Final Progress Report
Sustainability Science Program
Term: September 1, 2013 – August 1, 2014

Name:
Nigel Asquith

Your field(s):
Ecosystem Services and Poverty Alleviation

Your degree program, institution and graduation date:
PhD, Zoology, Duke University, 1998

Faculty host(s) at Harvard name and department:
William Clark, Kennedy School of Government

Description of SSP-related research activity:
Governing the Commons through Reciprocal Watershed Agreements: An alternative to Payments for Environmental Services.

This is part of an assessment of the efficacy and efficiency of various types of payments for ecosystem services programs.

Abstract:
More than 70,000 hectares of upstream watershed forest are currently being conserved under Reciprocal Watershed Agreements (RWA) in Peru, Colombia, Ecuador and Bolivia. I here undertake a preliminary assessment of whether RWA could provide a useful alternative to Payments for Environmental Services (PES), studying the 30 municipalities where reciprocity agreements were active by the end of 2013. I use the lens of Ostrom's (1990) common property management design principles, using data from across the Andean region. RWA are locally designed, funded and implemented, focus on local priorities, and are based on the precautionary principle and behavioral economic theory. Their bottom-up focus attempts to link the economic imperative of private incentives for conservation with a more nuanced institutional and behavioral focus on program uptake, enforcement and compliance. Unlike PES, RWA do not consider the opportunity cost of conservation as the primary driver of levels and types of compensation. Rather, RWA attempt to strengthen and formalize pro-conservation social norms, by publically recognizing individuals who contribute to the common good by conserving their forests. The "compensations" are thus tokens of appreciation rather than economic transactions, and thus can comprise much lower amounts than economic theory would predict. A comparison with Ostrom's design principles for commons governance suggests that RWA may be a sustainable alternative for incentive based conservation.

Identification of the problem you address:
Investment in sustainable natural resource management is often precluded because of the seemingly intractable tragedy of open-access resources, and the difficulties of successful nationalization or privatization (Harden 1968). Ostrom (1990) argued that there is a third way: open-access resources can be governed sustainably through development of institutions that explicitly recognize the nature of the "commons" management problem. My research assessed to what extent Ostrom's management principles to can be used for watershed management.

Key question asked about the problem:
The key question I asked is about the role of institutions in natural resource management, and the relationship between financial and other incentives and governance.

The methods by which you answered that question:
Field research in 2012 and 2013, and a literature review

Principle literature upon which the research drew:
Governing the commons and incentive based watershed management

Empirical data acquisition description:
To understand the philosophy underlying RWA, and their impact in Bolivia, I interviewed seven staff at Fundación Natura Bolivia. To assess take up and implementation of RWA and PES elsewhere in the Andes, I interviewed more than 30 municipal and national level policymakers and researchers in Peru, Colombia and Ecuador, as well as field technicians and managers at Naturaleza y Cultura and Rare, institutions that have facilitated a number of RWA and RWA-like initiatives in the region over the last ten years. In 2012 and early 2013 I undertook Rapid Rural Appraisals in nine municipalities, interviewing more than 50 local actors. Rapid Rural Appraisal (RRA) consists of 'short, intensive, informal field surveys that focus on consultation to define… problems and solutions' (Rocheleau et al. 1994). Key features of the approach are an emphasis on multidisciplinarity, cumulative learning and a semi-structured and flexible research program (Cornwall et al. 1994). Rigor of RRA analyses is maximized by 'cross-checking and progressive learning… through plural investigation (triangulation)' and, further, by actively 'looking for and learning from exceptions, oddities and dissenters' (Chambers 1994). I also interviewed staff who had implemented the twenty Bolivian municipal RWA, and three RWA elsewhere in the Andes (Chachapoyas, Espindola and Roncesvalles). I only studied the 30 municipalities where RWA schemes were active by the end of 2013—i.e. had actually facilitated payments between entities—and not the ~15 schemes that are still in their initial phases. I spent my time at Harvard analyzing these data.

Geographical region studied:
Northern Andes (Colombia, Ecuador, Peru and Bolivia)

Recommendations that might be relevant for your problem:
The goal of this study is develop recommendations to policy makers about the components of different types of PES schemes that work best, with the hope that these recommendations can help guide the development of new programs.

A description of the final product(s) you have/are aiming to produce:
Peer-reviewed journal article

Description of major other intellectual or professional advancement activity(ies) over the past academic year:
I made two invited presentations at conferences in this semester. The first was "Ecosystem Services and Poverty Alleviation" in London on November 21st, and the second was at the conference "Evaluating forest conservation initiatives: new tools and policy needs" on December 11th in Barcelona. There were two direct results of the latter conference: a collaboration with Jordi Honey-Roses from the University of British Colombia (Jordi's MS student Eric Fox just finished his thesis fieldwork in Bolivia), and an invitation to submit a paper to the journal PLOS One (due September 15th), about our RCT, which I will write with Kelsey Jack, Tara Grillos and two other co-authors. Later in the year I presented the results of my work at a meeting of the Katoomba Group, in Lima, Peru, and at a workshop in the Aberdares, Kenya.

Please list citations for reports, papers, publications and presentations that built on your fellowship research:
There are two papers in preparation, but nothing yet completed

Please describe any collaborative activities with other SSP Fellows that you are involved with.
Along with Judson Valentim, Pamela Templer, Zhu Liu and Rachael Garrett we held a Colloquium on Innovative Adaptation to Climate Change, to which we invited five external speakers, including Bolivia;s Chief Negotiator to the UNFCCC.

Principal collaborators outside Harvard:
Julia Jones (Bangor University)
Conrado Tobon (National University of Colombia)
Kevin Green and Amielle Dewan (Rare Conservation)
Jordi Honey Roses (University of British Colombia)
Paul Ferraro (Georgia State University)
Ricardo Godoy (Brandeis University)

List any awards or grants that you have received this year for the current or coming year.
I wrote and was awarded the following grants to Fundación Natura Boliva:

- New Venture Fund, $50,000 for watershed protection projects in Peru and Bolivia
- Darwin Initiative, $350,000, for "Reciprocal Watershed Agreements: conserving Bolivia's Chaco through improved livelihoods"

Along with Kelsey Jack, Ricardo Godoy and Paul Ferraro I received $20,000 from the International Institute for Impact Evaluation in order to developed a full proposal for an RCT that assesses the livelihood impacts of Fundación Natura Bolivia's incentive based watershed management intervention in southern Bolivia. In addition, I helped Julia Jones (Bangor University) write a successful grant proposal to Britain's Leverhulme Trust. I do not know the exact value of the grant, but it provides funds for a postdoctoral position to work with me in Bolivia for 2015-2017.

If you are moving to a new position, please list your contact information there:
Director of Policy, Fundación Natura Bolivia, Av. Roque y Aguilera 3355, Santa Cruz, Bolivia