ and forest conservation.

We do not know whether or not ICDPs improve the effectiveness of PAs because too few projects were rigorously monitored or analysed. ICDPs do tend to be associated with the most high-profile and best-known PAs simply because donors support these sites, and because most donor support for biodiversity conservation during the last two or three decades has been invested in ICDP approaches.

## What not to do

The main problems encountered by ICDPs were as follows.

1. Objectives were often unclear, incompatible, or poorly understood and interpreted differently by different stakeholders. Contradictions and tradeoffs between biodiversity goals, which can marginalise local stakeholders, and economic development goals, which can threaten biodiversity, were often glossed over or ignored.
2. Although planning stressed local participation and collaborative management, these processes were poorly understood and rarely implemented effectively. The 'project' approach was often unsuitable, with local actors expected to achieve 'ownership' and project activities expected to achieve 'sustainability' even with objectives, design, time-frame and budget largely determined by outsiders. In retrospect, the idea that a limited duration, stand-alone project could lead to large-scale, sustainable changes in human behaviour seems naïve.
3. Many ICDPs were overambitious and tried to address too many problems simultaneously, thereby ignoring one of the clearest lessons from earlier integrated rural development projects championed by international development agencies. Donors' expectations and assumptions in terms of contributions to mitigating rural poverty in and around PAs were often unrealistic.
4. The developing country institutions engaged to implement ICDPs (i.e., government agencies, NGOs and research organisations) often had a limited understanding of the ICDP concept. They also lacked the capacity to undertake complex sets of activities across disciplines and departmental jurisdictions.
5. While in principle committed to expanding local economic opportunities, ICDPs often did not create viable alternative livelihoods or boost household incomes in communities in and around PAs.

6. The activities of local people are less of a threat to many PAs than the development of infrastructure (roads, mines, dams, etc.) or the conversion of forest to agriculture by large enterprises. Most ICDPs or PAs have not successfully engaged with economic planning or land use decisions, thereby missing the main threats.
7. ICDPs were frequently frustrated by poor law enforcement in PAs. The importance of effective and equitable enforcement of PA laws and regulations as an essential element of ICDPs was not recognised. In particular, prevention of large-scale illegal logging or poaching by powerful commercial interests is well beyond the remit of projects, communities or PA management agencies.

These problems were compounded by:

- the reluctance of most organisations funding and implementing ICDPs to take account of the lessons emerging from early experiences (e.g., Wells and Brandon 1992);
- the belief that communities are homogeneous and harmonious and can meaningfully engage with external interests with little conflict; and
- a lack of accountability for on-site implementation with selective reporting on the part of NGOs and an apparent inability to learn among donors.

All of these lessons appear relevant to REDD+ demonstration projects.

**Table 18.2. Main lessons from ICDP projects relevant to REDD+ projects**

| What not to do | What to do |
|---|---|
| 1. Have unclear, incompatible and poorly understood objectives<br>2. Believe that stand-alone and time-limited projects can lead to large-scale sustainable changes<br>3. Establish overambitious goals, create high expectations<br>4. Commit to delivering livelihood opportunities where infeasible<br>5. Combine limited local capacity with complex activities and interactions<br>6. Focus on small local deforestation or degradation actors and ignore large-scale actors and land use planning<br>7. Maintain poor law enforcement inside PAs | 1. Use adaptive management and actions based on problem identification and solving<br>2. Establish strong and flexible local management organisations<br>3. Get long-term funding, and communicate how it will be performance based<br>4. Enable local communities and institutions to participate in real decision making |

## What to do

ICDPs offer positive lessons for REDD+ projects, including the conclusion that it is not 'that the *principle* of linking protected area management with local social and economic development is flawed [but] the *expectations* and *implementation* that have been problematic' (Wells *et al.* 2004).

REDD+ projects may take on too much and fail as a consequence, especially where land and resource uses and tenure, including ownership of carbon rights, are not clear. REDD+ projects would be challenging enough if their only objective was to reduce carbon emissions. But, as REDD has become REDD+, project objectives now span not only the conservation and sustainable management of forests but also the enhancement of carbon stocks and co-benefits such as biodiversity conservation, watershed protection, other ecosystem services and poverty mitigation. REDD+ may even become REDD++ or 'fair trade carbon' where projects must be environmentally and socially responsible while demonstrating improved governance and clarifying property rights (Griffiths 2008; UNFCCC 2009a). While REDD+ projects are likely to attract much more money than ICDPs, this does not guarantee that they will be designed and implemented more carefully; rather, the ICDP experience suggests the opposite.

While avoiding the seven main ICDP problems outlined previously is imperative, the authors' experiences suggest that the following implementation lessons from the more promising ICDP approaches should be considered by those promoting REDD+ projects. All of these are elaborated in the participatory rural development, PA and ICDP literature.

1. Replace standard blueprint project designs with adaptive management and actions geared toward problem identification and solving (which is not the same as 'learning by doing'). This applied research approach integrates design, management and monitoring so that projects systematically test assumptions, adapt and learn (Salafsky *et al.* 2001). Interventions that start small and simple and build on early successes appear to have good long-term prospects.
2. Staff local management organisations with people with the capacity and authority to exercise judgement and deploy resources flexibly, both to enforce regulations (e.g., restrictions on logging) and to generate co-benefits (e.g., promote livelihood opportunities).
3. Provide long-term funding commitments (i.e., a decade or more) rather than conventional project support for short time periods. A key part of building trust among local stakeholders is for them to know where the funding is coming from and why, who will receive the funds and how long this will continue.

4. Put mechanisms in place that enable communities and institutions to make decisions and own projects rather than depend on outside agencies. Many developing country government agencies need more flexibility in overstepping jurisdictional boundaries, and agencies need greater flexibility and willingness to work together on finding REDD+ solutions and addressing local communities' needs. Similarly, government agencies often need help or confidence building before working effectively with local or national NGOs.

## PAs and ICDPs in REDD+

The REDD+ discussions have paid little attention to forest PAs, and this needs to be corrected. Forest PAs are likely to become a critically important element of tropical forest countries' strategies to implement and benefit from REDD+. The effective management of forest PAs (in some cases linked to ICDPs) has the potential to make significant contributions to national REDD+ performance and the sale of carbon credits if forest carbon markets emerge as expected.

There are similarities and overlaps between the approaches and methods of ICDPs linked to PAs and REDD+ demonstration projects. REDD+ project proponents could usefully take lessons from ICDPs into account. The reasons why most ICDPs have failed to meet their objectives are well understood and thoroughly documented. Despite this, mistakes continue to be repeated, demonstrating the disconnect between research and practice.

REDD+ demonstration projects have generated considerable excitement, relatively large donor support and very high expectations among stakeholders. They are also being implemented in an atmosphere of impatience and haste. This increases the risk of failure and could undermine the REDD+ initiative, the most exciting development in tropical forest conservation in the past 30 years.