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The Living Landscapes Program is a Wildlife Conservation Society initiative that identifies, tests, and implements wildlife-based strategies for the conservation of large, wild ecosystems integrated within wider landscapes of human influence.

SETTING PRIORITIES: THREATS REDUCTION OR MONITORING EFFECTIVENESS?

The Importance of Monitoring

For years the conservation community and donors have been lauding the virtues of monitoring project effectiveness. We would all likely agree that unless we monitor the outcomes of our conservation investments, we will never know whether or not they have been successful, and we will never learn what actions lead to the success or failure of a particular conservation strategy or approach. Without monitoring we run the risk of pouring considerable resources into ineffective activities that do little if anything to reduce threats and conserve wildlife and wildlands. That said, deciding how much to allocate to threats reduction and to monitoring effectiveness is a challenge most often met by simply neglecting the latter and spending exclusively on the former. Wildlife conservation projects are all designed to reduce the pressure of human land and resource uses on animal populations and their habitats. Conservation monitoring is therefore an attempt to measure and evaluate, over time, the consequences of human actions on biological systems, and the success or failure of efforts to reduce undesired effects.

A Real-World Dilemma

The conservation community has developed tools to rank threats and set priorities for taking action to reduce threats. We also have a growing understanding of how to assess the trade-offs associated with monitoring our conservation objectives directly or through proxies (i.e., threats and interventions). However, we do not at present have a tool for helping us decide how much of our perennially scarce resources to allocate to reducing threats and monitoring effectiveness. In the real world of resource conservation where money is limited, we are faced with a non-trivial task – how to decide when to spend money on monitoring rather than reducing a threat further or tackling the next threat.



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Key Concepts:

- The conservation community has developed tools to rank threats and set priorities for taking action to reduce threats.
- The conservation community also understands that monitoring is essential if we are to learn whether or not we are reducing threats and understand which interventions are effective and which are not effective.
- When personnel and finances are limited, we must decide how much to allocate to threats abatement and how much to allocate to monitoring.
- In the absence of a decision-making tool to “objectively” allocate resources to abating threats and to monitoring our success, we most often simply neglect the latter and spend exclusively on the former.

Do we decide to address only threats for which we have the resources for both abatement activities and outcome monitoring? And if so, what percentage of available resources do we allocate to reducing and monitoring a particular threat? If two threats are equally ranked in conservation importance but one is much more costly to abate than the other, do we preferentially monitor the former because of its higher opportunity costs? Is saying that an intervention works when it does not a more serious mistake if the intervention is expensive? Do we care if monitoring indicates that an intervention is not working when it is? If one threat is inexpensive to abate but expensive to monitor with confidence and another threat is expensive to abate but cheap to monitor, how do we choose between the two dyads if money is limited? If we can assess effectiveness within a few months in relation to one threat and at the same cost in a few years for another, should we first invest in the threat that can be most quickly monitored?

Deciding which threats to abate and which threats to monitor is not simple, even for a geographically limited and highly focused conservation effort, such as managing the harvest of chewing sticks in a village woodlot. These questions become much more complex, and even less trivial to solve, when the scale of conservation expands to the landscape level and the number of threats and the costs of monitoring increases significantly. In an ideal world without personnel and financial constraints, we would tackle all threats and monitor the implementation of our interventions, the reduction of threats, and our progress toward attaining our conservation objectives. In the absence of a decision-making tool to “objectively” allocate resources to abating threats and to monitoring our success, we have, in the past, dealt with this dilemma simply by focusing most, if not all, of our resources on threats reduction and paying lip service to monitoring.

Allocating Scarce Resources - An Unclear Example

Using a little imagination, we can conjure up an example that shows how complex this priority setting challenge is. Let’s assume that we are trying to conserve wildlife within a forest in West Africa. Let’s also assume that we can rank threats according to an accepted set of criteria and that we can estimate the costs of abatement and of monitoring – all of which requires considerable knowledge or significant guesswork. Lastly, let’s assume that we have 200 units of available resources to abate threats and monitor outcomes. Using three different scenarios for resource allocation, we can show how difficult it is to prioritize allocation of resources to abate and monitor threats. We could attempt to abate all threats and monitor just the implementation of our interventions – total cost 197. Alternatively, we could abate and comprehensively monitor just the top two ranked threats – total costs 196. That said, we almost have the resources to abate the first three threats and monitor implementation and threats reduction – total cost 201. So how do we decide? Do we implement everything perfectly or do we skimp on some activities to save money? Does skimping carry its own costs?

Threat	Threat reduction		Monitoring cost (time x unit cost)				Total Cost
	Rank	Abatement cost (time x unit cost)	Implementation	Threat	Objective	Monitor All	
Commercial hunting	1	25	6	11	65	82	107
Timber harvesting	2	48	3	3	35	41	89
Forest clearing for agriculture	3	84	13	8	10	31	115
Sand mining in wetlands	4	12	6	6	21	33	45
TOTAL		169	28	28	131	187	356

197 201 196

An example showing the difficulty in allocating resources to reducing threats and monitoring effectiveness when available resources (200 units) are insufficient to cover all costs (356 units).

To help answer these questions, the Living Landscapes Program is leading a collaborative effort with the Nature Conservancy, the World Wildlife Fund, and other partners within the USAID-supported Global Conservation Program, to develop a resource allocation decision-making tool. We propose that an experts group, over the next 6 to 9 months, explore approaches to reconciling how conservationists might objectively prioritize the allocation of scarce resources to abating threats and monitoring the effectiveness of such actions.

The experts group will, at the end of this process, have developed a prototype expert system (e.g., decision tree) that site-based conservationists can use to help them allocate their staff and funding resources to reduce threats and monitor success.

Upcoming Bulletins:

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NGO/Private Sector Partnerships

Community-based Wildlife
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Threats Analysis and Coalition
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