Conservation agreements as a strategy for long term stakeholder participation and assured biodiversity conservation, in north Western Ghats, India

Archana Godbole, Sameer Punde & Jayant Samaik
Applied Environmental Research Foundation (AERF), Pune, India
www.aerfindia.org

Abstract

The Western Ghats is a global biodiversity hotspot where 74 percent of existing forests remain outside protected areas. The lack of economic opportunities for most landowners drives them to lease out forests to logging contractors. Since the causes of deforestation are directly linked to the economic needs of the local populace, an incentive-based mechanism for private land conservation was tested by conservation –non governmental organization (NGO) Applied Environmental Research Foundation (AERF) in Ratnagiri District in the north Western Ghats. The use of incentives for conservation – termed here as "conservation agreements" -- is a tried and tested strategy in countries such as North and South America, however new to India. This paper presents the need for this strategy for regions such as the north Western Ghats as well as discusses the workings and experiences of a pilot project while associating with various stakeholder groups in the region. In conclusion, the use of this strategy and its expansion and implementation in other parts of India where protected area networks may be poor is recommended.

Introduction

Arresting deforestation and conserving remaining forests is probably the single largest challenge faced by conservation practitioners the world over. Designation of statutory Protected Areas was probably the first attempt to conserve forests and wildlife which began in the west in the late 1800s. However, recent assessments of the protected area strategy have revealed that merely 12 percent of global biodiversity is currently represented in protected areas (Brookes, *et al.,* 2004). Closer to home, the Critical Ecosystem Partnership Fund (CEPF) (2007) states that up to 74 percent of forests in the Western Ghats of India lie outside the protected area network.

With one of the highest human population densities in the world, India has a high rate of deforestation. Between 1920 and 1990, the Western Ghats – one of the two biodiversity hotspots in India -- experienced a 40 percent reduction in forest cover (Menon and Bawa, 1997). Major factors behind tropical deforestation have been attributed to economic factors and national or regional policies that drive agricultural expansion and infrastructure development (Helmut, *et al.,* 2002). However, in a regional context, deforestation often occurs due to issues related to land tenure and land use, local and regional energy demand as well as livelihoods (Punde, 2009). This article presents the case of two districts – Ratnagiri and Sindhudurg (Maharashtra)

within the Western Ghats hotspot of India where a majority of existing forest cover is on private land. Here, local livelihoods and energy needs are directly linked to the forests on private lands and therefore a protected-area approach may not have been feasible. The authors are associated with the Applied Environmental Research Foundation (AERF) – a local non governmental organization (NGO) which tested the use of "conservation agreements" whereby co-management agreements were established and incentives were provided to landowners. Conservation agreements and similar incentive-based mechanisms for conservation are often debated as measures that escape participatory processes and stakeholder engagement therefore may have a negative social impact (Milne and Niesten, 2009). At the end of the one-year pilot phase, the authors undertook a stakeholder analysis for the conservation agreements implemented on 100 acres of private forests. The results of this review with stakeholders and experiences of implementing this approach for the first time in India have been discussed here.

The region in focus

The Western Ghats is one amongst 34 global biodiversity hotspots (see www.biodiversityhotspots.org) and is characterized by a mountain range parallel to the entire western coast of peninsular India. Every year, south-westerly winds bring heavy monsoon clouds from the Indian Ocean into this mountain system causing heavy rains measuring up to 2,500 millimeter (mm) in the months of June and July. The remaining months are hot and dry with temperatures soaring to 32°C in April and May. Elevated between 1,000-2,000 above mean sea level and barely 40 kilometer (km) from the coast, the unique geography and climatic conditions of this region supports an immense amount of biological diversity with 5,000 flowering plants of which 1,700 are endemic.

The Western Ghats is, therefore, a region of global conservation importance. However with a hotspot spanning 170,000 sq. km in area, conservation issues are complex and a single conservation strategy alone may not provide achievable conservation outcomes.

The north Western Ghats falls within the administrative districts of Thane, Raigad, Ratnagiri, Sindhudurg, Pune, Satara and Kolhapur in the state of Maharashtra. Recent prioritization studies for the Western Ghats have identified one major landscape placed in the northern region and eight priority sites (CEPF, 2007). Recent prioritization studies for the Western Ghats (Bawa, *et al.,* 2007; Das, *et al.,* 2006) have identified major gaps in the existing protected area network in the biodiversity hotspot and have reported 74 percent of existing forests outside protected areas. The north Western Ghats supports moist and dry deciduous forests with semi-evergreen

patches on higher elevations. The official forest cover assessment in 2003 estimated at 2,711 sq.km of existing forest cover in the district of Ratnagiri and 2,223 sq.km in Sindhudurg. Based on data from the *Maharashtra Gazetter* and the district Forest Department, the authors estimate only 1.3 percent of the district is currently within protected areas. It is difficult to estimate the total area of forests on private lands in this region; however, based data from the Forest Survey of India and *Maharashtra Gazetteer*, Aaron Welch (See Welch in this volume) estimated 600,000 acres of private forests in Ratnagiri District alone. This is a considerable area which requires urgent conservation intervention.

When in dire need of cash, poverty stricken landowners in this region lease out forests on their lands to logging contractors who then supply fuel wood and timber to local industries. Therefore, any conservation measure in this region would need to address the economic needs of the landowners and therefore an incentive-based mechanism, popularly known as "conservation agreements," was used. The Conservation Agreement Model developed by Conservation International (2007) was tested by AERF in Ratnagiri District covering an area of 100 acres.

Methodology: Implementing Conservation Agreements and Stakeholder Analysis

Conservation incentive agreements, in recent years, have proved to be a viable strategy for conservation on private lands. International agencies such as The Nature Conservancy and Conservation International are successfully using this strategy globally (See Welch in this volume). However, this has not been attempted in India. In areas such as the north Western Ghats, where forests and important habitats on private lands are rapidly being cleared, conservation incentive agreements appear to be a viable if not the only solution.

Site selection

On the basis of a district-wise conservation prioritization study (Punde, 2007), 17 locations in the districts of Ratnagiri and Sindhudurg were identified which fulfilled criteria set out by Plantlife through the Important Plant Area program and Forest Stewardship Council through the High Conservation Value Forest (HCVF) scheme. Apart from community protected forests (sacred groves), 10 of the 17 priority locations also included vast tracts of private lands with standing forests. In order to implement the first set of conservation agreements, preference was given to locations identified during the prioritization study.

Design and implementation of agreements

Rural communities, often due to the lack of economic opportunities, are unlikely to alter their patterns of production or consumption which eventually leads to degradation of

natural resources and economic deprivation. In such cases, incentives in the form of cash or non-cash are useful tools to influence or motivate rural communities towards sustainable management and conservation, according to the International Union for the Conservation of Nature (IUCN) (2001). During the course of this project, a situation analysis – a process modified and used for conservation projects (Bibby, *et al,.* 2003) was undertaken to understand the linkages between the socio-economics of local communities and deforestation on private lands. The situation analysis therefore provided a vital planning tool to design and implement the conservation incentive agreements in Ratnagiri District. Following the selection of sites and after gaining an understanding of the economic influences of deforestation, the agreements were established through a process beginning with awareness generation, negotiation, planning and monitoring (see Fig.2). Design and implementation of incentive agreements has been discussed in detail by Milne and Nieston (2009), Conservation International (2007) and IUCN (2001), which have been important for the design and implementation of incentive agreements descried here. The first set of agreements covered a total of 100 acres spread over five villages in one district. The results of the situation analysis have been depicted in the Results section of this paper along with details of the agreements established during the pilot phase (2007-08).

Evaluation through stakeholder analysis

As mentioned earlier, incentive agreements are often debated as mechanisms that seek to escape the participatory process or engagement of stakeholders. To disprove this argument, the authors engaged with stakeholders during and after the implementation of the pilot conservation agreements in Ratnagiri. Engagement was undertaken through a series of formal and informal meetings, interview schedules and consultations with key stakeholders including landowners, community leaders, logging contractors, laborers and forest department officials.

Results – the Success and Learnings from the Pilot Phase

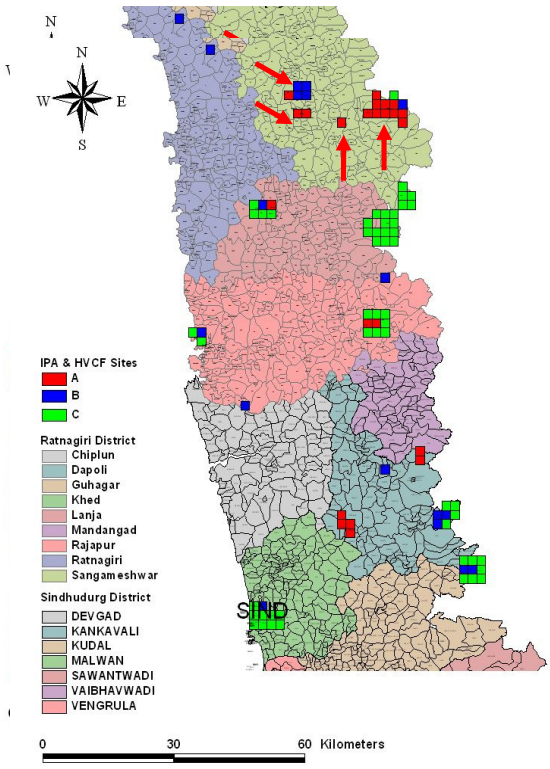
The following section presents the results of the pilot phase (2007-08) of implementing conservation incentive agreements in the north Western Ghats. The first set of results depict the details of the first set of agreements established in Ratnagiri District shown in a Table 1 along with a map (Figure 1) depicting locations brought under agreements against priority locations identified. The second set of results show the stakeholders involved in the process and results of the stakeholder analysis.

Table 1: Details of the First Set of Agreements

Village	Area (in acres)	Tenure of Agreement	Type of Incentive

Village	Area (in acres)	Tenure of Agreement	Type of Incentive
Ambavli	7	5 years	Cash incentive for a farmer family
Rajewadi	25	10 years	NGO partnership - voluntary
Ujgaon	7	5 years	Agroforestry loan
Kasar-Kolvan	13	5 years	Cash incentive for farmers group
Saile-Katawli	30	25 years	Development aid for enti community

Figure 1: Priority Areas (highlighted) Currently under Agreements in Ratnagiri and Sindhudurg Districts



Sites under agreements depicted by red arrows.

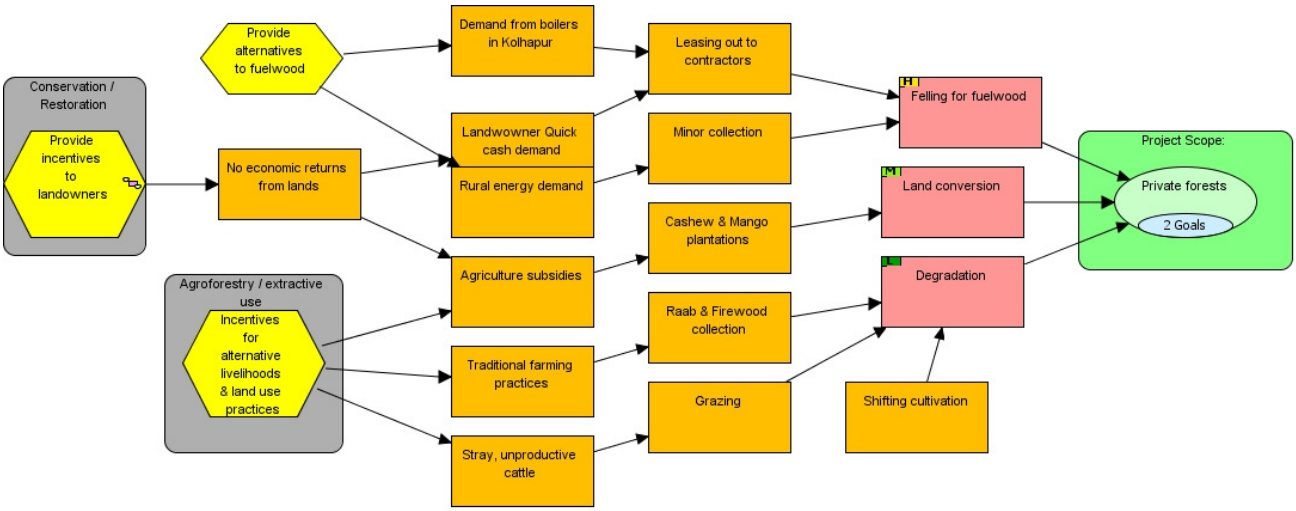
Table 2 depicts the results of the consultations with stakeholders.

Table 2: Results of Stakeholder Analysis and their Support for Conservation Agreements

Stakeholder Group	Key Role/Influence	Support for Agreements
Landowners	Resource users/managers for forests on private lands	Positive support (only if economic benefit or

Stakeholder Group	Key Role/Influence	Support for Agreements
		livelihood support is assured)
Migrants to cities	Influence decision-making at the community level	Neutral
Logging contractors	Key stakeholders that influence or drive deforestation often employing local people for felling	Will only support agreements i some forests are made available to them for felling
Laborers working for contractors	Livelihoods directly dependant on logging on private lands	Will only support if alternative livelihoods are provided
NGOs	Generating awareness	Positive support
State/district Forest Department	Regulate transport of logs using stat felling laws	Positive support however legal restrictions over private lands
Private Sector	Energy demand, wider impact on t environment	Financial support through Corporate Social Responsibility (CSR)

Figure 2: The Situation Analysis for Conservation of Forests on Private Lands



Discussion and Conclusion

This study presents experiences from a pilot project involving the implementation of conservation incentive agreements in the district of Ratnagiri which lies within the Western Ghats global biodiversity hotspot and where a majority of forests are on private lands. Based on an assessment, priority locations were identified and conservation incentive agreements were established following a process of awareness generation, negotiation and consultation with landowners as well as key stakeholders

in the region. The situation analysis of the deforestation on private lands provides support for the need for incentive agreements as well as the design and implementation of agreements in the region. Consultation with stakeholders reveals wide support for the program from key stakeholders. This shows that incentive-based mechanisms for conservation do not escape participatory processes and, in fact, participatory processes and stakeholder engagement are crucial in the success and sustainability of conservation agreements. The results of the pilot implementation at five different locations reveal that there cannot be a standard methodology or design for conservation incentive agreements. Design and implementation of such agreements need to be dealt on a 'case-by-case' basis. The authors' experiences and results show that no two agreements were similar and every agreement is formed as a result of a negotiated process. Finally, it is fair to conclude that the pilot phase of implementing conservation agreements has been a success and thereby suggests expansion to other areas within the Western Ghats or areas where forests exist on private lands and need urgent conservation intervention. However, the challenge lies in long-term sustainability of such agreements which depends on financial support for which corporate social responsibility (CSR), carbon offsets and individual sponsorships are being explored through a website – www.myforest.co.in

Acknowledgments

The authors are grateful to the Rufford Small Grants Foundation (RSGF) for providing financial support for the pilot phase of the project as well as the Ashoka Trust for Ecology and the Environment (ATREE) for funding the first assessment in 2008. The authors also express their gratitude to the AERF staff and field operatives – Mr. Sanjay Pashte for their continual support as well as the first group of landowners who showed enthusiastic support for this project – Mr. Satish Kamat, Mr. Satish Bondre, Mr. Ashok Mangle and others.

References

Bibby, C.J. and C. Alder, C. (Eds.), 2003. *The Conservation Project Manual*, BP Conservation Programme, Cambridge, U.K.

Brooks, T.,M Mohamed i.Bakarr, T. Boucher, Gustavo a. B. Da fonseca, Craig Hiltontaylor, Jonathan m. Hoekstra, Tom Moritz, Silvio Olivieri, Jeff Parrish, Robert l. Pressey, AnaS. L. Rodrigues, Wes Sechrest, Ali Stattersfield, Wendy Strahm, and Simon n. Stuart, 2004. Coverage Provided by the Global Protected Area System: Is it Enough? *Bioscience* 54:12 (1081 – 1091).

CEPF, 2007. Western Ghats and Sri Lanka Biodiversity Hotspot: Western Ghats Region Ecosystem Profile. Critical Ecosystem Partnership Fund, ConservationInternational, Arlington.

Conservation International, 2007. Conservation Agreements: Model, Design and Implementation. Conservation International, Arlington.

Godbole, A.J., J.P. Sarnaik and S.P. Punde, 2007. Reviving Traditional Conservation Practices in the North Western Ghats. AERF Technical Report. Available at www.whitelyaward.org

Helmut, J.G. and E.F. Lambin, 2002. Proximate Causes and Underlying Driving Forces of Tropical Deforestation. *Bioscience*. 52:2. *ProQuest Biology Journals*.

IUCN, 2001. Community-based Incentives for Nature Conservation. Available at http://economics.iucn.org (September 2008).

Menon, S. and K.S. Bawa, 1997. Applications of Geographical Information Systems, Remote Sensing and a Landscape Ecology Approach to Biodiversity Conservation in the Western Ghats. *Current Science* **73:** 134-145.

Milne, S. and E. Niesten, 2009. Direct Payments for Biodiversity Conservation in Developing Countries: Practical Insights for Design and Implementation. *Oryx* 43: 4) (530-541).

Punde, S.P., 2009. Protecting the Unprotected Forests on Private Lands – Case from the Sahyadri-Konkan Corridor. AERF Technical Report (unpublished).

Punde. S.P., 2007. Prioritizing Areas for Forest Conservation in the Konkan Region of the Western Ghats Hotspot (India) – a Pilot Study. AERF Technical Report. Available at www.biodiversityhotspots.org (August 2008).