

Integrating Problem Formulation in Tools, Methods and Approaches for Articulating Trade-offs in Conservation and Development: The case of Cat Tien National Park, Vietnam

Anderson, Z.^{1,2}, Hirsch, P.³, O'Connor, S.⁴, Sunderland, T.¹

¹Center for International Forestry Research, Indonesia; ²Center for Integrative Conservation Research, USA; ³Syracuse University, Maxwell School of Citizenship and Public Affairs, USA; ⁴Arizona State University, USA
For further information, please contact zach1224@uga.edu

Introduction

There is a growing awareness within the conservation community of the complex trade-offs that exist between the goals of biodiversity conservation and human well-being and development. Trade-offs occur at a variety of scales, from local to international, and often have to be negotiated across boundaries, both physical and institutional.

The basic definition of trade-off is that some things are gained and others lost. A focus on trade-offs allows multiple actors to recognize the hard choices involved in conservation and development, the outcomes of which will change the diversity, functioning, and services provided by ecosystems and the range of opportunities available to people over space and time. More explicit acknowledgment of trade-offs and hard choices may lead to more resilient and sustainable conservation outcomes (McShane et al. 2010).

Trade-off thinking and TMAs

We are interested in various tools, methods and approaches (TMAs) applied in the nexus of conservation and development. While trade-offs are beginning to be thought about in context of the outcomes of conservation and development projects, the selection of tools, methods, and approaches for understanding and negotiating trade-offs is an important decision that is rarely reflected upon adequately.

Our claim is that by selecting and applying TMAs with recognition of the multiple ways of formulating problems that arise from the diverse perspectives of the various stakeholders involved, we will be able to more explicitly identify and articulate trade-offs. Making trade-offs explicit will hopefully allow for more resilient processes and help reduce some of the tension between conservation and development objectives.

Case Study: Cat Tien National Park, Vietnam

Cat Tien National Park (CTNP) is located in the south of Vietnam, about 150 km North of Ho Chi Minh City (CTNP n.d). It is situated in the administrative area of three provinces: Dong Nai, Binh Phuoc and Lam Dong. The Park is divided into three sectors in each of the provinces, respectively Nam Cat Tien, Tay Cat Tien and Cat Loc. CTNP is one of the largest national parks in Vietnam, with a total area of almost 72 000 ha (Polet and Ling 2004).

Our analysis of Cat Tien National Park thus far has relied on case study data collected by CIFOR and interviews with people representing eight different perspectives relevant to the park and ongoing conservation and development projects in the area. These perspectives included that of: an ecological researcher who has worked in the park; park staff; a guide who has worked at the park for over ten years; the park administration; a representative of an NGO working with the park: a

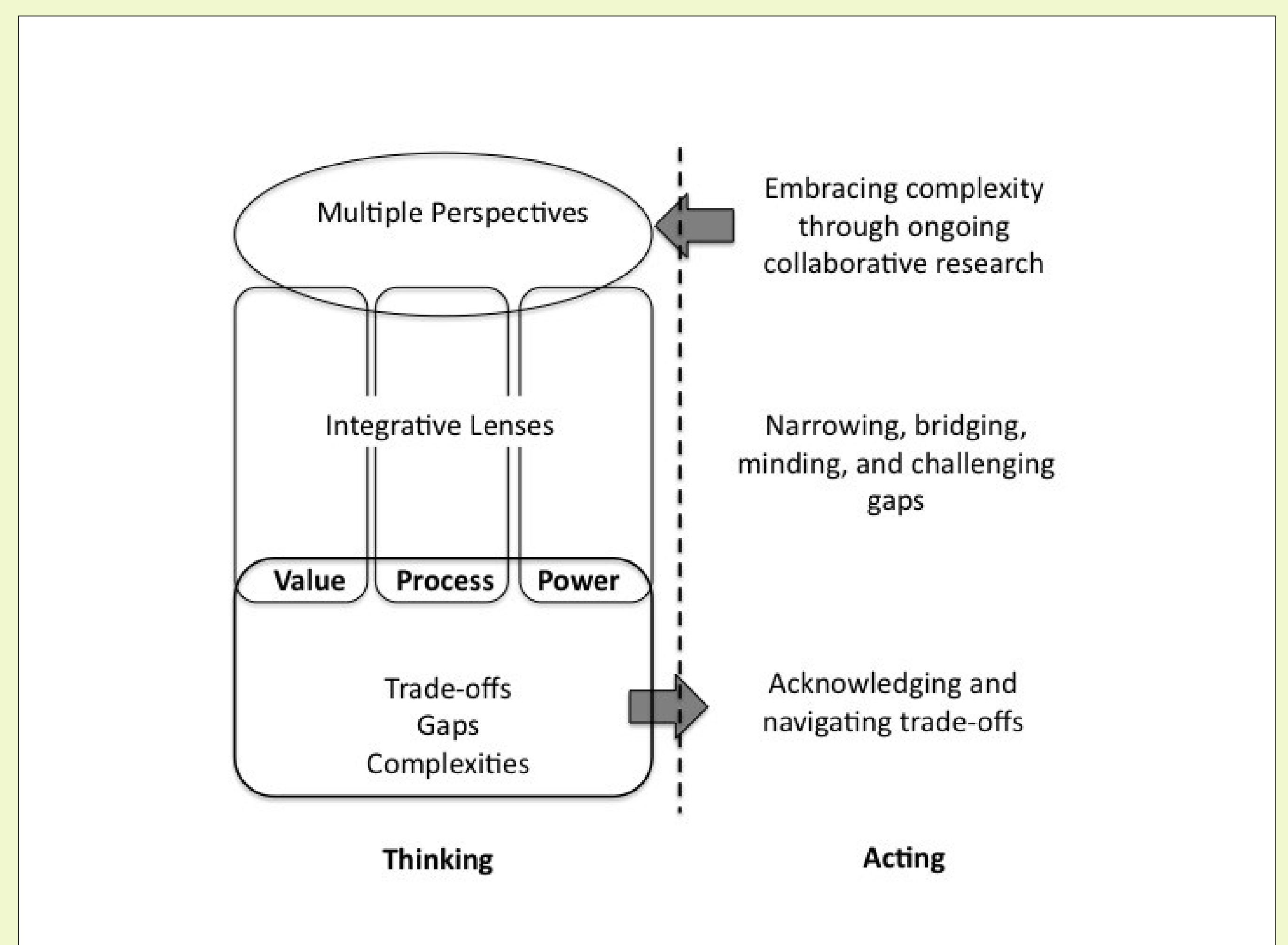


Figure 1: The ACSC Integrative Framework

Table 1: The three lenses of the Integrative framework applied to Cat Tien National Park.

Value	Process	Power
200,000 people in park and buffer zone. Supported by agriculture, livestock, hunting, non-timber forest products.	1978 - 35 000 ha in Nam Cat Tien protected as part of efforts to double country's forest cover	People living in the core zone are not allowed to own their land and are treated only as <i>defacto residents</i> .
11 ethnic minorities	1986 - Government proposed a 10 000 ha nature reserve in Tay Cat Tien.	Relocation - Many of the people within the park are subject to possible relocation due to their perceived threat to biodiversity, while people living in the buffer zone still harvest forest resources for sale to markets.
One of the largest parks in country; core and buffer zones equal ~320 000 ha	1986 - Buffer Zone re-designated as a New Economic Zone, resulting in influx of immigrants	The power of the Rhino - Park-reliant people's livelihoods are being compromised because they are perceived as a threat to the Javan rhino.
Exceptional biodiversity, and home to many endangered species.	1992 - Rediscovery of lesser one-horned rhinoceros in Cat Loc; Nam Cat Tien upgraded to National Park and increased to 38 900 ha.	
Only known population of a sub-species of Javan rhino.	1998 - Cat Tien is recognized as a single administrative unit	
Two of the most threatened mammals in Vietnam (2 species of wild buffalo).	1998 - UNESCO recognized CTNP as a UNESCO Biosphere Reserve Zone	
The Park and its neighboring state-owned logging concessions is the only remaining example in southern Vietnam of a mosaic of habitats that include riparian and wetland ecosystems	2003 - RAMSAR Convention recognized the Bau Sau Wetland Complex as the 1499th most important wetland area of the world	

References

- Hirsch, P., et al. 2010. Acknowledging Trade-offs, Embracing Complexity: A Challenge for Conservation.
- McShane, T., et al. 2010. Making Trade-offs between Biodiversity Conservation and Human Well-being. *Biological Conservation*.
- Polet, G., and S. Ling 2004 Protecting mammal diversity: opportunities and constraints for pragmatic conservation management in Cat Tien National Park, Vietnam. *Oryx* 38(2):186-196.

Acknowledgements

This project was supported by the MacArthur Foundation, the Center for International Forestry Research and the Advancing Conservation in Social Contexts Initiative. We acknowledge the Cat Tien National Park Management Board, Vietnam; the Center for Natural Resources and Environment Studies, Vietnam; and the personal assistance of Nguyen Tran Vy and Hoang Van Thang. We also acknowledge all organizations and persons interviewed, especially participants of the 2007, 2008, and 2009 workshops run by CIFOR.



Drawing from these interviews and background data we have performed a preliminary analysis using the Integrative Trade-off