



CENTRE FOR EVIDENCE-BASED CONSERVATION

SYSTEMATIC REVIEW No. 20

**DEVELOPMENT AS A CONSERVATION TOOL: EVALUATING ECOLOGICAL,
ECONOMIC, ATTITUDINAL, AND BEHAVIORAL OUTCOMES**

REVIEW REPORT

Reviewers: Brooks, J.S., Franzen, M.A., Holmes, C.M., Grote, M.N.,
Borgerhoff Mulder, M.

Postal Address: University of California, Davis
Department of Anthropology
One Shields Avenue
Davis, CA 95616
USA

Email: mborgerhoffmulder@ucdavis.edu

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SYSTEMATIC REVIEW SUMMARY

Background

In the past 25 years, using development as a conservation tool has become central to policy and various strategies for linking conservation to development have become prominent. This reflects the recognition of the importance of local support for conservation and the associated assumption that conservation ultimately depends on development and vice versa. Despite sound arguments both for and against the effectiveness of these strategies (Wells 1992; Barrett & Arcese 1995; Oates 1999; du Toit 2004; McShane & Wells 2004), there have been few quantitative comparative evaluations of their successes and failures (Bruner et al. 2001; Salafsky et al. 2001; Struhsaker et al. 2005). As the focus on, and funding towards, conservation and development projects increases, it is essential that the paradigm be more rigorously examined. Here we test some of the assumptions of the conservation and development paradigm using four measures of success; ecological, economic, behavioral, and attitudinal.

Objective

The objective is to assess the characteristics of conservation projects that lead to successful ecological, economic, behavioral, and attitudinal outcomes and to determine the quality and quantity of monitoring efforts in the field. To achieve this, five questions were asked, the first of which addresses the quality of the data available, and the second through fifth of which are posed as hypotheses (see Methods, question formulation for justification of hypotheses):

1. To what extent do studies evaluate multiple measures of success?
2. Greater levels of utilization of natural resources and lower levels of protectionism will lead to success in all outcome measures.
3. Conservation projects that facilitate increased market integration will result in success for all outcome measures.
4. Greater local input in conservation decisions and greater community control over programs will lead to success in all outcome measures.
5. The more culturally homogeneous a community, the more successful the project will be in all outcome measures.

Study Inclusion Criteria

Studies were included if they fulfilled the relevance criteria below.

- *Type of study* – primary literature

- *Subjects studied* – any conservation and development project associated with a protected area. Papers reviewing the impact of a protected area on local communities in the absence of a specific conservation and development project were not included.
- *Outcomes* – ecological, economic, behavioral, attitudinal outcomes. At least two of the outcomes had to be measured for inclusion in the study.

Scope of the Search

The impetus for this project originated from case studies analyzed for Borgerhoff Mulder and Coppolillo (2005). We reviewed the bibliographies of these case studies for additional papers and bibliographies of integrated conservation and development projects (ICDP) (Brown 2002; Flintan 2000). In addition, we conducted web-based searches with ISI Web of Knowledge, Anthropology Plus, Biblioline, and JSTOR electronic databases. We searched for the terms *ICDP*, *integrated conservation and development project*, *community based conservation*, and *conservation and development* in each database.

Main Results

The results of this review are that (1) very few studies provide adequate quantitative measures of success across multiple outcomes to provide a strong test of the hypotheses, and (2) that two separate statistical approaches to the data indicate market selling opportunities are associated with attitudinal outcomes, and community involvement in decision making and implementation is associated with behavioral success.

Conclusions

As regards the first objective, it is clear that without far better monitoring schemes in place it is still impossible to provide a systematic evaluation of how different strategies are best suited to different conservation challenges. First, there is a paucity of high quality data. Second, few studies provide quantitative evaluations of success. Third, few studies evaluate across the full range of relevant outcomes – behavioral, attitudinal, economic and ecological. The second objective was to determine the impacts of market integration, utilization and protection, decentralization, and community homogeneity on conservation and development projects. It is clear that the predictions stemming from the integrated conservation and development philosophy, that emphasize utilization, decentralization, and market access as a means for achieving conservation success, do receive some statistical support in our sample.