Assessing conservation success of protected areas under global change

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GoBi – Assessing Biodiversity Governance and Management Approaches

The GoBi project aims to investigate success and failure factors of protected areas in the tropics and subtropics to provide recommendations for protected area managers and policy makers on how to achieve protected area objectives. The interdisciplinary research team is lead by PD Dr. Susanne Stoll-Kleemann and consists of four PhD students, three master students, a research assistant and at times student apprentices.

The project follows an **integrated methodological approach** that combines the following elements:

- a comprehensive **literature review**
- a qualitative analysis and a quantitative **meta-analysis** of about ninety case studies of PA management from the literature
- an **expert assessment** based on expert interviews (>120) and a ranking questionnaire on potentially influencing factors (>170)
- several of the group's own detailed **case studies**, primarily in protected areas and biosphere reserves in South Africa, South East Asia, and Latin America
- a global **telephone survey** following and completing the expert interviews, and
- an analysis of databases and supporting fieldwork

Governance: who has influence, who decides, and how are decision-makers held accountable

PA Management: structure and processes → what is done to achieve conservation goals?

Protected Area (PA) vulnerability

impact
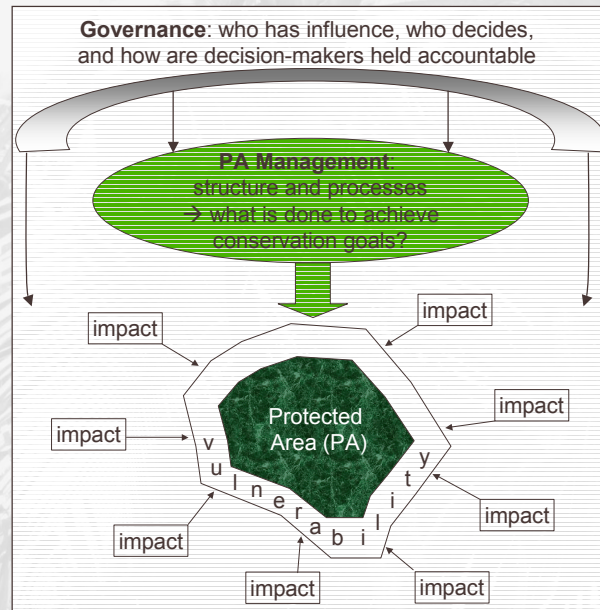
The task: Assessing Conservation Success

To check progress towards the CBD's 2010 target several indicators have been set up[1], among them the percentage of country surface declared protected. Unfortunately, many times it remains unsure, whether PAs do in fact achieve their objectives or instead are only ‚paper parks'. Global change consequences do furthermore increase the challenge to safeguard what is left. In order to maximise the efficiency of conservation activities, conservation success needs to be assessed. Here, the vulnerability of a PA plays a major role in determining the magnitude of effort the PA management is faced with and therefore directly relates to the probability for achieving successful conservation.

As a matter of fact, ecological data to be used in such an assessment is usually strongly limited. Consequently, qualitative social research methods are increasingly acknowledged as a way of access to the information needed. Natural and social sciences thus have to be integrated.
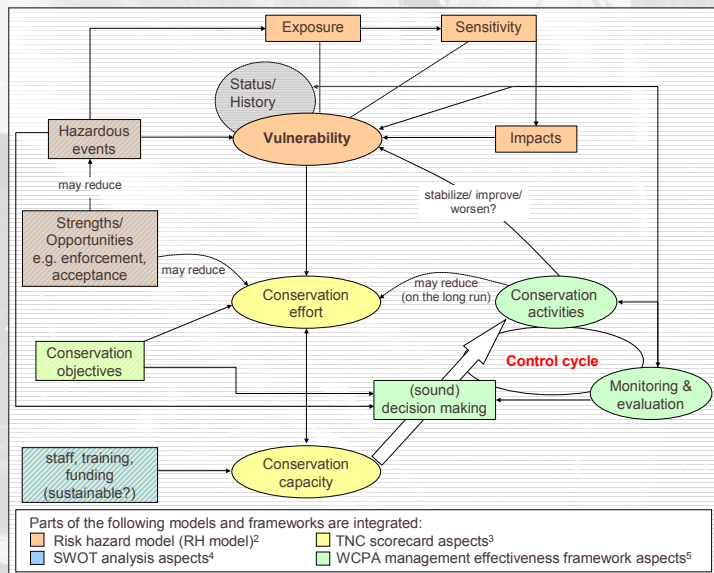

Parts of the following models and frameworks are integrated:
- Risk hazard model (RH model)[2]
- SWOT analysis aspects[4]
- TNC scorecard aspects[3]
- WCPA management effectiveness framework aspects[5]

Figure 1: The current version of the 'Conservation Success Model'

The method:

Step 1: *Developing a 'Conservation Success Model'*

In order to understand the underlying system of successful conservation in PAs the context as well as dynamic interrelations of influencing factors need to be clear (current version see figure 1)

Step 2: *Development of interview guidelines for various stakeholders*

Due to data scarcity, qualitative social studies will be conducted on various levels of detail

Step 3: *Case study on Cuba*

Two Biosphere Reserves on Cuba will be closely investigated applying the developed methodology

Step 4: *Analysis*

Data will be analysed and results on interrelations of factors and their weight of importance backed up with more information from other project components

The objective:

Development/Identification of indicators for success and failure as well as patterns of factors influencing a site's success in achieving conservation objectives. Ideally, factors are to be weighted in order to model interrelations of different aspects in terms of possible global change scenarios. Results will be integrated with results from all PhD and master theses compiled within the GoBi project to end up in a broad overview about success and failure factors in biodiversity conservation, covering ecological as well as social, economic and political issues (management and governance).

Literature cited:

[1] Balmford, A., Bennun, L., Brink, B. t., Cooper, D., Côte, I. M., Crane, P., et al. (2005). ECOLOGY: The Convention on Biological Diversity's 2010 Target. *Science, 307*(5707), 212-213.

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[3] TNC & USAID (2002) Measuring Success: The Parks in Peril Site Consolidation Scorecard Manual, pp. 22. The Nature Conservancy and US Agency for International Development, Arlington, Virginia.

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[5] Hockings, M., Stolton, S. & Dudley, N. (2000) *Evaluating Effectiveness: A Framework for Assessing the Management of Protected Areas.*, IUCN, Gland, Switzerland and Cambridge, UK.