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REMEMBERING ELINOR OSTROM

HER WORK AND ITS
CONTRIBUTION TO THE
THEORY AND PRACTICE
OF CONSERVATION AND
SUSTAINABLE NATURAL
RESOURCE MANAGEMENT

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RESOURCE MANAGEMENT**

Edited by:

James P. Robson

Iain J. Davidson-Hunt

Alyne Delaney

Gabriela Lichtenstein

Lapologang Magole

Aroha Te Pareake Mead



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Table of Contents

5	Preface
7	Introduction
11	CHAPTER ONE Governing India's Commons: The Influence of Elinor Ostrom's Ideas <i>Harini Nagendra, Rucha Ghate, Jagdeesh Rao</i>
23	CHAPTER TWO The Impact of Elinor Ostrom's Scholarship on Commons Governance in Mexico: An Overview <i>Raul Pacheco-Vega</i>
35	CHAPTER THREE Rompiendo paradigmas: Gobernanza de los bienes comunes y ciudadanía en las políticas forestal y de conservación Mexicanas <i>Leticia Merino Pérez</i>
47	CHAPTER FOUR An Assessment of Community Management of Traditional Woodland Enclosures (Hiza'ti) in the Highlands of Eritrea <i>Bereket Tsehaye Haile</i>
57	CHAPTER FIVE Governing the Commons Through Customary Law Systems of Water Governance: The Case of the Marakwet <i>Elizabeth Gachenga</i>
69	CHAPTER SIX Researching Complex Governance Arrangements: Elinor Ostrom's Legacy for Research Methods and the Analysis of Institutional Design <i>Derek Kauneckis</i>
79	CHAPTER SEVEN Advancing Algonquin Recognition and Participation in Forest Management in Québec, Canada <i>Rosanne Van Schie</i>
91	CHAPTER EIGHT From Theory to Practice: A Decade of Co-managing Pasture and Other Natural Resources in Mongolia <i>Hijaba Ykhanbai and Ronnie Vernooy</i>
103	CHAPTER NINE Recognition of the Role of Collective Action among Indigenous Peoples and Local Communities in the Convention on Biological Diversity <i>Diego Pacheco</i>
111	CHAPTER TEN Are Ostrom's Design Principles Sufficient for Design? <i>Arun Agrawal and Jesse Ribot</i>
117	CHAPTER ELEVEN Un son para Lin Ostrom <i>Caña Dulce y Caña Brava</i>

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Plate 1: Elinor Ostrom with Aroha Mead, Grazia Borrini-Feyerabend and Taghi Farvar at the CEESP Sharing Power Conference, Whakatane, Aotearoa (New Zealand), January 2011. (Photo credit: CEESP)

Preface

My lasting memory of Elinor Ostrom is of us sitting together at a picnic table outside the shop/garage in Taneatua (Bay of Plenty, New Zealand) waiting for a bus. This was in January 2011. Elinor had cut short her time at the meeting of the International Association for the Study of the Commons (IASC) in Hyderabad, India, an Association of which she was a founding member, to travel to Whakatane, New Zealand to participate in another conference, *Sharing Power: A New Vision for Development*. The Sharing Power Conference was organised by the Ngati Awa tribe, Te Whare Wanangao Awanuirangi, and the Commission on Environmental, Economic & Social Policy (CEESP) of the International Union for Conservation of Nature (IUCN). Elinor was a founding member of the Commission's Theme on Governance, Equity & Rights.

By the time she travelled to New Zealand, Elinor was already feeling poorly. Yet she insisted on joining the Conference participants for a field-trip as soon as she arrived after her long journey from Hyderabad. I therefore had the task of picking her up at the airport and driving to the Taneatua shops to wait for the field-trip bus that was taking participants for a tour of the lands of the Tuhoe people in the heart of the Urewera ranges. The topic of the day was 'Sharing Power—indigenous governance of conservation areas' and the 'shared power' part of the discussion was centered around the ability or inability of those with power to transfer lands back to indigenous peoples unfettered.

As we waited for the bus I briefed her on our tribal hosts for the day, Tuhoe, and mentioned that of any tribe in New Zealand, they had the best chance of having the lands of a National Park located within their territories returned to them and that there was widespread support across New Zealand society for this to happen. In turn, Elinor spoke of her work and the eight "design principles" of collective action for commons management discussed in her 1990 book, *Governing the Commons*—the

work that was instrumental in earning her the 2009 Nobel Prize in Economic Sciences. We began trying to match the design principles to the situation of Maori in general and the Tuhoe people in particular. I struggled to get beyond the principle of having clearly defined boundaries and the ability to exclude others. The bus arrived and we both tucked our discussion away.

Our guides for the day were Tuhoe artist and activist Tame Iti and actor and activist Patrick 'Onion' Orupe. From Taneatua we visited the burial place of the Maori prophet, faith healer and land rights activist Rua Kenana at Tupou Marae in Waimana and later drove through the blockade that had been put in place to keep government officials out of the Urewera National Park. The return of Urewera National Park to Tuhoe was part of the Treaty of Waitangi Settlement negotiation process that was currently underway. We stopped and talked to the Tuhoe people guarding the blockade and as the bus drove away we passed a number of police cars heading for a stand-off with the protestors—a day in the life of many indigenous peoples and part of the struggle to have those with power relate to communities as fellow citizens rather than protestors or marginalised peoples (names used to diminish their status and integrity). We then visited Te Rewarewa Marae in Ruatoki to hear from a range of Tuhoe people about their plans and aspirations post-Treaty settlement.

Throughout this time Elinor was quiet. She didn't ask any questions in the open forum, she didn't speak. After the Marae visit I drove her back to the place where all of the conference participants converged for dinner after field-trips into four different tribal areas (Ngati Awa, Te Arawa, Ngati Tuwharetoa and Tuhoe). As soon as the car door closed we resumed our discussion.

Whereas I had thought the design principles for common pool resource management would be problematic in the NZ Maori situation because of the fluid nature of many tribal

boundaries, she saw this as a reinforcement of what truly constitutes common pool resources. What I mean by ‘fluid nature of tribal boundaries’ is that while many tribes can and do confidently assert authority over their central territories, they tend to adopt a diplomatic inter-tribal relations approach to the outer boundaries they share with other tribes. It is not uncommon for neighbouring tribes to have common areas within their respective tribal territories, each one claiming the area as part of their own territory based on a spiritual or cultural historical association.

As we explored the principles of defined territories, mechanisms of conflict resolution, a graduated scale of sanctions for resource appropriators who violate community rules, self-determination recognised by higher authorities and the opportunity for resource appropriators to participate in decision-making, I questioned their applicability to Maori. Elinor on the other hand was more interested in what self-determination really means for Maori. She wondered if there was a bottom line that guided Maori in their Treaty settlement negotiations. A line that they would never cross because to do so would significantly compromise their ability to manage their heritage in the future as commonly held and managed resources.

As one can imagine neither of us answered each other’s questions to a satisfactory level. We were both left with more questions than answers. However, what I did gain from our discussion was an understanding that the design principles she identified are not meant to be interpreted literally but rather expansively. “Defined territories” doesn’t have to mean fences and signposts. It can also be recognised through customary laws and practices that demonstrate the historical and cultural association a community holds with a place that continues to this day and beyond. The principles, however, should be understood within an overall context of community self-determination and not be co-opted to mean other things. Her ideas came from a place of optimism that people can and should work things out and that communities can successfully manage common resources

sustainably over time. Elinor was also very clear in her talks with me, and in the Keynote presentation she delivered to the Sharing Power Conference the following day, that there is no quick-fix panacea, there is no one simple solution and nor is there one solution for all contexts throughout the world. Rather the key to effective long-term sustainability in using and managing natural resources is communication—treating nature as a shared resource—sharing access, use and decision-making. In other words, sharing power.

Elinor Ostrom was an accomplished, secure, positive and unassuming person who had great loyalty to the individuals and networks that helped form her perspectives and career. It was a truly generous gesture on her part to travel to Whakatane, to be with CEESP, Ngati Awa and the other neighbouring tribes and conference participants at the Sharing Power Conference. CEESP members Janis Alcorn, Grazia Borrini-Feyerabend, Taghi Farvar and Michel Pimbert who knew and worked with Elinor over a long period of time were instrumental in securing Elinor’s visit to New Zealand. It is with pleasure that IUCN’s Commission on Environmental, Economic & Social Policy (CEESP) devotes this special edition of the peer reviewed journal Policy Matters to the influence and legacy of her work.

Thank you Elinor for inspiring so many with your ideas, vision and belief in a just world.

*No reira, haere, haere, haere e te rangatira
Haere ki te wa kainga* Go to the home of all time

Haere ki te kainga tuturu Go to the true home
Hoki atu ki te Kaihanga Return to the creator
Haere, haere, haere.

Aroha Te Pareake Mead
Ngati Awa, Ngati Porou, Chair
IUCN Commission on Environmental,
Economic & Social Policy (CEESP)
Director, Maori Business,
School of Management,
Victoria University of Wellington

Remembering Elinor Ostrom

Her Work and its Contribution to the Theory and Practice of Conservation and Sustainable Natural Resource Management

*James P. Robson¹, Iain J. Davidson-Hunt², Alyne Delaney³, Gabriela Lichtenstein⁴,
Lapologang Magole⁵ and Aroha Te Pareake Mead⁶*

The Commission on Environmental, Economic and Social Policy (CEESP)—Theme on Sustainable Livelihoods (TSL)—of the International Union for Conservation of Nature (IUCN), in partnership with the International Association for the Study of the Commons (IASC), is delighted to present this special issue of *Policy Matters*, which focuses on the outreach and impact of Dr. Elinor Ostrom's groundbreaking research on common property (or commons) theory. Lin was a supporter and friend of CEESP and a founding member of the IASC, and we were all deeply saddened by her passing in 2012.

Lin Ostrom's work has been instrumental in shaping contemporary analyses of resource management and conservation, especially at a local level. A 'commons' can be considered any resource subject to forms of collective use, with the relationship between the resource and the human institutions that mediate its use an essential component of any management regime. While conventional wisdom has long assumed that the sustainable management of common resources is best achieved through centralized government or private control, Lin led the way in challenging this assumption—showing how alternative forms of property can work effectively if well matched to the “attributes of the resource and users, and when the resulting rules are enforced, considered legitimate, and generate long-term patterns of reciprocity” (van

Laerhoven and Ostrom 2007:19).

In recognition of her many achievements, we wanted to invite and publish a series of commentaries that build upon her work and, where possible, provide case studies demonstrating the practical application of her theoretical contributions. A Call was sent out in late 2012, soliciting expressions of interest and abstracts from those keen to be involved. Room was made for both traditional articles and more creative print presentations in any of IUCN's official languages (English, French, Spanish). We received an excellent response, and after embarking on a long peer-review and editing process, we were able to whittle the submissions down to the collection of research papers, essays, commentaries and songs that follow.

Encapsulating voices from academia, indigenous communities, government agencies, development agencies and non-governmental organizations (both local and international), they all make clear the connections between Lin's work and the authors' own scholarship and/or practice. We briefly introduce each in turn.

Preceding our introduction was a preface by CEESP Chair, Aroha Te Pareake Mead, who provided the impetus to develop this volume following Lin's participation in the Sharing Power Conference of CEESP. Aroha provided a personal testimony of Lin's tireless efforts

¹ Visiting Professor, Department of Environmental Studies, University of Redlands, United States of America and member of IASC. Email james_robson@redlands.edu

² Associate Professor, Natural Resources Institute, University of Manitoba and Co-Chair, Theme on Sustainable Livelihoods, CEESP, IUCN and member of IASC. Email davidso4@ad.umanitoba.ca

³ Associate Professor, Innovative Fisheries Management Centre, Department of Development and Planning, Aalborg University, Denmark and Editor-in-Chief, *Commons Digest*, IADC. Email ad@plan.aau.dk

⁴ National Research Council of Argentina (CONICET), Instituto Nacional de Antropología y Pensamiento Latinoamericano, Buenos Aires, Argentina and member of IASC and SULi, CEESP/SSC, IUCN member. Email Lichtenstein.g@gmail.com

⁵ Okavango Research Institute, University of Botswana, Botswana and member of IASC and SULi, CEESP/SSC, IUCN. Email lapomagole@gmail.com

⁶ Chair, IUCN Commission on Environmental, Economic & Social Policy and Director, Maori Business, School of Management, Victoria University of Wellington. Email Aroha.Mead@vuw.ac.nz

to bridge the worlds of activism, policy and academia—a mixture reflected in the contributions.

While Lin's work has had an impact globally, it is through focusing on individual countries that one really begins to appreciate the depth of that impact. Nagendra, Ghatge and Puppala, who represent the *mélange* of academia, practice and activism that commons scholarship so readily evokes, report on the different ways in which Lin's work has impacted the governance of India's extensive natural resource commons, taking in both rural and urban environments. Similarly, the two papers that follow, by Pacheco-Vega and Merino-Perez respectively, show how Mexico's commons scholars and practitioners, and environmental and conservation policies, have been influenced by Lin's thinking. Pacheco-Vega looks at multiple resource types (water, forests, irrigation systems, small-scale fisheries) to highlight the range of empirical research from Mexico that has drawn on Lin Ostrom for inspiration. Merino Perez, current President of the IASC, provides a brilliant analysis of how Lin's work has challenged the way we view nature-society relationships, and does so with an eye on changes to indigenous territorial management in the south of the country.

While a number of the articles in this Special Issue are written by senior scholars and practitioners, as well as alumni of the Workshop in Bloomington that Lin founded with her husband Vincent, we were also keen to include contributions from recent students and younger scholars who represent a new generation of researchers interested in the broad area of natural resources and environmental management. Two case studies from Africa—Bereket's assessment of woodland conservation in the Eritrean highlands using the Design Principles from Ostrom's seminal *Governing the Commons*, and Gachenga's paper from Kenya that explores how Lin's thinking on the commons meshes with customary law systems of natural resource governance—showcase nicely the continued relevance of Lin's work to those beginning their careers as commons scholars.

Remaining with the academic research community, we continue with a piece by Derek Kauneckis, a graduate of Lin's program at Indiana University, who expertly traces how her substantial body of work is informing current efforts to develop research tools and techniques of institutional analysis for understanding the governance of commons as complex systems—concluding that her work represents the beginning of a “new science of governance” that others are working hard to develop.

Our final three papers move away from academia to focus on the applied nature of Lin's work; how it is being used, in very practical ways, to guide and inspire change in the way people relate to and manage their natural environments. They report on local, national and global efforts respectively. First we head to the boreal forest of northern Quebec, Canada, where Van Schie, Economic Development Officer for Wolf Lake First Nation, tells the story of the community's fight to ensure that forestry on their customary lands is not only environmentally sustainable but allows for their active involvement as part of a new forest commons framework. From Canada we shift focus to Central Asia, where Ykhanbai and Vernooij talk about their experiences developing a co-management process in Mongolia that aims to improve pasture management for that country's nomadic herders. Ten years in the making, it draws heavily upon Lin Ostrom's work on commons institutions and institutional diversity. Lastly, we hear from Pablo Pacheco, current Head of the Bolivian delegation at the Convention on Biological Diversity (CBD), who shows how Lin's scholarship inspired Bolivia to argue (successfully) for local and indigenous collective action to be recognized by the CBD for the role it affords biodiversity conservation efforts – opening the door for local-level commons institutions to become a more integral player as part of national and international policy processes.

We bring our Special Issue to a close with two pieces. The first, written by leading commons scholars Arun Agrawal and Jesse Ribot, builds upon the lessons of our earlier contributions

to acknowledge the power of Ostrom's analyses and the tools that she developed—which have helped us to better understand the governance of shared resources. Yet, as with all scholarly endeavours, the major advances that Lin made are not without their limitations, and Agrawal and Ribot offer a most useful critique of her design principles for commons institutions so that a key area of her legacy can be carried forward and strengthened.

The second is a song, written and performed by Caña Dulce y Caña Brava, a musical quartet from the Tuxtepec region where the Mexican states of Oaxaca and Veracruz meet. The group plays in the regional folk style known as Jarocho, and wrote this song in celebration of Lin's life and work. They were able to perform for her on her final visit to Mexico in 2012. It is a very fitting way to end this special issue.

In providing a platform for such a wide array of voices, and offering cases from so many different geographical and cultural contexts, this special issue of Policy Matters showcases just how important and far-reaching Lin's work has been (and continues to be). As

these diverse contributions highlight, from her early PhD work to the final presentations she gave in 2012, Lin exhibited a quality of thought, an ability to convey complex ideas in understandable and entertaining ways, and an optimism that enabled her ideas to make their mark in classrooms, local communities, and on the most important of policy and legislative stages. Our current understanding of natural resources management and conservation would not be what it is without her input, and the prospects for improving environmental policy at local, national and global levels that much poorer.

We are very happy to be able to share in some of her achievements with CEESP, IUCN and IASC members.

Enjoy!

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1

GOVERNING INDIA'S COMMONS The Influence of Elinor Ostrom's Ideas

Harini Nagendra, Rucha Ghate, Jagdeesh Rao



1

Governing India's Commons The Influence of Elinor Ostrom's Ideas

Harini Nagendra^{1,2}, Rucha Ghate^{3,4}, Jagdeesh Rao⁵

Abstract

Elinor Ostrom's research on the commons has fundamental implications for the governance of commons in India. Research from the International Forestry Resources and Institutions (IFRI) network, coupled with remote sensing analyses conducted by Ostrom and colleagues, has been fundamental in demonstrating the importance of self-governance for the sustainable management of the commons in Indian forests and cities. Recent field experiments conducted in two predominantly tribal communities in central India further demonstrate that communities with strong previous traditions of shared norms and mutual trust, tend to be non-exploitative, non-commercial, and cooperate towards the sustainable harvest of forest resources. Forests and other commons form critical components that supplement and support rural communities dependent on agriculture, livestock, water and other types of natural resources in large parts of India, providing stability and security in an unpredictable environment. In addition to rural commons, urban commons such as lakes play a very important role in Indian cities. Recent studies on lakes in the rapidly growing incipient megapolis of Bangalore demonstrate the importance of polycentric arrangements, involving local citizen groups along with Government agencies in monitoring, restoration and protection. Yet, institutional apathy has led to the neglect of traditional institutional arrangements and the customary rights of people in the solutions proposed under different Government policies and programmes. Currently, common and public lands cover almost a fifth of the geographical spread of India. Such land, if brought under the ambit of local self-governance institutions, could contribute significantly to the rural economy, providing critical ecological functions besides meeting livelihood needs. Recent initiatives by the Supreme Court, coupled with State government and national policy changes are promising, but much remains to be done. Large scale changes are needed while keeping in mind the pillars of Ostrom's vision—the need for self-governance of the commons at a local level that permits flexibility, adaptation and innovation, with the ultimate goal of ensuring equitable and sustainable access to the commons for all citizens.

Keywords: *Collective action, sustainable use, self-governance, rural and urban commons, India*

¹ Ashoka Trust for Research in Ecology and the Environment (ATREE), Royal Enclave, Srirampura, Jakkur P.O., Bangalore 560064, India, nagendra@atree.org

² Center for the Study of Institutions, Population, and Environmental Change (CIPEC), Indiana University, 408 N. Indiana Avenue, Bloomington IN 47408, USA.

³ SHODH: The Institute for Research and Development, 106, K.T. Nagar, Katol Road Nagpur-440013, Maharashtra State, India; ruchaghate@gmail.com

⁴ International Centre for Integrated Mountain Development (ICIMOD), Khumaltar, Lalitpur G.P.O. Box 3226, Kathmandu, Nepal, rghate@icimod.org;

⁵ Foundation for Ecological Security, Post Bag 29, Anand, Gujarat, India, jagdeesh@fes.org.in

GOVERNING THE COMMONS: ELINOR OSTROM'S IDEAS

Born in 1933, Elinor Awam Ostrom's perspective of the world was shaped in an era impacted by economic depression and global war, resulting in a life-long, deep awareness of the limited nature of the earth's natural resources, as well as the capacity of communities to come together in times of difficulty, to cooperate and provide a helping hand to those in need. These beliefs were purposeful in shaping a career of path-breaking research that demonstrated the importance of collective action for the sustainable use of natural resources.

Ostrom strongly believed in the power of the local. Yet her impact and influence was global. She had a special attachment to South Asia, working for decades on issues of irrigation and forest management in Nepal (personally conducting field work there), and on collective action in urban and forest contexts in India (Plate 1). Her research on the commons has fundamental implications for the governance of common property resources in India.

Ostrom's analysis of long-term local institutions for the commons was done with a view to identifying the conditions that shaped how "a community of citizens can organize themselves to solve the problems of institutional supply, commitment and monitoring" (Ostrom 1990). Impatient with a predominant focus that searched for "simple" solutions, she argued for the need to distinguish between complexity and chaos, often pointing to the importance of complexity in biological systems and challenging political scientists to go beyond the formulation of simple, one-size-fits-all rules. Thus, rather than develop a set of rules that presumed to dictate how communities would respond in all contexts, she articulated her famous set of Design Principles—both elegant in their simplicity and yet profound. For instance, one design principle—often ignored by policy makers—states the importance for communities to have a "Minimal Recognition of Rights to Organize", i.e. to ensure that the rule-making rights of a local community are

respected by external government authorities. Unless this is provided, any group—such as a polluting industry—who wants to break the rules on sustainable use created by local user groups, only has to turn to the government to be able to bypass or overturn these community rules.

This Design Principle has profound implications for the long term sustainability of Indian commons—as is obvious from the many recent clashes between industry and indigenous communities across the country, and discussions between the Indian Minister of Environment and Forests and the Minister of Finance about setting up a fast-track National Investment Board to provide rapid clearances to mega-infrastructure projects, even in environmentally critical forests where indigenous communities are located.

Commons are of immense importance to issues of environmental sustainability, equity and democracy in India. Currently, common and public lands cover an estimated 45 to 60 million hectares—almost a fifth of the country's geographical spread. Such land, if brought under the ambit of local self-governance institutions, could contribute significantly to the rural economy, providing critical ecological functions besides meeting various needs such as fodder, food, medicine, firewood, etc. This would benefit large rural populations.

In this article, we discuss a number of applications of Ostrom's research on Indian commons, and the applications of her far-sighted analyses to governance of those commons.

OSTROM'S RESEARCH ON INDIAN COMMONS

A key factor in Ostrom's research was the development of the Nepal Irrigation Institutions and Systems (NIIS) database, which collated and organized information on farmer-managed irrigation systems in Nepal. Following a request from the Food and Agricultural Organisation (FAO) of the United Nations to prepare a similar database to study forest governance, Ostrom and her colleagues



Plate 1: Elinor Ostrom at a community forest group meeting organized by the Foundation for Ecological Security in Karnataka State, India, in February 2012 (Photo credit: Harini Nagendra)

at The Workshop in Political Theory and Policy Analysis at Indiana University initiated the International Forestry Resources and Institutions (IFRI) program, which would provide over-time data on peopled forests to link information on socio-economic, institutional and ecological aspects. Now active in a number of countries across multiple continents, IFRI was founded and tested using a small set of sites that included locations in India and Nepal, and continues to contain active programs in these two countries.

Research from IFRI locations in India has been fundamental in demonstrating the importance of self-governance and local monitoring for the sustainable management of community forests in critical wildlife habitats in central India (Ghate 2004; Ostrom and Nagendra 2006; Ghate, Ghate and Ostrom 2013) and the eastern Himalayas (Agrawal and Chhatre 2006). Local monitoring, sanctioning and enforcement of rules seem to be important predictors of forest condition in several IFRI studies (Ghate and Nagendra 2006). A complete reliance on government monitoring through forest guards is difficult in the Indian

context, where guards have to cover large areas, are lightly armed, and have to deal with social challenges that make it difficult for them to enforce rules. In fact, as Agrawal and Chhatre (2006) conclude from IFRI studies in India and elsewhere, government involvement may be negatively associated with forest condition in some contexts, while community managed forests may be better suited to cater to local needs (Agrawal and Chhatre 2006; Chhatre and Agrawal 2008). Thus, warning against a mis-interpretation of the need for monitoring, Ostrom and Nagendra (2006, 19230-19231) stated that “We do not advocate using fences and guns to protect government forests... Unless one ensures the livelihoods of those living around or within a forest, a major investment in monitoring alone is not a sufficient, long-run management strategy and may even be counterproductive”.

Through a careful examination of forest change in the Tadoba Andhari Tiger Reserve in Maharashtra, the Mahananda Wildlife Sanctuary in West Bengal, and the Chitwan National Park in Nepal, Ostrom and Nagendra (2006) found that the official designation

of a forest as government, community, or co-managed did not appear to impact forest conservation as much as the legitimacy of ownership and degree of local monitoring. Corroborating this, data from 42 forests in multiple countries established that the type of ownership did not have a statistically significant impact on forest quality as measured using assessments of tree density or tree size. What emerged as most significant was the involvement of communities in regular monitoring, with this study concluding that “when users are genuinely engaged in decisions regarding rules affecting their use, the likelihood of them following the rules and monitoring others is much greater than when an authority simply imposes rules.” (Ostrom and Nagendra 2006, 19224). Local forest users can also provide reliable, low cost assessments of changes in forest density that can be significant inputs for monitoring ecological change (Nagendra and Ostrom 2011).

The research of Ostrom and colleagues holds great significance for Indian forest policy, in particular to the discussions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (FRA) of 2006, which provides traditional forest dwellers with rights over forest land that is customarily used and managed by them. Presently, debates around implementation of the FRA are centred on questions such as: Are communities capable of monitoring and managing such a valuable resource? Will the transfer of authority result in large-scale deforestation? Are traditional norms of sustainable harvesting and equitable benefit sharing effective in traditional communities?

FIELD EXPERIMENTS IN INDIGENOUS INDIAN COMMUNITIES

Generally assumed in these discussions is the fact that access to markets and commercialisation has affected local communities’ attitudes and behaviour regarding forests, making them less inclined to cooperate, and more likely to engage in destructive practices of over-harvesting. Ostrom and her colleagues examined this issue in detail using field experiments conducted

in predominantly tribal communities in the Indian State of Maharashtra. From eight experiments conducted in four forest/tribal rich areas of the state, Ghate, Ghate and Ostrom (forthcoming) found that communities that have had strong previous traditions of shared norms and mutual trust tend to be non-exploitative, non-commercial, and cooperate towards prioritising, planning, and sustainably managing forest resources. Thus, human beings are not always “*Homo economicus*”, they can be “*Homo reciprocans*” and even “*Homo cooperatus*” in the case of common-pool resources. The study confirms Ostrom’s (1998) observation that it is also possible for individuals to achieve results that are “better than rational” in certain conditions.

Another study that used evolving field experiments (Ghate, Ghate and Ostrom 2013) indicates that indigenous communities can be trusted with forest management responsibilities, and policies such as Joint Forest Management (JFM) and the FRA are moving in the right direction. In one of the experiments, participants adopted plantations of fast-growing trees for fuel wood and fodder, which, they argued, helped them protect high-value timber trees. It was also clear by their behaviour during the experiments that communities are able to address the issue of equity while sharing the benefits from collective forest protections measures. The study concludes that if forests collectively managed by communities are not degraded below the critical minimum, communities are capable of successfully protecting and regenerating the resource. However, at least in the initial period, some failures of community management should not be generalized, because “once altruist and reciprocal motivations are crowded out, it takes some time to re-establish trust and reciprocity” (Vollan 2008: 563).

RESEARCH ON URBAN INDIAN COMMONS

Ostrom argued it was time to really pay attention to urban commons. The Social-Ecological Systems (SES) Framework she developed provides a useful common

language that can be used to understand the patterns of interactions and outcomes occurring in complex urban systems (Ostrom 2007). Ostrom recommended that the SES framework be used as the initial organizing language by scholars, citizens, and officials who are trying to understand a complex system so as to achieve effective, fair, and sustainable policies over time (Ostrom 2009). This framework provides a common analytical language to identify the broad characteristics of a Resource System and related Resource Units, a Governance System, and Actors that together impact on the structure of Action Situations, leading to specific Interactions and Outcomes. During the last year of Ostrom's life, she and one of the authors of this paper (HN) had initiated research applying the SES framework to an urban context in the south Indian city of Bangalore, to examine the effects of diverse structural variables on interactions and outcomes achieved related to seven of the city's lakes (Plate 2).

Bangalore, a city in a semi-arid region of south-central India, was formerly dependent on numerous artificial lakes that have witnessed tremendous encroachment and pollution in recent years (D'Souza and Nagendra 2011). Once managed as commons by local communities, these lakes are now governed by a number of government departments with overlapping jurisdictions. While many lakes continue to be severely polluted, a few lakes have been effectively restored in recent years and managed collaboratively by local citizen groups working with the city municipality (Nagendra 2010). Nagendra and Ostrom applied the SES framework to investigate the conditions that may shape the ecological and social outcomes associated with these lakes. Collective action was high in six out of the seven lakes studied. Yet, only in two of these lakes were citizens able to successfully translate collective action into positive ecological outcomes.

The Bangalore example highlights the challenge of protecting and cleaning up urban lakes in a setting of continued pollution, which is very difficult without

the involvement of citizens (to closely monitor and manage local challenges) and government organizations (to solve large scale technical problems and deal with social challenges such as sanctioning major polluters). Contrary to the trend of increased centralization in the country's urban areas, a polycentric structure seems most effective for solving the numerous environmental challenges plaguing Indian cities (Nagendra et al. 2012)—especially through the explicit provision of opportunities for local communities to work effectively with governmental agencies.

TRANSLATING OSTROM'S IDEAS ON THE COMMONS INTO PRACTICE: THE INDIAN CONTEXT

Though the Indian economy is growing at a rate of 9% annually, the geographies in which this development is located and the constituency it benefits, remain narrow. Commons or common pool resources form critical components that supplement and support rural communities dependent on agriculture, livestock and forests in large parts of India, but especially across dryland and tribal areas. The role of land and water resources commons in strengthening the viability of the agro-pastoral production systems and the resilience of household livelihoods has been insufficiently recognized so far.

A recent study by the Foundation for Ecological Security (2012) further documented the importance of the commons for rural livelihood support. Conducted in seven states—Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh and Odisha—the study spanned 3000 households in 100 villages in arid, semi-arid and sub-humid parts of the country. Dependence on the commons was very high, with 98% of households accessing the commons for different types of use, with 69% using the commons for grazing, 30% for fodder collection, 53% using the commons for agriculture and 38% for food, 74% deriving fuelwood, and 38% collecting non-timber forest products. In sub-humid areas, people



Plate 2: Elinor Ostrom planting a jackfruit tree at the Kaikondrahalli lake in Bangalore in February 2012, surrounded by members of the local community closely involved in restoration and lake management (Photo credit: Harini Nagendra).

largely utilized the commons for meeting agricultural needs, while in arid and semi-arid regions, the commons were critical for livestock grazing. Dependence on community sources of water, such as tanks, ponds, rivers was also high, as was dependence on forests for timber, fuel wood and non-timber forest products. Resources from the commons contributed to a substantial proportion of household income, about 25%—and an even higher proportion of 31% of net income for the landless, who were highly dependent on fuel wood from the commons. This study indicates that India needs to strengthen its information databases on common land and water resources, along the lines of the databases developed by Ostrom and her colleagues on forest, irrigation and marine commons across the world. Such databases could help to dispel myths related to their ‘residual’ character and thereby their

degradation, by assessing the actual extent and status of resources that are generally considered as common pool in nature as well as the nature of property rights governing the same.

The studies described above clearly demonstrate that continued access to the commons helps provide stability and security in an unpredictable environment. Although especially critical for landless households, commons are also very important for large rural land-owners. Yet, land use data from Indian states demonstrates that common lands have seen an overall reduction in area, with a marked decline in grazing lands and cultivable “wastelands”. The crisis is a manifestation of institutional apathy, following neglect of traditional institutional arrangements and the customary rights of people in the institutional solutions proposed

Ostrom believed that in a country like India, with a federal system of governance, polycentricity was critical for effective management of the commons...

under different Government of India and State policies and programmes. Programmes for decentralization, based on a prescriptive top-down approach without understanding local social-cultural dynamics or the economic and ecological conditions, have failed to meet expectations. Although there has been a

shift in the policy paradigm towards more participatory forms of development and natural resource management since the 1990s, as reflected in the 73rd amendment of Constitution enabling a greater role for *Panchayati Raj* Institutions, JFM arrangements, and recent Acts such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and Forest Rights Act, several challenges remain in the institutional arena level in order to realize the potential of this shift.

The Supreme Court of India, in a recent landmark ruling (*Jagpal Singh and Others vs State of Punjab and Others* (Civil Appeal No. 1132/2011 @ SLP (C) No. 3109/2011), recognized the importance of the commons, stating that “Since time immemorial there have been common lands inhering in the village communities in India.... These public utility lands in the villages were for centuries used for the common benefit of the villagers of the village such as ponds for various purposes e.g. for their cattle to drink and bathe, for storing their harvested grain, as grazing ground for the cattle, threshing floor, maidan for playing by children, carnivals, circuses, ramlila, cart stands, water bodies, passages, cremation ground or graveyards, etc. These

lands stood vested through local laws in the State, which handed over their management to *Gram Sabhas/Gram Panchayats*. They were generally treated as inalienable in order that their status as community land be preserved.”

This ruling clearly recognizes the diversity of Indian commons, a finding supported by Lin Ostrom’s deep appreciation of institutional diversity (Ostrom and Nagendra 2011). Indeed, at a meeting in Delhi in early January, India’s then Minister of Environment and Forests, Jairam Ramesh singled out the most powerful insight that he thought Lin’s research had to offer Indian policy—that institutions are diverse, and that institutional monocultures are to be avoided (Foundation for Ecological Security 2011).

India has a rich diversity of traditional and indigenous institutions for commons management, including *Van Panchayats*, *gramya* jungles and community forestry. *Van Panchayats* are long standing village forest institutions in Uttaranchal, with a documented history of existence over a century, that have been very successful in the protection and sustainable management of village forests in the Kumaon hills. *Gramya* jungles are village forest institutions recognized in the state of Odisha, consisting of village forest areas managed for communal and developmental purposes within the village boundary. Similarly, there are a variety of long standing indigenous community institutions that have evolved locally to manage forests in different parts of the country, such as the *Mundari Khuntkatti* in Chotanagpur, indigenous Community Forest Management in Odisha and Maharashtra, sacred groves (*Devara Kaadus* and *Gunda Thopus*) in Karnataka.

In most instances, these indigenous institutions have been insufficiently recognized by formal administrative rights, with national programs largely focused on approaches such as JFM. For instance, in parts of the Aravalli hills in north India, an important ecoregion which harbours highly biodiverse forests critical for ground water recharge, forests have been traditionally protected by local communities through

their belief in sacred spirits and yet are now threatened by urbanization spreading outwards from the Indian capital, Delhi. Ostrom believed that in a country like India, with a federal system of governance, polycentricity was critical for effective management of the commons, combining the greater fiscal and administrative capacities of the government with the local knowledge and monitoring capacity of local communities (Narayanan 2012).

A major challenge for polycentricity in India is that effective formal and informal institutions have not been crafted to protect, develop and manage common lands. For instance, Joint Forest Management (JFM) has largely failed in providing access to non-timber forest products for local communities. *Panchayati Raj* Institutions have, on the whole, shown limited capacity to manage and develop common lands and to prioritize MGNREGA and other developmental funds for restoration and protection of the commons. At times, these have also come into conflict with community-led initiatives. In Orissa, south Gujarat and south Rajasthan, for instance, Foundation for Ecological Security (2012) found that access to forest lands seems to have improved as a result of informal claims and contestations with the forest department, rather than through formal institutional recognition.

In the Indian context, differences in policies at the federal (national), state and local levels are also critical, with land-related policies strongly influenced by state interventions. Further, even when state policies are in place, bridging the gap between legal policies and field programmes is critical to achieve actual impact on the ground. The key, therefore, is to move from a piecemeal approach towards the management of natural resources to long-term policy and programmatic action. Progress is slowly being made in a number of states. A collaborative arrangement between the Rural Development Department of Government of Andhra Pradesh and NGO networks has been established in 2009

for strengthening the efforts to conserve, develop and protect common lands through community involvement under the National Rural Employment Guarantee Scheme (NREGS). The Government of Rajasthan was the first to formulate state-specific commons legislation, 'The Draft Rajasthan Common Land Policy (2010)', which it followed up by developing 'Operational Guidelines on the Implementation of Grazing Land Development under MGNREGA', both with the involvement of the Foundation for Ecological Security. The Supreme Court of India, as a result of the *Jagpal Singh and Others vs State of Punjab and Others* decisions mentioned previously, directed the state governments to draw up schemes to evict encroachments on common lands and restore them to *Panchayats* and *Gram Sabhas* (village institutions). Following the apex court's direction, there have been five high court orders either admitting cases against the taking over of village commons or rescinding such takeovers. Twenty-nine judiciary pronouncements and twenty-nine government orders on commons have been issued since the apex court order last year (Mahapatra 2012). The 12th Plan of the Planning Commission of India has also recognized the importance of the commons, creating a working group on 'Natural Resources

Large scale changes are needed, whilst keeping in mind the central pillar of Ostrom's vision— self-governance of the commons at a local level that permits flexibility, adaptation and innovation, with the ultimate goal of ensuring equitable and sustainable access to the commons for all citizens.



Plate 3: Elinor Ostrom with the authors of this manuscript (and Harini Nagendra's daughter) in Bangalore in February 2012, on the last day of her final visit to India (Photo credit: Venkatachalam Suri).

Management and Rainfed Farming' and sub group on 'Institutions and Commons' for the 12th Plan preparation, in which the need for favourable land tenure arrangements, institutional design and programme architecture was highlighted for effective governance and management of commons. Following direction from the Lok Adalat (people's court) of Karnataka, two districts in Karnataka have also embarked on a programme to improve their commons management.

These new directions for commons regimes, while focusing to date on land, hold promise for other commons of importance to India such as fisheries, water (and ground water in particular), genetic sources such as agricultural seeds, and patenting of traditional knowledge systems, traditional health practices and medicines. However, while the direction taken by the Indian Supreme Court, the policy and programmatic level decisions of the Central Government, many State Governments, and the Planning Commission all provide ways forward, there remains a lack of integration in efforts to address the issue of commons governance at a

national level. In this context, a Model Common Lands Bill or such like could provide important direction for State Governments. One approach could include tethering the MGNREGA with a 'commons regime', such that the institutional dimensions currently found wanting would be filled. The right to employment and the right over resources combined together can have a significant impact in protecting ecological resources and creating robust institutional regimes.

CONCLUDING THOUGHTS

In conclusion, the ethics and value systems espoused by Elinor Ostrom, and her pathbreaking insights into the commons, as well as her research on the principles governing their effective, equitable and sustainable management, has tremendous implications for the governance of shared resources in India. India is home to a grand diversity of common pool resources ranging from forests to grazing lands, from fresh water to marine areas, with both rural and urban communities exhibiting widespread dependence on these resources for meeting

a range of economic, social, cultural and spiritual needs. Ostrom's theoretical and empirical observations of the commons provide a framework for governance that respects diversity and rights to local self-governance, while at the same time recognizing the need for multi-level governance that require governments to fulfil their social responsibilities towards equity and sustainability. India has a long standing diversity of traditional common property systems, with new forms of innovative commons governance evolving in areas such as patent rights, and in urban commons. Recent initiatives by the Supreme Court of India, coupled with various Indian State Government initiatives in some states, and the national policy changes brought about by the Forest Rights Act, indicate signs of progress that are promising. Yet much remains to be done. Large scale changes are needed, whilst keeping in mind the central pillar of Ostrom's vision — self-governance of the commons at a local level that permits flexibility, adaptation and innovation, with the ultimate goal of ensuring equitable and sustainable access to the commons for all citizens.

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2

**THE IMPACT OF ELINOR OSTROM'S SCHOLARSHIP
ON COMMONS GOVERNANCE IN MEXICO**

An Overview

Raul Pacheco-Vega



2

The Impact of Elinor Ostrom's Scholarship on Commons Governance in Mexico

An Overview

Raul Pacheco-Vega¹

Abstract

Professor Ostrom's work has been extremely influential worldwide, and this includes important contributions to Mexican commons scholarship and governance. From water and forest stewardship to small-scale fisheries management, her institutional approach to analyzing commons problems and uncovering opportunities for self-organization, where solutions to complex resource issues are far from straightforward, has been successfully applied to case studies across the country. This paper summarizes lessons learned from such cases, which cover a broad range of resource areas and issues, and offers insight into the degree of impact that Ostrom's work has had, and continues to have, on Mexico's efforts to more sustainably manage its extensive natural resource commons.

Keywords: *Governance, Mexico, commons, neo-institutionalism, water governance, polycentricity, complex adaptive systems*



Plate 1: *Mountain Stream, humid montane forest, communal territory of Santiago Comaltepec, Oaxaca, Mexico. (Photo credit: James Robson)*

¹ Professor/Researcher, Centro de Investigación y Docencia Económica (CIDE), Aguas Calientes, México. Email: raul.pacheco-vega@cide.edu

INTRODUCTION

Professor Lin Ostrom's work has been extremely influential worldwide, and her scholarship has been applied across the sphere of Mexican commons governance. From forest stewardship to water governance to small-scale fisheries management, Lin's institutional approach to analyzing commons problems and uncovering opportunities for self-organization, especially where solutions to complex resource issues are far from straightforward, has been successfully applied to cases around the country. This paper summarizes the lessons learned from a number of Mexican studies, which cover a broad range of natural resource commons, in order to highlight the influence of her work. I begin by summarizing the intellectual history of Mexican interactions with Lin's scholarship, before conducting a review of how her work has been used to research and better understand multiple types of resource commons and their management across the country. Using water governance as a major focus, I then describe how Lin's thinking has influenced policy and offer a number of potential avenues for applied scholarly research to build on.

I may come across as a little biased in my writing. There is a simple reason for that—I had been an avid student of Lin's and her husband, Vincent, when they came to visit the University of British Columbia as Green College Residential Visiting Professors. I spent hours listening to their lectures and having long scholarly conversations outside of the lecture hall and cherished their subsequent friendship, mentorship and guidance. It was Lin and Vincent who encouraged me to engage in water governance scholarship, and it is in their memory that I now undertake scholarly work on these issues in Mexico. While it was those personal interactions with the Ostroms that led me to the study of neo-institutionalism and commons governance theories, it has been the applicability of their work that has kept me in this field since then. Lin Ostrom's research has left an indelible mark on environmental policy, and I hope this article showcases some of the ways by which her thinking has advanced our understanding of self-governing resource systems in a Mexican context.

OSTROM AND MEXICO

Before delving into the application of Lin Ostrom's work to Mexican cases of shared resource management, it is worth outlining the intellectual history of her involvement with the country's scholarly endeavours in the field of common pool resource theory. Lin came to Mexico several times during her life, as her scholarly collaboration with Dr. Leticia Merino from UNAM's Institute for Social Research (IIS-UNAM, Instituto de Investigaciones Sociales de la Universidad Nacional Autónoma de México) blossomed. Professor Merino's scholarship has been integral to how we view forest governance in Mexico (Merino Perez, 2004), and Merino used Lin Ostrom's work extensively to document the institutional arrangements that have enabled Mexico's community-based forest sector to develop, and flourish in some instances, and compare these with experiences from other countries.

Merino was also involved in some of the watershed moments that punctuate Lin Ostrom's influence on Mexican commons scholars more broadly. In 2004, Professor Merino helped to organize, in addition to chairing, the Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP), held in Oaxaca in southern Mexico. This exposed many Mexican scholars to Lin Ostrom's scholarship, who then applied the frameworks and theoretical lessons of her work more readily to case studies around the country. As Robson and Lichtenstein's (2013) recent study shows, the IASCP's Oaxaca conference led to a significant increase in peer-reviewed published articles from both Mexico and Latin America more generally. Then, more recently in 2012, and just a few months before her passing, Lin was invited by Dr. Lourdes Amaya Ventura to give a seminar in Mexico City. On the back of this, a number of additional events were organised, including one at the Universidad Autónoma Metropolitana Cuajimalpa where numerous Mexican scholars presented draft conceptual and empirical papers for Ostrom to provide feedback on. While limited space precludes a review of the papers presented at the event, it was clear that interest in commons governance, neo-

institutionalism and polycentricity had risen greatly since Lin's earlier visits to the country.

A REVIEW OF OSTROM'S INFLUENCE ON MEXICAN COMMONS SCHOLARSHIP

There appear to be four broad categories of scholarly output from Lin Ostrom that apply to Mexican commons governance. The first one is perhaps the most popular; the concept of common pool resources (CPRs) and the idea that self-organizing communities can build institutions (understood as the rules and norms that regulate agents' interactions) for resource self-governance. Taken from her 1990 book, *Governing the Commons*, Ostrom's Design Principles for commons institutions have been widely used as an analytical lens by which Mexican scholars examine the robustness of resource governance systems.

The second category concerns the framework that evolved partially from Susan Kiser and Elinor Ostrom's grammar of institutions and partially from an evolutionary process of understanding how institutions emerge: the Institutional Analysis and Development (IAD) framework (Gibson, Andersson, Ostrom, &

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Shivakumar 2008; Olivares & Sandoval 2008; Ostrom, Gibson, Shivakumar, & Andersson 2001; Ostrom 2011; Pacheco-Vega 2005). IAD is both an analytical framework and a set of heuristics that enable scholars to study how resource governance systems function, through the identification of structural variables that affect institutional arrangements (Ostrom 2010, 2011; Pacheco-Vega & Basurto 2008; Pahl-Wostl, Holtz,

Kastens, & Knieper, 2010). I have been among the main proponents of IAD applications to Mexican water governance, using the Lerma-Chapala river basin as the case study of choice (Pacheco-Vega & Vega 2008a, 2008b; Pacheco-Vega 2005, 2007a, 2007b, 2012a, 2012b, 2012c). This work has found that institutional reforms for water governance in Mexico such as river basin councils are not robust enough to facilitate proper sanitation policy. More recently, Briseño Ramírez followed a similar strategy in undertaking an institutional analysis of water management in the metropolitan area of Guadalajara in Mexico (Briseño Ramírez 2012), finding that the structures of resource governance at the local, state and regional levels are weak, and that the dilution of jurisdictional responsibilities lead to deficient institutional structures that further undermine water management at the regional level. These findings are consistent with my frequent criticisms of the river basin council as an arena for water management in Mexico (Pacheco-Vega 2012b).

The third category deals with Ostrom's work on polycentricity. Milman and Scott (2010) used Ostrom's work in this area to examine the shared Santa Cruz Aquifer that runs alongside the US-Mexico border. Their findings confirm what we already knew thanks to Lin's research: that a non-polycentric approach can lead to overlapping authority and blurred jurisdictional boundaries, thereby weakening resource governance regimes and limiting proper binational groundwater management. Yet by exploring the degree to which Mexican water governance is moving towards more polycentric models (Pacheco-Vega 2013a, 2013b), my own work – comparing the geographies of wastewater in the central cities of Leon and Aguascalientes and analyzing a dataset of 26 river basin councils in Mexico— finds that such governance arrangements in Mexico are still in their infancy and remain poorly understood.

The fourth category concerns the broader decentralization of natural resources governance and how devolving decision-making power to lower levels of organizational structures can contribute to building better,

more robust rules for resource management. A glut of recent work on Mexican resource management has been espousing the effectiveness of a decentralized governance model (Bravo Pérez, Castro Ramírez, & Gutiérrez Andrade 2005; Caire Martínez 2004; Caldera Ortega 2012; Camacho, Aguilar, & Cercantes 2012; Cortez Lara 2005; Domínguez 2012; Galindo-Escamilla, Palerm-Viqueira, Tovar-Salinas & Rodarte-García 2008; González Santana, n.d.; Licea Murillo 2012; López Mera & Chávez Hernández 2012; Murillo Licea 2012; Paré & Robles 2000).

Beyond the field of water governance, Ostrom's influence has been equally apparent in the study of other natural resource commons in Mexico. In the forest sector, for example, the aforementioned Leticia Merino is among a group of Mexican scholars to have made use of Ostrom's work, having spent many years studying the country's self-organizing forest communities. The country's community forests offer an excellent opportunity to empirically apply Ostrom's thinking given that they function as something of a laboratory for researching how self-organization affects forest conditions over time. Merino-Perez and Hernandez-Apolinar (2004), for example, analyzed forest conservation initiatives within the Monarch Butterfly Biosphere Reserve, Michoacan, from 1986 to 2000, focusing on the experiences of two ejido communities: Cerro Prieto and Donaciano Ojeda. In the former they found that pernicious self-reinforcing negative incentives led to illegal timber extraction, while in the latter, nested formal and informal institutions had helped to generate incentives for forest conservation and the regulation of timber extraction.

Other stand-out case studies include Lujan Alvarez's (2003) work that argues for the creation of participatory multi-stakeholder roundtables to empower forest communities to properly manage their timber resources. He used Ostrom's work to set the stage in highlighting the need for community participation mechanisms in the governance of Mexico's forest resources. Among the many non-Mexicans working in the country, several studies inspired by Ostrom have influenced

Mexican natural resource policy. Antinori and Bray (2005), for example, contributed to our understanding of community-based forest enterprises in Mexico, which drew on insights from the common property literature with regards to self-organization and community engagement. Ostrom's work has also demonstrated that strong cooperation by all actors is necessary to achieve good governance—something Barsimantsov (2010) picked up on when identifying non-governmental organizations (NGOs) as key actors in implementing sound resource management strategies. In his comparison of forest governance in the Mexican states of Oaxaca and Michoacán, Barsimantsov (2010: 62) found that “unless communities can internalize timber extraction and community development activities, external non-governmental actors will be critical in community forestry and therefore must be considered in creating development strategies.”

Jacinta Palerm is another leading Mexican scholar to frequently use Ostrom's scholarly work to provide context to analyses of irrigation systems management in Mexico (Palerm Viqueira, Rivas, Ávalos Gutiérrez, & Pimentel Equihua, 2004; Palerm Viqueira 1999, 2000, 2003). With frequent reference to Ostrom, the work of Palerm typically focuses on organizational structures and the hierarchy of division of labor in irrigation management in central Mexico. Nevertheless, in some key work (particularly those involving

The country's community forests offer an excellent opportunity to empirically apply Ostrom's thinking given that they function as something of a laboratory for researching how self-organization affects forest conditions over time.

the Cuautla and Nexapa Rivers) Palerm and collaborators explore the relevance of formal and informal institutional arrangements within river basins and associated irrigation districts.

Ostrom's work has also been applied to the study of fisheries management worldwide, and Mexico is well represented here (Basurto et al., 2012; Cinti, Shaw, Cudney-Bueno & Rojo 2010; Ibáñez de la Calle, Becerra Pérez & Brachet Barro 2004; Morán-Angulo 2012; Ortiz Paniagua 2004; Zepeda Domínguez 2010). Basurto's work, in particular, is relevant as it draws directly from the Ostrom school of institutional analysis (Professor Basurto was a student of Lin's). In his studies of two Mexican small-scale fisheries in the Gulf of California, Mexico, he found broad divergences in how communities access and govern fish as a resource. While one community used a CPR regime approach, the other continued to rely on permits as a policy strategy (Basurto et al., 2012), showing that both formal and informal rules and institutions both have a direct effect on the effectiveness of the resource governance regime.

Beyond these more resource-specific fields of scholarship (water, fisheries and forestry), Ostrom's work on the commons (particularly her study of rules and institutions in self-governing systems) has also been applied more broadly to the governance of Mexico's extensive resource commons. Her early 1990s work, which dealt with agrarian issues, is well suited to the study of Mexican *ejidos*—land-based tenure systems managed by small-scale resource appropriators that share characteristics of both common and private property. For example, Schroeder Gonzalez undertook an applied study of ecosystems within the Chamela-Cuxmala *ejidos* (Schroeder Gonzalez 2006), and reported that institutions for resource conservation were lacking and indicative of a loss of social cohesion and social capital in the communities under study—a finding that resonated strongly with Ostrom's view that self-governing communities need to develop long-range, robust, and cooperative institutional arrangements to ensure resources are not degraded by the actions of narrow-minded, short-sighted appropriators.

Finally, any review of Ostrom's impact on Mexican commons scholarship is incomplete without reference to the Mexican social science journal *Relaciones*, which dedicated a entire volume in 2002 to the application of Ostrom's work to understanding local self-governance and the commons in Mexico (Roth Seneff 2002). This was something of a pioneering move, given that Ostrom's 2005 *Understanding Institutional Diversity* book was yet to be published, and she was still 7 years away from being awarded the Nobel Prize. The volume summarized mostly theoretical work but did include some empirical studies on water allocation in Izucar de Matamoros in northern Mexico, and forestry management in the Monarch Butterfly Biosphere Reserve in Michoacan, comparing governance of forest resources there with those found in Oaxaca, southern Mexico. The standout piece, however, was written by Silvia Bofill Poch, who explored community forestry in the indigenous community of San Juan Parangaricutiro in the Purhepecha altiplano (Bofill-Poch, 2002). In her article, Bofill Poch looked at the articulation (or lack thereof) and nesting of political institutions, social norms and power struggles that have reinforced class struggles and conflicts between governments at multiple scales and forestry community users. In the same vein as Ostrom's work on self-governing irrigation units, Bofill Poch shows the myriad conflicts that can stem from perverse incentives and a lack of robust institutional structures tend to perpetuate negative effects on resources governance.

HOW OSTROM'S WORK HAS INFLUENCED POLICY: THE CASE OF WATER GOVERNANCE

Within the context of setting new regulatory standards for water governance in Mexico, bureaucrats and scholars alike have used Ostrom's common pool resource (CPR) theory as an all-encompassing framework to allow for innovative institutional reforms to be implemented in a relatively straightforward fashion. In addition, because the vast majority of Mexican scholarship on water governance focuses on water allocation, redistribution and equitable sharing, Ostrom's research

findings are easily applied to Mexican case studies dealing with access to water. In my own research, I have departed from analyzing water access to focus more on the rules and institutions governing wastewater generation, distribution and treatment (Pacheco-Vega & Basurto 2008; Pacheco-Vega, 2005, 2009, 2012c). Using a comparative analysis of the sanitation policies of five Mexican States, Ostrom's work has helped me to demonstrate that when institutional reforms such as river basin councils are not robust enough, they can be detrimental to building a potentially sustainable basin-wide sanitation policy.

Lin Ostrom's teachings were much broader than just a mere list of 8 design principles for good commons governance. Unfortunately, the recent popularization of her scholarship (following her 2009 Nobel Prize for Economics) have sprouted hundreds of notes, newspaper and magazine articles on her research that tend to narrow her major achievements down to these very principles. As others papers in this special issue show, doing so negates the many contributions of Lin Ostrom's intellectual heritage. This is no less the case with water governance in Mexico. In reviewing how her contributions have been used by scholars to understand water governance in the country, three insights in particular should be considered. First, Lin Ostrom's research demonstrated that communities are indeed capable of self-organizing for sustainable water governance. Taking her previous empirical work on Spanish *huertas*, and applying it to Mexican *cajas de agua*, Palerm and collaborators have shown that communities are capable of self-organizing to improve conditions in their irrigation systems. Second, Ostrom's insights on rule and norm design have helped improve Mexican water governance by highlighting the importance of robust institutions designed from the bottom-up. As an example of this, my work demonstrates how Mexican river basin councils can fail when institutional erosion occurs because of a conflict between policy objectives and overlapping jurisdictional attributions (Pacheco-Vega 2013a). And third, Lin Ostrom's contribution to our understanding of the notion of resource governance itself

has been extremely influential in Mexican water policy. As an example, the past couple of years have seen a flurry of works published that stressed the need to devolve control to communities as one of the necessary pillars of future water governance in Mexico (COLMEX, CONAGUA, IMTA, & ANEAS 2012).

Taking Ostrom's insights on decentralization as a main tenet of resource governance, Mexican water policy is slowly but surely moving in this direction. Her research has been influential in the design of the Mexican National Water Law (*Ley de Aguas Nacionales*), where changes have seen greater emphasis placed on community participation in order to build resilient and robust institutions for water governance. Similarly, Ostrom's work on institutional diversity and her emphasis on multi-layered forms of governance have opened up policy discussions at the national level to increase the perceived value of polycentric arrangements and to test their feasibility at the sub-national level. Last year, Mexico's National Water Commission (Comisión Nacional del Agua, CONAGUA) convened a policy workshop sponsored by the OECD (Organisation for Economic Cooperation and Development) where discussions around polycentricity and water governance in Mexico were held. These constituted important conversations involving the country's policymakers, and they were informed, in part, by Ostrom's thinking.

Officials at all three levels of government are now looking to improve the institutional design of river basin councils and river basin organisations. The results to date have been mixed, with both successful (the Lerma-Chapala river basin), and not-so-successful

Lin Ostrom's research demonstrated that communities are indeed capable of self-organizing for sustainable water governance.

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(Rio Mayo river basin) cases. Nevertheless, the mere fact that federal, state and municipal-level water authorities are increasingly interested in robust institutional design for shared water governance is indicative of the ongoing influence of Lin Ostrom's scholarship.

While the country's scholars, practitioners, and now policy-makers, have begun to delve more deeply into the long-term implications of institutional change for water resource governance, new areas are set to be explored. One is the application of Lin Ostrom's institutional analysis framework to study rules and norms in non-traditional resource management contexts (Pacheco-Vega 2013b). Others include the impact on water governance of the climate as a global commons, adaptation to changes to climate across Mexico's diverse geographical regions, and the emerging idea of anticommmons (Osorio & Lara 2012). Thus, while Ostrom's legacy is beginning to yield fruit in policy circles around water governance in Mexico, it is no more than a beginning—the onus is now on others to follow in her footsteps and build upon her foundational work.

CONCLUDING REMARKS

Lin Ostrom's scholarship on the commons has, without doubt, had a significant and positive impact on Mexican resource governance scholarship and policy. This paper summarizes a number of those scholarly and applied contributions. Lin was passionate about the potential of commons research to improve the lives of Mexicans. During her visits to Mexico, she always kept an ear to the ground, to think about new ways in which her work and thinking could inform, and be informed by, the country's experiences. Perhaps of most importance, her research sparked an

increased awareness among Mexicans of the role that local communities could and should play in natural resources management and conservation. Examples abound not only in the governance of water resources, but for other resource types also—how institutional innovations can secure sustainable fisheries management in coastal zones in Mexico, or how local communities can make use of and adapt existing customary governance institutions to help develop their own forest enterprises.

Yet beyond Lin's obvious contributions to Mexican commons scholarship, it is critical that we strive to explore new avenues for scholarly research on the commons—work that can further the intellectual heritage she provides. My hope with this paper is that other scholars and practitioners with an interest in Mexican resource commons can be inspired to build a strong research programme that increases our understanding of their governance and, in doing so, builds upon the work and achievements of the indomitable Lin Ostrom.

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3

ROMPIENDO PARADIGMAS **Gobernanza de los bienes comunes y ciudadanía en las políticas forestal y de conservación Mexicanas**

Leticia Merino Pérez



3

Rompiendo paradigmas: Gobernanza de los bienes comunes y ciudadanía en las políticas forestal y de conservación Mexicanas

Leticia Merino Perez¹

Síntesis

Retomo en el texto algunas de las aportaciones más relevantes de la obra de Elinor Ostrom, considerando el contexto en que emergieron: la polémica con la tesis de la universalidad de la “Tragedia de los Bienes Comunes”. Reviso diversas rupturas de la obra de Ostrom con los paradigmas sobre la relación sociedad naturaleza, dominantes en las ciencias sociales y en las políticas de conservación y manejo de los recursos naturales: el paradigma de la propiedad privada o pública como panaceas, la visión de los derechos de propiedad acotados a los derechos de alineación; el paradigma de la elección racional y las posiciones neo-malthusianas sobre la relación sociedad naturaleza. Analizo las implicaciones políticas y conceptuales de estas rupturas y de propuestas: el potencial de la propiedad colectiva como base de arreglos institucionales para la conservación, la propiedad vista como “conjunto de derechos” que generan incentivos y responsabilidades con la sustentabilidad de los bienes; la posibilidad de cooperación, gobernanza y sustentabilidad en contextos de recursos naturales utilizados, incluso en condiciones de densidad demográfica relativamente alta. Busco aplicar este esquema al análisis de la gestión de recursos forestales en el Sur de México, área con fuerte presencia indígena

Palabras Clave: *Gobernanza, bienes comunes, acción colectiva, comunidades, panaceas, paradigmas, derechos de propiedad, políticas públicas*

Abstract

I reflect on what I consider to be some of the key contributions of Elinor Ostrom’s work, taking into account the scholarly context in which it emerged – the debate over the validity of Hardin’s “Tragedy of the Commons” argument. I also review diverse ruptures of Ostrom’s work with some of the traditional paradigms with regards to Nature-Society relationships, still dominant in the social sciences and frequently referenced in policy discourses—privatization and state control as institutional panaceas for nature’s conservation; the concept of property and property rights reduced to alienation rights; and, “rational choice” theory and neo-Malthusian conservation proposals as self evident givens. I analyze some of the policy and theoretical implications of Ostrom’s conceptual proposals, such as: the potential for collective property and associated institutional arrangements to enable conservation; property as a “bundle of rights” that create incentives and responsibilities towards sustainable resource uses; and, the viability of cooperation, governance and sustainability in contexts where natural resources are used, even under conditions of relatively high population density. I try to apply these lessons to the analysis of the experience of use and governance of forest in Southern Mexico, with its significant indigenous populations.

Key words: *Governance, common resources, collective action, communities, panaceas, paradigms, property rights, public policies*

¹ Investigadora, Instituto de Investigaciones Sociales (IIS) de la Universidad Nacional Autónoma de México (UNAM) y Presidenta de la *International Association for the Study of the Commons* (IASC). Email: merinoleticia@gmail.com

“Ningún problema puede ser resuelto desde el mismo nivel de conciencia que lo creó”

Albert Einstein

INTRODUCCIÓN

Un tema seminal en la obra de Elinor Ostrom es la crítica a la tesis que sostiene la universalidad de la tragedia de los bienes utilizados o poseídos colectivamente, planteada por Hardin en 1968, que sostiene que los usuarios de estos bienes nunca son capaces de coordinarse y evitar su destrucción (Ostrom, 1990). Hardin ilustró esta propuesta utilizando el caso hipotético de destrucción de un pasto comunal en Inglaterra Medieval. El análisis histórico de la enorme tragedia de las comunidades rurales a partir del “cercado” de los “commons” quedó fuera de su horizonte. Entre los siglos XIII al XVII miles de “commoners” fueron expropiados de los medios de vida con que tradicionalmente contaban. Su expulsión masiva de las tierras ancestrales, sin más opciones que la ocupación como mano de obra sobre-explotada, incluso semi-esclavizada que requerían la industria, el comercio marítimo y las colonias inglesas en Norte América, y la violenta represión a su resistencia han sido calificadas como uno de los “grandes crímenes de la modernidad” (Linebaugh and Rediker, 2001).

El discurso de búsqueda de eficiencia como justificación de la expropiación, acumulación y concentración de antiguos bienes comunes, acaecidos en distintas latitudes, se convirtió en prontamente ideología que identifica a lo comunitario con lo obsoleto y a la privatización de los bienes comunes con el progreso; para la que los dramáticos costos sociales de esa exclusión son el precio necesario de la modernidad. Fuera de Europa esta ideología y las políticas consecuentes se nutrieron en abismales inequidades sociales y en el racismo imperante en las sociedades coloniales. En México del siglo XIX las reformas liberales de privatización de las

tierras comunales permitieron una enorme expansión de las haciendas dedicadas a plantaciones orientadas al mercado mundial² sobre las antiguas milpas³ dedicadas al consumo de los pueblos. La concentración de la tierra y la riqueza generaron niveles de miseria mayores que los existentes durante la colonia (Warman, 2003). La recuperación de las tierras comunales fue el reclamo más sentido del movimiento social que sacudió al país durante la primera década del S.XX. El reparto de tierras durante 1930-1970 fue eje de estabilidad política. En los 1980 más de 60% de las tierras del país y más de 65% de sus áreas forestales eran propiedad de comunidades locales⁴. Las tierras de comunidades forestales—en muchos casos indígenas—se encuentran en áreas montañosas y de selvas, de difícil acceso y valor agrícola marginal que por siglos fueron regiones de refugio para los sobrevivientes y prófugos de la colonización europea y más tarde de la expansión del capital nacional e internacional.

El planteamiento de Hardin extendió el ámbito del discurso sobre los bienes comunes del campo de la economía al de la ecología, sumando una nueva culpa a lo comunitario: la responsabilidad de destruir la naturaleza. Este postulado hacía eco con la percepción del acelerado deterioro ambiental, emergente en los 1960 y 1970 entre el público de los países industrializados, luego de la publicación de los textos de Carson (1962), Ehrlich (1968) y del Informe “Los límites del crecimiento” (1972). La pérdida de los bosques tropicales del mundo es uno de los temas ambientales que desde los 1970 ha recibido mayor atención global. Desde la perspectiva de la TBC las causas del deterioro forestal son la ausencia y/o inestabilidad de los derechos de propiedad en los países “en desarrollo”, donde se ubican la mayoría de las selvas del planeta; asociado a la pobreza allí prevaleciente. La aceptación paradigmática del diagnóstico de Hardin se funda en gran medida en su simplicidad. En contextos académicos disciplinarios donde

² Henequén, caña de azúcar, algodón, café, tabaco.

³ Cultivo tradicional de maíz, frijol, calabaza y vegetales semicultivados.

⁴ Comunidades agrarias y ejidos (Warman, 2000)

impera la dificultad de asumir la complejidad de los procesos socio-ambientales, la tesis de Hardin pareciera auto-evidente: “cuando los recursos son limitados, las decisiones racionales para cada individuo dan lugar a un dilema irracional para el grupo... por lo que todos los recursos poseídos en común son, o serán eventualmente sobre-explotado..., las causas... son la libertad y el crecimiento de la población” (Hardin, 1968).

PARADIGMAS Y PANACEAS

Dos décadas después de la publicación de la Teoría de los Bienes Comunes (TBC), E. Ostrom (1990) reconoce la relevancia del problema planteado: gran parte de los recursos de los que dependen las sociedades contemporáneas enfrentan riesgos de tragedias similares a la de la metáfora de Hardin, aunque de mayor trascendencia. Sistemas naturales clave del medio ambiente global, numerosos bienes culturales y de conocimiento e importantes medios de información y comunicación dependen de acción y gestión colectivas, sujetas a potenciales fallas. Ostrom no niega la realidad de estas fallas sino el carácter inevitable que Harin les atribuye. Señala el error metodológico y conceptual de construir modelos explicativos universales con sustento empírico endeble, manejando los modelos como realidades, generalizando excesivamente condiciones y explicaciones particulares, sobre-simplificando los procesos que se pretende comprender. Considera la tesis de la “TBC” más como una ideología sobre esquemas de derechos y toma de decisiones ideales, que como un marco explicativo. Una ideología a partir de la cual se han impuesto alrededor del mundo esquemas de control estatal y de privatización como panaceas institucionales.

Ostrom comparte con Hardin el interés por la resolución de problemas. Sus empeños académicos buscan contribuir a generar elementos para comprender y evitar tragedias de los bienes comunes y de las comunidades que dependen de ellos. Desde la perspectiva de Ostrom, el supuesto de que la mayoría de los usuarios de bienes comunes están siempre atrapados en la imposibilidad de cooperar,

mientras los funcionarios gubernamentales y agentes de mercado son omnipotentes para solucionar los retos de gestión de los más diversos bienes, resulta autoritario y excluyente (Ostrom, 1990; Ostrom, Janssen and Anderies, 2007). La valoración de las capacidades de gestión de sociedades auto-organizadas y la crítica a los esquemas de gestión totalitarios, son centrales en su axiología, influida por su larga colaboración con Vincent Ostrom y por la tradición Tocquevilliana de valoración de la cooperación ciudadana como base de la gestión pública. Esta axiología fue para Ostrom una rica fuente de preguntas de investigación e hipótesis, no generadora de respuestas dogmáticas.

Al tomar distancia de los discursos basados en el sentido común y las panaceas académicas y políticas, insiste en la necesidad de que la construcción teórica y política estén basada en investigación empírica rigurosa y multi-método, comprometida con el reconocimiento de la complejidad y la inter-disciplina (Ostrom, 2009; Poteete, Janssen and Ostrom, 2010). Contra lo que puede suponerse, el extenso análisis de experiencias de éxitos y fallas de cooperación a partir de fuentes históricas, de campo y de experimentos económicos (Cárdenas, 2009; Poteete, Janssen y Ostrom, 2010) no condujo a Ostrom a proponer lo comunitario como una nueva panacea; sí a reconocer el peso de los actores locales en los procesos de apropiación y protección de los bienes comunes, en el éxito o fracaso del gobierno de los bienes comunes, aún en los casos de bienes o procesos de gran escala como la regulación climática, vista como resultado del “anidamiento” de sistemas de distintas escalas.

PARADIGMAS, PANACEAS, PROPIEDAD Y CONSERVACIÓN

A partir de la crítica de la universalidad de la “TBC”, Ostrom problematiza otros paradigmas prevalentes en los análisis sobre las relaciones sociedad-naturaleza. Cuestiona la noción de propiedad y la falla inevitable de la propiedad colectiva, que se percibe a menudo como ausencia de propiedad y sinónimo de acceso abierto asociados con frecuencia, al deterioro

de los bienes. Su concepción cuestiona las nociones de propiedad de los distintos polos del espectro político. Define a la propiedad colectiva como “propiedad privada colectiva”, en la que—a diferencia de la propiedad pública—existen titulares reconocidos de derechos y responsabilidades respecto a los bienes, y bajo la cual al igual que en regímenes de propiedad privada individual—los titulares poseen derechos de excluir a los no propietarios, impidiendo el libre acceso abierto.

En la crítica de Ostrom a Hardin, se señala la confusión generada por el uso indistinto de las categorías de “bienes comunes” y propiedad colectiva. (Schlager y Ostrom, 1992; Ostrom et.al., 2001; Ostrom, 2009; Potetee, Jansen, Ostrom, 2011). Los tipos de bienes se definen: por los costos de excluir usuarios potenciales del acceso a los bienes y por el nivel de “rivalidad” (implicaciones que el uso de los bienes tiene en el uso potencial de nuevos usuarios), (Ostrom 1990). Reconoce cuatro tipos de bienes: públicos, de uso (acceso, o acervo) común⁵, tarifa y privados. Esta tipología permite visibilizar los retos que enfrentan el gobierno y uso sostenido de distintos bienes. Estos retos derivan de las formas en que la apropiación (uso) de los bienes se lleva a cabo y de los costos de su mantenimiento y protección (provisión). Las presiones de apropiación tienden a ser más importantes para los bienes de alta rivalidad: privados y de uso común. Las presiones de provisión resultan más relevantes para la conservación de bienes de difícil exclusión: públicos y de uso común. De ahí que los bienes de uso común, como la mayoría de los sistemas y recursos naturales, sean los bienes potencialmente más vulnerables. Por otra parte los regímenes de propiedad se refieren a los titulares de la propiedad: los individuos y el Estado.

Ostrom cuestiona la noción generalizada que reduce los derechos de propiedad a los derechos de alienación⁶, destacando la importancia de los derechos de acceso, exclusión, uso y capacidad de participar en

las decisiones sobre el uso y control de los bienes. Asume plenamente el valor de la certeza de los derechos de propiedad para generar perspectivas de largo plazo en el uso y protección de los recursos, pero identifica a la propiedad colectiva como un régimen de propiedad capaz de generar certeza. Encuentra que en muchos contextos los derechos de uso y decisión crean sentido patrimonial, perspectivas e incentivos de largo plazo; mientras que los derechos de alienación no resultan indispensables en todos los casos para crear compromisos con la sustentabilidad de los bienes, sino que en algunos contextos generan incertidumbre y vulneran la gestión colectiva de bienes de “acceso común”.

La aplicación de este marco a un gran número de casos, así como un amplio meta-análisis (Potetee, Jansen, Ostrom, 2011) llevan a concluir que ningún régimen de propiedad es garantía de conservación de los recursos, ni se asocia invariablemente con su deterioro. Existen tanto casos de bienes comunes naturales (y culturales) conservados, como casos de bienes comunes deteriorados en regímenes de propiedad pública, privada individual y colectiva. La explicación del éxito o fracaso de la gestión colectiva y la construcción de esquemas de gobernanza de los bienes comunes requiere atender a la distribución de derechos entre actores, a las desigualdad del acceso a derechos, poder y activos (Ostrom 2009) y a los incentivos para un determinado tipo de uso e inversión en reglas y acciones de protección.

En distintas áreas forestales de África, Asia y América Latina existen altos niveles de deforestación en tierras públicas concesionadas a empresas madereras externas con incentivos de maximizar el uso de los recursos en el corto plazo (White and Martin, 2002). Las tierras de propiedad privada—individual o colectiva—no son inmunes al deterioro en ausencia de incentivos para su uso sustentable y altas tasas de descuento de la conservación⁷. Estos son los motivos de la sustitución de selvas por

⁵ “Common pool resources”,

⁶ Compra, venta, renta, hipoteca.

⁷ Frecuentemente como resultado de políticas públicas y demandas de mercado.

plantaciones de soja en terrenos privados de la Amazonia y el Chaco en Sudamérica y del deterioro de los bosques comunales en Papua-Nueva Guinea concesionados a empresas transnacionales. Durante los años 1970-2000 muchas comunidades mexicanas optaron por deforestar en respuesta a los subsidios a la expansión de la ganadería y agricultura en tierras forestales; en ausencia de incentivos para conservar (en contextos de vedas generalizadas al uso de los bosques). Actualmente la minería es un factor central de destrucción forestal en América Latina. En México las concesiones mineras en zonas montaña se incrementaron en 30% entre 2006-2012, incluyendo terrenos donde algunas comunidades han establecido áreas de conservación comunitaria.⁸

Los bosques públicos conservados presentan muchas veces condiciones de baja densidad de población, valoración ciudadana y capacidades financieras de los gobiernos. Son los casos de distintos parques nacionales en los Estados Unidos, Canadá y Europa Occidental, o de las Reservas de la Biósfera de Calakmul y Tikal en las zonas turísticas de la selva maya en México y Guatemala. La conservación de bosques públicos se ha logrado a partir de la participación social con base en prácticas de gobernanza tradicional en los bosques de los cantones suizos en los Alpes, en los bosques municipales del Totonicapán en Guatemala; o en las selvas de propiedad nacional concesionados a comunidades locales para su aprovechamiento y certificados por el Forest Stewardship Council en el Petén Guatemalteco, cuya capacidad para contener la expansión de la ganadería y de cultivos ilícitos⁹ de enervantes en la selva es hoy mayor que las Áreas Naturales Protegidas en esa región. Las propiedades privadas—individuales o familiares—en Finlandia y Austria, han producido madera de manera sostenida durante generaciones. Las comunidades productoras forestales

certificadas por el FSC en México, las reservas indígenas “extractivistas”¹⁰ en la Amazonia brasileña, los bosques comunitarios dedicados al uso doméstico en condiciones de alta presión demográfica y pobreza en la India y Nepal y los bosques sagrados del Sahel Africano (Larsson, Barry, Dahal and Pierce Colfer, 2010) hablan del potencial de la propiedad colectiva para la conservación. En estos casos los factores determinantes en las dinámicas de deterioro o conservación han sido la equidad de la distribución de derechos entre actores sociales, la estructura de incentivos a que da lugar y su “anidamiento en los sistemas de gobernanza” locales y nacionales.

Durante la mayor parte del siglo XX, México fue el único país en el mundo donde la propiedad forestal comunitaria contaba con reconocimiento legal, a pesar de que continuamente los derechos de propiedad comunitarios han sido vistos como obstáculos para intereses públicos y de empresas privadas. Entre los 1950 y 1980 los bosques comunitarios fueron concesionados a empresas externas para la extracción comercial de madera, convirtiéndose en importantes activos para las finanzas públicas y fuente de fáciles ganancias para esas empresas. En los años 1980, como resultado de la movilización de las comunidades forestales, concluyeron oficialmente las concesiones. A partir de los 1990 al extenderse la preocupación por los servicios eco-sistémicos de los bosques, la propiedad comunitaria ha sido tratada como causa central del deterioro forestal. Los diagnósticos suelen ignorar los impactos de las políticas que durante décadas promovieron el cambio de uso del suelo o expropiaron a las comunidades de derechos de uso, decisión y exclusión, imponiéndoles concesiones y vedas al uso de los bosques. En muchos casos estas políticas llevaron a las comunidades a percibir los derechos de propiedad forestal como inciertos.

⁸ El área de conservación de Capulalpam, Oaxaca, de altísima biodiversidad, donde nacían abundantes manantiales fue concesionada en 2005 a una minera canadiense; a pesar de que esta comunidad cuenta con amplio reconocimiento por su compromiso con la conservación y con la certificación de buen manejo forestal del FSC.

⁹ Marihuana y amapolas utilizadas para la producción de opio y morfina.

¹⁰ Donde se recolectan resinas, nueces.

PANACEAS, COOPERACIÓN, GOBERNANZA Y CONSERVACIÓN

La segunda gran ruptura de Ostrom con el pensamiento económico convencional es el cuestionamiento de la universalidad del paradigma de la “elección racional”, de la búsqueda del beneficio económico individual como móvil exclusivo de la conducta social. Las implicaciones del paradigma del individuo como “maximizador racional” rebasan las fronteras de la academia. En diversos análisis Ostrom alerta contra el riesgo de panaceas políticas basadas en el supuesto de la incapacidad de cooperación, que conducen persistentemente a prescripciones de concentración de derechos en manos de unos cuantos. La contraparte de los esquemas de concentración de derechos¹¹ es la privación de derechos sobre los bienes comunes naturales o culturales, de carácter local o regional para la mayoría de sus usuarios, incluyendo a los grupos que dependen de ellos, valoran su presencia y conocen sus dinámicas.

Sin negar el papel de los mercados y los estados en la vida social, la investigación de Ostrom muestra repetidamente resultados inesperados, incluso perversos de la imposición unilateral de panaceas, que califica como disfuncionales: concentración de poder y de beneficios en élites, inequidad social¹² toma de decisiones ajenas a las condiciones y necesidades locales, destrucción o “saturación” (Ostrom, 2007; Cárdenas, 2007) de la institucionalidad local y de las formas de cooperación comunitarias, obstaculizando paradójicamente la destrucción de los bienes comunes que se quiere proteger. Panaceas que resultan en actores locales carentes de capacidades y/o incentivos para proteger los bienes y actores externos empoderados, con capacidades de acción local insuficientes e inadecuadas y posibilidad de abuso de los bienes, en casos de los mercados dominados crecientemente por corporaciones internacionales (Dauvergne, 2008).

Para Ostrom los individuos actúan de manera diferente en distintos contextos: tienden a comportarse de manera competitiva y oportunista en condiciones de mercado, pero aprenden normas de interacción, y utilizan racionalidades distintas en diferentes contextos. (Ostrom y Walker; 2003). La acción colectiva no está dada, su construcción implica costos y dilemas significativos. Asumir riesgos de cooperar requiere credibilidad del compromiso de los pares, visiones compartidas sobre los bienes colectivos y las presiones a que están sujetos; acuerdos sobre las reglas que sustentan la cooperación, evidencia del cumplimiento de los otros y de la preservación de los bienes como fruto de esos esfuerzos. Estas no son condiciones espontáneas sino construidas a partir de la interacción, la agencia, los esfuerzos sociales y políticos; que pueden estar ausentes o presentes en distintas medidas en diversos casos. La crítica del modelo del “dilema del prisionero” (Ostrom, 1990) reconoce el valor que tienen para la cooperación el conocimiento previo entre los actores (reputación) y la comunicación al interior de los grupos. Aprender a confiar a partir de la experiencia colectiva, es clave para la superación de los “dilemas de lo colectivo”¹³ (Cárdenas, 2007). Ostrom asume que las tragedias de lo colectivo son extensas: “cuando las decisiones que se toman de forma anónima la sobre-explotación es mayor que la prevista por los modelos teóricos” (Ostrom, 2009), sin embargo en su visión hay espacio para el “optimismo racional”: la evidencia muestra que cuando los usuarios tienen posibilidad de diseñar sus propios esquemas de monitoreo y sanción y discutir “cara a cara” sobre sus visiones, conflictos y reglas, los resultados de la cooperación son casi “óptimos” (Ostrom 2009). Otras condiciones que favorecen la acción colectiva en torno a la gestión de los bienes comunes son: un nivel relevante de dependencia de los bienes, de modo que existan incentivos para construir y aplicar reglas colectivas con perspectivas de largo

¹¹ Junto a la gran concentración creada por los mercados globales y la globalización de la orientación de las políticas ambientales.

¹² Que Richard Wilkinson y Pikett propone considerar como un “mal público” (Wilkinson and Pickett, 2010).

¹³ Estos dilemas derivan de la contradicción entre la búsqueda de beneficios individuales y los posibles beneficios colectivos.

plazo; bajos costos de la cooperación y la conservación, ausencia de abuso de los bienes colectivos basado en inequidad e impunidad que erosionan drásticamente el capital social¹⁴ de los grupos. Los liderazgos y las políticas son pueden contribuir a movilizar la agencia grupal y acercar visiones, promoviendo prácticas de comunicación, construcción institucional y espacios de resolución de conflictos. (Ostrom, 1990).

La gestión centralizada impera en las agendas de las agencias multilaterales y en las políticas nacionales, a pesar de la evidencia de su frecuente inviabilidad (Ostrom, 2007). Siguiendo esta inercia, las políticas de conservación, pago por servicios ambientales y mitigación del cambio climático suelen imponer a las poblaciones rurales del “Sur Global” costos desproporcionados de la protección de los bienes “comunes globales”, en contextos nacionales donde el desarrollo de incentivos, el aprendizaje adaptativo y la ciudadanía de la conservación son incipientes. En México el gobierno federal mantiene fuertes derechos de regulación sobre los bosques que se traducen en una marcada sobre-regulación, a pesar de las escasas capacidades gubernamentales de vigilancia y sanción de los usos forestales ilegales. Las actividades de producción y vigilancia comunitarias enfrentan fuertes exigencias y costos, mientras que los usos ilegales prevalecen con alto nivel de impunidad (Merino y Ortiz, 2013)

Durante las pasadas tres décadas, en algunas regiones de México, a partir de las luchas contra las concesiones, diversas comunidades forestales han desarrollado experiencias de buen manejo y uso de los bosques. Los bosques y la inversión comunitaria para la producción forestal son hoy nuevos activos comunitarios. En la construcción y consolidación de estas iniciativas el esfuerzo por el desarrollo de capacidades locales

técnicas y de gobernanza ha tenido un papel fundamental. En distintos periodos algunas políticas públicas, organismos no gubernamentales y agencias de cooperación y conservación internacionales han apoyado el desarrollo de capacidades comunitarias¹⁵. Entre las lecciones aprendidas de estas iniciativas destacan; el valor del respeto y apoyo al capital social y gobernanza comunitarias, como sostén de las empresas colectivas y las iniciativas de conservación de los bienes comunes forestales. La importancia de promover visiones compartidas de los territorios y recursos comunitarios y desarrollar reglas basadas en el consenso para el gobierno de los bienes comunes. El reconocimiento de las comunidades locales y sus espacios de organización como interlocutores y contrapartes necesarios de las políticas públicas de sustentabilidad y conservación. Un estudio reciente¹⁶ revela la existencia de estrecha correlación entre las actividades y medida de protección y conservación de los bosques, con el nivel de organización y confianza en las comunidades y el desarrollo de actividades productivas forestales. (Merino y Martínez, 2013; Merino 2012). También se encontró que en comunidades con mayor capital social, con ingresos y empleo forestales, las presiones sobre los bosques¹⁷ son menores.

La sustentabilidad de bienes comunes de importancia regional y nacional (las cuencas hidrológicas) o global (el sistema clima, la biodiversidad, los océanos o la atmósfera) no implica que para su gobernanza basten los derechos y la actuación de los estados nacionales o las agencias internacionales. En tanto se trata de sistemas complejos, cuyas condiciones son frecuentemente resultado de la “anidación” de bienes comunes y de prácticas de menor escala (bosques, pesquerías, prácticas agrícolas y ganaderas en territorios específicos, patrones regionales de consumo de energía y consumo) su

¹⁴ Capital social entendido como: confianza, redes y normas (Ahn y Ostrom, 2003).

¹⁵ Destacan el Programa de Conservación y Manejo Forestal Comunitario, el de Conservación Indígena de la Biodiversidad, el Corredor Biológico Mesoamericano y el Consejo Civil Mexicano para la Silvicultura Sustentable entre otros.

¹⁶ Con base en entrevistas en 102 comunidades

¹⁷ Se consideraron indicadores de presión: la presencia en las áreas forestales de incendios, plagas, cultivos ilícitos y extracciones ilegales.

gestión requiere esquemas de gobernanza complejos, capaces de responder a presiones y condiciones de bienes de distintos tipos y escalas, cuyo manejo requiere la coordinación de actores, ubicados en distintas escalas, con diversos intereses, percepciones y derechos; sistemas de gobernanza que Ostrom caracteriza como “policéntricos (Ostrom, 2012).

POBLACIÓN, POBREZA Y CONSERVACIÓN

Un tercer paradigma cuestionado por Ostrom se refiere a la supuesta la relación unívoca entre el crecimiento de la población y la pobreza y la destrucción de la naturaleza. Uno de los ejes de argumentación de la “TBC” es el riesgo apocalíptico del crecimiento demográfico—que se supone es siempre exponencial. Si bien las poblaciones humanas ejercen presión sobre los sistemas naturales de los que dependen en gran medida los pobres rurales del mundo, en sus decisiones y prácticas de uso y manejo de los recursos naturales influyen los incentivos y las instituciones¹⁸, que a su vez dependen de la valoración, percepción y conocimiento local de los ecosistemas por parte de los actores sociales, del nivel de confianza existente entre ellos y de los costos de oportunidad de la sustentabilidad.

Desde los años 1990 la investigación empírica encontró que las relaciones población-pobreza-conservación distan de ser lineares y se caracterizan por su complejidad. Se han documentado experiencias de conservación y sustentabilidad en condiciones de pobreza y alta densidad poblacional: en bosques de India y Nepal; en el Totonacapan Guatemalteco y en la Sierra Nahua-Totonaca de México. Además de la densidad de población y su pobreza, estos casos tienen en común: alta dependencia y valoración de los recursos forestales, clara percepción de su escasez, derechos locales de uso y regulación, y fuertes tradiciones de gestión local. En contextos

de densidad demográfica, escasez y pobreza se han generado también experiencias de cooperación para la construcción de nuevos bienes comunes: represas para captar agua de lluvia en la región Nahua de Guerrero; cooperativas rurales de crédito popular¹⁹, creación de empresas comunitarias para: la producción orgánica de café, miel, maíz, frijol, madera, muebles, agua de manantial, resinas, artesanías, flores, hongos, para su certificación y comercialización, y para la prestación de servicios de turismo comunitario, construcción de escuelas, bibliotecas y centros de internet financiados con recursos de comunidades campesinas pobres.

El envejecimiento de las poblaciones y el despoblamiento de las regiones—crecientes en el campo en México y Sudamérica—tienen a menudo como consecuencia la debilidad local para proteger y restaurar áreas forestales, cuerpos de agua, fauna silvestre y suelos, recursos que enfrentan ya sean usos ilícitos o presiones naturales²⁰. En algunas regiones de baja densidad demográfica, los bienes comunes han sido deteriorados como resultado de prácticas de ganadería extensiva, agricultura industrial con alto uso de insumos químicos y agua²¹, de cultivos ilícitos y crimen.²²

Dos importantes análisis recientes sobre el cambio ambiental global exponen como patrones de relación población-naturaleza determinantes de este proceso: una fuerte relación entre los altos niveles de consumo y producción globalizados y la destrucción de los bienes comunes ambientales globales y locales (Dauvergne, 2008; Merino, 2013), y una fuerte relación negativa entre el nivel de desigualdad social, el capital social y la disposición a asumir compromisos ambientales (Wilkinson and Pickett, 2010). Más allá de cierto nivel de desarrollo, el crecimiento de la economía tiende a incrementar la desigualdad y el consumismo—fuente clave de presiones ambientales. Estas propuestas demandan análisis y

¹⁸ Las instituciones se definen como patrones de interacción que a fuerza de repetirse se instituyen.

¹⁹ Promovidas por la Asociación Mexicana de Uniones de Crédito en contextos de alta marginación.

²⁰ Cuya magnitud e incertidumbre se han incrementado a partir de los procesos de Cambio Ambiental Global.

²¹ Los suelos y cuerpos de agua del Valle Central de California se encuentran entre los más contaminados en los Estados Unidos.

²² Frecuente en los estados de Guerrero, Michoacán, Durango y Chihuahua en México.

políticas conservación de mayor complejidad y diversidad que aquellas que consideran el ejercicio de los derechos de los pobres, como opuesto a la conservación, enfocadas en criminalizar o impedirles el uso de los territorios naturales.

Propongo una redacción alternativa para dar mayor claridad: Estas propuestas demandan análisis y políticas conservación de mayor complejidad y diversidad que aquellas enfocadas en criminalizar o impedir el uso de los territorios naturales a los habitantes locales por considerar el ejercicio de sus derechos como opuesto a la conservación.

CONCLUSIONES

La Teoría de la Acción Colectiva busca rebasar los esquemas ideológicos sobre la gestión de los bienes, reformulando las preguntas sobre su gobernanza, reconociendo la complejidad de los sistemas socio-ambientales que analiza. Propone: sustituir los debates sobre las virtudes o lastres intrínsecos a los regímenes de propiedad por cuestionamientos en torno a las condiciones que permiten a los grupos superar los dilemas de la acción colectiva; investigar los factores que favorecen la regulación local adaptada a condiciones socio-ambientales únicas y favorecer la construcción de sistemas de gobernanza policéntricos capaces de asumir los retos de gestión de sistemas complejos. La respuesta no son las comunidades vistas como panacea; los estados y mercados tienen papeles importantes en esta construcción, pero generalmente el peso de la comunidad local es determinante en el éxito o fracaso de la gestión de los bienes comunes.

Coherente con el espíritu de optimismo racional, Lin Ostrom fue practicante convencida de la acción colectiva académica, durante más de 40 años cientos de estudiantes, y académicos visitantes de más de 40 países participamos en el hoy llamado "Vincent and Elinor Ostrom Workshop for Political Theory and Policy Analysis". En 2009 Lin fue distinguida con el "Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel Nóbél". Un Premio

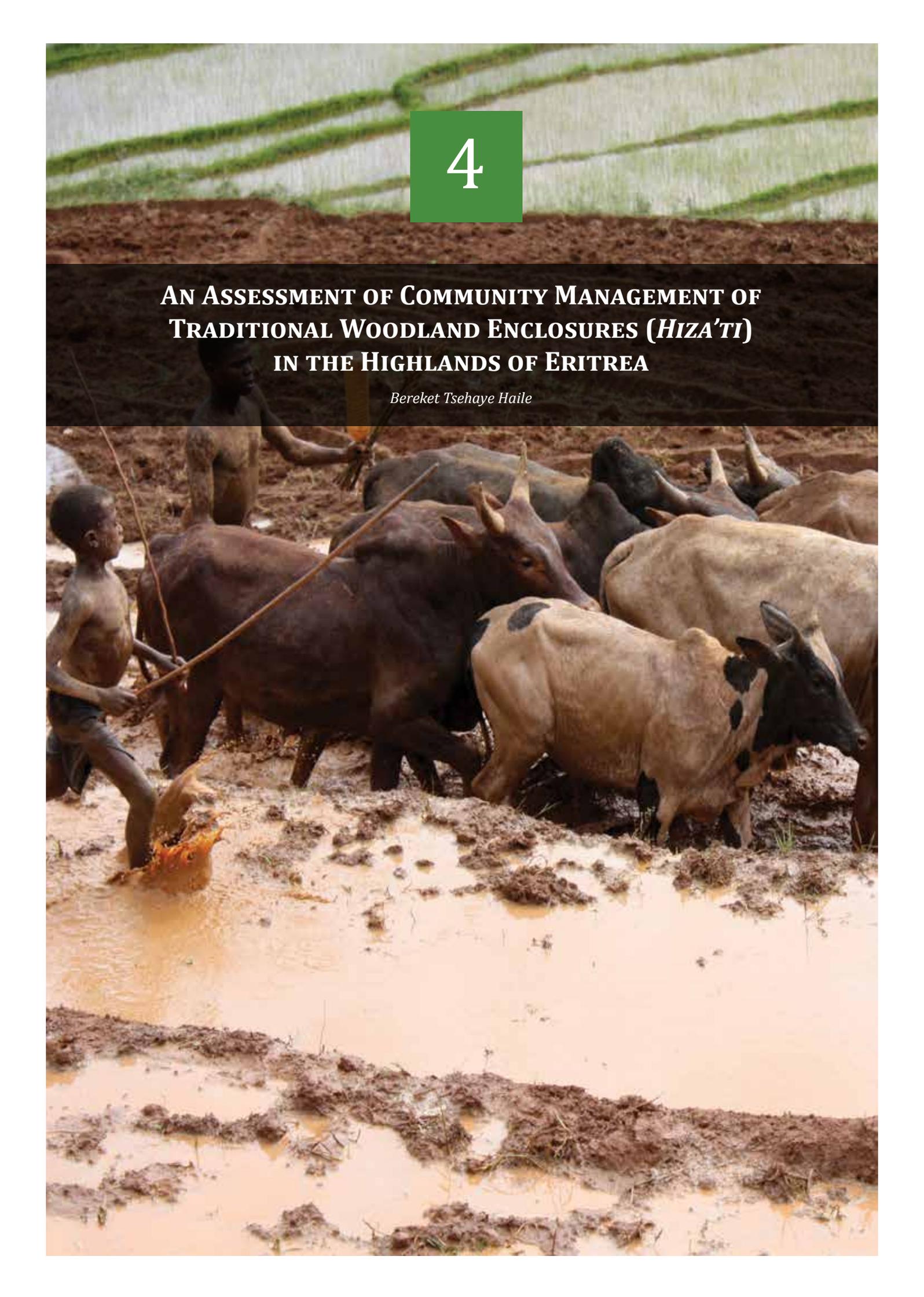
Nobel de Economía paradigmático que reconoció la importancia global del gobierno de los bienes comunes, con certeza el Premio Nobel de Economía que ha generado mayor alegría alrededor del mundo. Elinor Ostrom falleció el 11 de Junio de 2012 dejando como herencia un impulso formidable de renovación a la investigación socio-ambiental, basado en nuevas formas de práctica académica y de pensar la acción social, así como una extensa comunidad académica y activista comprometida con la continuidad de su legado de búsqueda de equidad y práctica cotidiana de la democracia.

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4

**AN ASSESSMENT OF COMMUNITY MANAGEMENT OF
TRADITIONAL WOODLAND ENCLOSURES (*HIZA'TI*)
IN THE HIGHLANDS OF ERITREA**

Bereket Tsehaye Haile

4

An Assessment of Community Management of Traditional Woodland Enclosures (*Hiza'ti*) in the Highlands of Eritrea

Bereket Tsehaye Haile¹

Abstract

In rural Eritrea, people's lives are closely linked to local natural resources. Villages in the highlands of Eritrea have a long-standing tradition of forest and woodlands management. The *hiza'ti* system (traditional woodland enclosure), which is practiced by systematically restricting grazing and biomass harvesting, is one example. However, efforts to understand such traditions and assess their effectiveness as management systems have been limited. This research explores how communities manage their traditional woodland enclosures (*hiza'ti*) and assess their effectiveness, through qualitative research conducted in the village of Lamza. Four focus group discussions were conducted in addition to several key informant and household-head interviews. Ostrom's Design Principles for commons management were then used to analyse the robustness of the management regime. The study found that the village held a strong attachment with their natural resources and traditions of managing the local woodland. The community played a major role in protecting and monitoring their enclosure, with a mutual monitoring and sanctioning system that was commensurate with the benefits that villagers drew from the woodland enclosure. Analysis shows that the *hiza'ti* system fulfills most of Ostrom's design principles through a robust set of institutional arrangements. However, the study identified potential threats to Design Principles three and seven, particularly in relation to interference from lower level government institutions that may affect collective choice among the villagers, as well as other actors that threaten to weaken the autonomy of the village assembly (*baito*) and their right to organise.

Keywords: *Traditional woodland enclosure (Hiza'ti), Common Pool Recourses (CPRs), Ostrom, Design Principles, Eritrea*

¹ School of Oriental and African Studies, University of London, UK, Email beretsehaye@yahoo.com

INTRODUCTION

Eritrea is an agrarian state located in the horn of Africa. From a total population of 6.2 million people (July 2013 estimate), 80% of Eritreans depend on traditional agriculture, characterised by rain-fed subsistence farming and a pastoral livestock system relying primarily on family labour (NSEO and ORC Marco, 2003; Sibhatu, 2006). In rural areas, people interact daily with their natural environment, and have acquired significant knowledge in the use and management of their shared (communal) resources. If such resources are utilized without regulation, they are exploited on “a first-come, first-served” basis (Gebremedhin et al. 2003), possibly resulting in their eventual depletion. Communities tackle the problem of overexploitation by crafting local institutions to regulate and ensure the sustainable use of these communal resources.

Several villages in the highlands of Eritrea have a management system in place for their forests and woodlands called *hiza'ti* (traditional woodland enclosure). The *hiza'ti* system is practiced by systematically restricting grazing and biomass harvesting. The main objective is to enhance the natural regeneration of those native species that contribute to sustaining local community livelihoods. The *hiza'ti* system is believed to have started when a shortage of firewood and pastoral resources began to impact rural communities, and rules were established to ration their use (FAO 1997). *Hiza'ti* are managed and monitored by local communities, with monitoring taking place either through a rotational scheme that each household is obliged to participate in, or by hiring permanent guards whose salaries are paid collectively (Sibhatu 2006).

Despite the rich tapestry of grassroots forest management practices evident in Eritrea, government policymakers have, on the whole, ignored them. The top-down approach of deploying government-appointed forest guards and enacting strict regulation is still the predominant management approach in the country, with minimal efforts to understand

traditional practices and evaluate their effectiveness. This study thus looks to assess the current role played by local communities in managing woodland enclosures and to appraise the effectiveness (robustness) of their management using the criteria developed by Nobel Laureate, Elinor Ostrom. While Garrett Hardin (1968) suggested that communal resources will inevitably suffer overexploitation unless transferred to private or government ownership, he failed to recognise that commons can be managed by a group of users with exclusive rights to regulate the resource under customary tenure arrangements, with effective local institutions enabling user access to be regulated. It was Ostrom's work, in particular, that openly challenged the limitations of Hardin's thesis and argued for solutions beyond state or private property (Ostrom 1990).

Due to the complex interactions that link society and environment, analysing the effectiveness of common property regimes is no easy task (Ostrom 2007). Most of the ‘success factors’ are site specific, while Agrawal (2001) argued that the variables that determine the success of Common Pool Resource (CPR) institutions are numerous, correlated and interrelated. Nonetheless, some common attributes are shared by many successful common property management systems (Ostrom 1990; Tucker 1999). In her ground-breaking work, *Governing the Commons*, Ostrom (1990) pointed to eight general design principles characteristic of successful CPR institutions (Table 1). According to Ostrom, a design principle refers to “an essential element or condition that helps to account for the success of these institutions in sustaining the CPRs and gaining the compliance of

The usefulness and validity of Ostrom's design principles have been shown in their application in CPR studies over the past two decades.

DESIGN PRINCIPLES
Clearly defined boundaries and users
Congruence between appropriation and provision rules and local conditions
Collective choice arrangement; those affected by operational rules should be allowed to participate and modify the rules.
Monitoring; monitors who actively audit common pool resource conditions and users' behaviour are users and/or are accountable to them.
Graduated sanctions; sanctions to violation increase proportionally relative to the severity of crimes
Conflict resolution mechanism; Low cost, readily accessible and rapid mechanism to settle conflicts
Rights to organise; rights and legitimacy of users to devise their own institutions is recognised by outsiders
Nested Enterprises (for CPRs that are part of larger systems)

Table 1: Design principles that characterise long enduring CPR institutions. (Source: Ostrom 1990:90)

generation after generation of appropriators to the rules in the use" (1990: 90). Rather than acting as a checklist for deciding the robustness of local institutions, the design principles are better understood as guides to help analyse the relative success or failure of institutional arrangements for CPRs (Ostrom 1999).

The usefulness and validity of Ostrom's design principles has been shown in their application in CPR studies over the past two decades. Cox et al. (2010) analysed 91 such studies and found that Ostrom's design principles are well supported empirically. The principles also have their limitations, with some (e.g., Singleton and Taylor 1992; Tucker et al. 2007) arguing that issues such as external socioeconomic factors and urban connections have not been adequately considered given their clear impact on CPR management regimes.

METHODOLOGY

For this study, qualitative research was used to assess the management of Eritrea's traditional woodland enclosures. The village of Lamza was selected due to its strong

resource management tradition and limited government involvement. Lamza is located about 8km south of the national capital of Asmara, and had a resident population of 430 (128 households) in 2012.

Four focus group discussions were conducted, numbering between 4 and 6 participants per group and representative of adult men and women of different ages. Each focus group also contained participants representing a variety of socio-economic backgrounds. To help provoke discussion on a range of issues related to the access, management and protection of their enclosures, several exercises were carried out, including resource mapping, plant resource valuation, and seasonal resource availability. In-depth interviews (with open ended questions) were also conducted with the village administrator and other selected village elders. To obtain a detailed understanding of how individual households interact with resources from the enclosure, and abide by set rules, a semi-structured questionnaire was also conducted with ten (8 male and 2 female) randomly selected household heads.

The data collected were analysed against



Map 1: Location of Lamza, Eritrea (Cartography by Marcel Morin)

Ostrom's design principles. The strength of the *hiza'ti* system in fulfilling the criteria of each design principle was then evaluated.

EVALUATING THE *HIZA'TI* SYSTEM USING OSTROM'S DESIGN PRINCIPLES

The *hiza'ti* system in Lamza was established about 120 years ago. It was widely held that a community leader named Kentiba Zere had initiated the practice of restricting access to local woodlands in fear that Italian soldiers (Eritrea was a colony of Italy at the time) would cut down trees for timber. Subsequent administrators continued to restrict access to these areas, devising several rules and bylaws to help govern resource use and access. The village has several specialised grazing areas for small ruminants, for suckling sheep and goats and free grazing areas for all kinds of livestock. Compared to these other grazing lands, the *hiza'ti* area is strictly managed and reserved mainly for oxen.

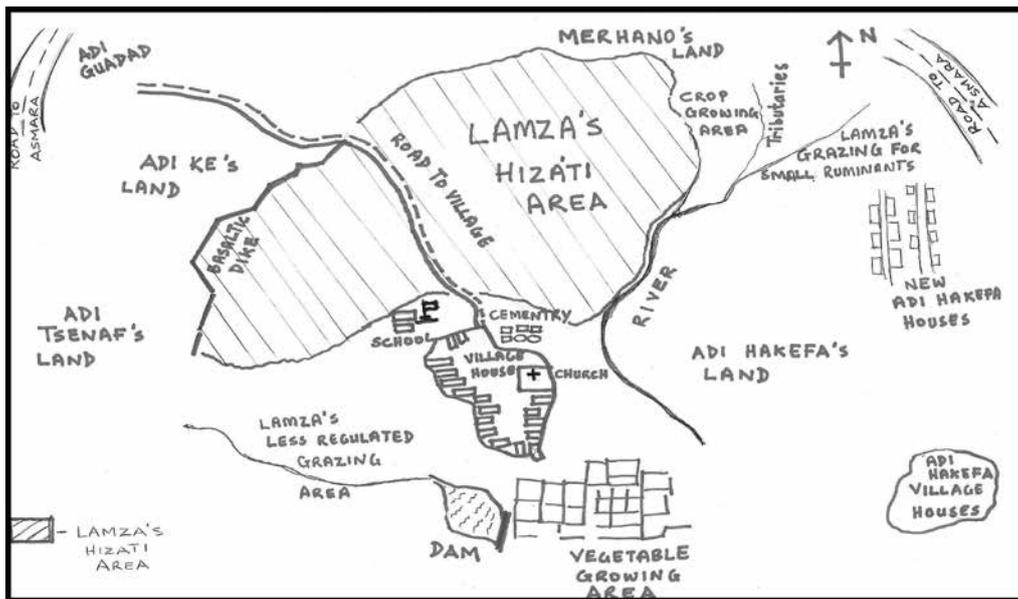
The *hiza'ti* is located north of the village and covers about 130 ha (Map 2). The dry-weather

road, which leads to the village, bisects the enclosure. Each side is open in turn for grazing for approximately two months each year. The *hiza'ti* is rich in plant species. Elders estimate that there are 35 types of tree and shrub species within the *hiza'ti*.

How does the *hiza'ti* system perform against Ostrom's Design Principles for community-based natural resource management?

Design Principle 1: Clearly defined boundaries and users

The *hiza'ti* has clear boundaries, both in terms of resource and resource users. Distinctive features such as a river, a basaltic dyke and other features separate Lamza's *hiza'ti* from the land of neighbouring villages. Village houses form the southern border. Use rights of any resource within the *hiza'ti* belong solely to residents of Lamza village. Since everyone knows each other very well, it is very easy for users to identify one another. Residence status is gained by birth or through marriage to a resident, and non-residents are prohibited



Map 2: Map of Lamza (Reconstructed from FGD resource mapping)

from accessing the *hiza'ti*. Lamza residents do not share resources within the *hiza'ti* with any neighbouring village—in this way, what is managed and by who is clear to community members.

Design Principle 2: Congruence between appropriation and provision rules / local conditions

The opening and closing of the *hiza'ti* coincides with the farming season. Only oxen are allowed to graze inside the *hiza'ti*. Each side of the *hiza'ti* is grazed for two months a year; with one side of the *hiza'ti* open from the beginning of May to the middle of July, and the other side opening at the end of July and closing at the end of September. The *hiza'ti* plays a major role in the recuperation of sick or injured oxen and castrated calves, which are allowed to graze even during the closed season, pending special permission from the village administrator. It is strictly prohibited to take firewood or grass from the enclosure to sell in nearby towns. Users are only permitted to take what is needed for their household consumption. For example, under supervision, villagers are allowed to use local trees to make farm tools. However, villagers know which branch is suitable for a specific tool, and guards ensure that users do not

cut any more than is needed. Similarly, rules exist around the collection of firewood. Every villager is allowed to collect dry fallen wood three times a year: mid-March for *negdet* (a religious festival); around New Year; and, at Easter. In addition, for funerals and weddings, three bundles of seraw tree (*acacia etbaica*) are permitted, although for weddings the bridegroom's family's quota can include a couple of extra bundles for firewood during the honeymoon.

The operational rules that govern the appropriation (use) of resources fit the local situation in the village, and it is this ability of the *hiza'ti* to meet the specific needs of villagers that appear to be the crucial factor behind its effective protection. If benefits from the *hiza'ti* area were not commensurate with the efforts required to protect and manage it, local people would not be so diligent in their stewardship of the resource. The study showed that residents believe the rules to be both fair and legitimate. Indeed, all respondents were satisfied with current management of the *hiza'ti* and want future administration of the enclosure to be left to the community. Moreover, they agreed that without rules to govern access, the resources within the enclosure would be severely degraded.

The fact that only a limited number of oxen and less destructive activities (e.g. carving farm tools, bee keeping, grazing of sick oxen etc.) are permitted is indicative that the operational rules in place are tied to the capacity of the resource to regenerate. These rules not only prevent outsiders from accessing the area but also regulate use-rate among eligible members, pointing to clear congruence between appropriation and provision rules.

Design Principle 3: Collective choice arrangement

Though no separate institution exists for managing the *hiza'ti* or woodlands, there is a traditional administration system in Lamza that manages several activities in accordance with local customary laws. This is called *Baito Adi* (village assembly) and is the space where important and divisive issues can be debated and decided upon, including the management of local natural resources. The *baito* devises laws, ensures the equitable allocation of resources from the *hiza'ti* and settles any conflicts over resource use and allocation.

In Lamza, every inhabitant has the right to participate and give his or her opinion in the village *baito*. The *baito* has both judiciary and legislative elements. In this way, the appointment of new guards, the amount of (or any modifications to) a guard's salary, and the contribution of each household towards that salary, takes place at these meetings. Each participant has the right to raise, discuss and debate issues related to the operational rules of the *hiza'ti*, and together craft and pass new bylaws. Decisions are made based on consensus.

Although the *baito* system allows resource users to modify operational rules affecting the *hiza'ti*, study participants did point to the potential threat from government-led administrative structures that have the potential to interfere in the *baito* system and impose new rules that do not necessarily reflect the needs of local communities. This is because the *baito* is a customary rather than statutory structure, and so without continued recognition from government agencies their

relevance and autonomy can be diluted.

Design Principle 4: Monitoring

Every resident is under the obligation to monitor and safeguard the *hiza'ti* and to bring rule-breakers to the attention of the guard or the village council. Residents are always attentive to movements within the enclosure and able to quickly spot and report unlawful activities.

One guard is officially appointed by the village *baito*, who also decide how much each household should contribute to the guard's salary. On the top of his base salary, fines levied also go to the guard, making their pay roughly equivalent to that of a university-educated government employee and thus attractive in an area where wages are generally low. This helps to minimise the opportunity cost for guards, who have to forego the income they could potentially earn from farming. The *baito* also appoints an *Abo guasa* (father of herders), who is responsible for overseeing the activities of both guards and herders, and holds power to enforce punishments and listen to the appeals of those charged. The most common transgressions in relation to the *hiza'ti* are grazing out of season and illegal tree cutting. Generally, all residents follow the rules and most culprits are outsiders. According to the village administrator, this is because the resources of neighbouring villages were depleted long ago.

The *zeraa* system is used in monitoring and safeguarding the area. This allows the guard to seize all livestock found to be grazing illegally inside the *hiza'ti*. The owner has to pay a fine to get the livestock back. For this reason the guard is commonly known as '*zeraay*', which means "one who seizes livestock." Besides his power to seize livestock, the guard is also entitled to levy penalties to any offender in accordance with village bylaws. If the offender refuses to pay, the guard takes him/her to the *baito* to be judged by the village administrator and elders. Here, the *Abo guasa* plays a key role in enforcing any punishment. If the offender is from a neighbouring village and refuses to pay the fine, the village administrator takes the case to the offender's

village *baito*. He will accuse him/her based on the 'law of the fathers', which is highly respected in the area. Neighbouring villages know that Lamza residents are very serious about the *hiza'ti* system and thus often afraid of not only the guard but also Lamza residents.

The fact that monitoring is carried out by resource users, means that mutual monitoring is extremely important. A quasi-voluntary form of compliance based around the idea of 'I will if you will' is highly visible, and the reason why so few law breakers come from within the community.

Design Principle 5: Graduated Sanctions

Punishments and sanctions designed to help regulate the *hiza'ti* system have evolved overtime. Fifty years ago, the punishment for any illegal action was about nine *melelik* (about five kilos) of cereals per shepherd. Today, the punishment is based around monetary fines and tied to the rules being contravened:

- 10 Nakfa² per cattle and 5 Nakfa per sheep/ goat for illegally grazing out of season
- 100 Nakfa for illegally cutting trees with an axe
- 25 Nakfa for illegally collecting dry and fallen wood with bare hands

In general, penalties and sanctions are graduated and increase based on offender intent, degree of damage caused, and the offender's past record. Generally, offences in relation to grazing fall into one of two categories. The first is unintentional damage (known as *Wererta*), typically when livestock that's browsing at the periphery of the enclosure enters without being noticed by the herder. Though a punishable offense, it is considered less serious and so the punishment less severe. Other categories cover deliberate illegal entry (*Hasya*), or when a herder intentionally leads his livestock into the *hiza'ti* out of season. Since he is doing this knowingly, the fine is much higher (usually double).

Design Principle 6: Conflict Resolution Mechanism

The village *baito* listens to and settles conflicts. It is rare that a resident of Lamza will appeal to the nearby Ministry of Agriculture office with regards to a resource-related conflict. While Lamza's *baito* is capable of settling conflicts vis-à-vis resource use within the village, respondents revealed that for issues involving neighbouring villages, it is the 'law of the fathers', in combination with the *baito* system, that creates access to what Ostrom refers to as "rapid, readily accessible and low cost local mediation" (Ostrom 1990). When this does not suffice, government agencies are asked to get involved.

Acknowledging the role of elders and local authorities in mediating conflicts and the importance of a low-cost justice system, the government recently introduced 'community courts', whose decisions are officially recognised by higher-level courts. The presence of 'community courts' increase the capacity of the village *baito* to settle conflicts, and again this is reflective of a strong internal mediation procedure.

Design Principle 7: Rights to Organise

Study participants said that government interventions in the *hiza'ti* management system have been minimal and generally limited to the provision of seedlings and technical assistance. While villagers view their management system as largely self-sufficient, with villagers holding the right to devise their own rules, it is also true that they are held accountable to an official inter-village- institutional arrangement known as *memihidar kebabi*, which typically comprises of 3-4 neighbouring villages. The decisions of the *baito* prevail only if it does not contradict the verdicts of *memihdar kebabi*.

At state levels, the Eritrean Forestry and Wildlife Conservation and Development Proclamation (No 115/2006; article 24) states that "communities... may utilize any naturally growing trees in accordance with the

² 1 Nakfa is equivalent to approximately USD\$15

management plan in which the government will have a role to play in the technical assistance as required". This proclamation allows villagers to practice self-management in their woodland and/or woodlots, but within a framework of state ownership³. The Proclamation also states that government can enter into agreement with community members where appropriate, for the purpose of sustainable forest management, afforestation and reforestation, protection of wildlife, watershed management and the like.

Both land and forest proclamations give recognition to community-based resource management and limit the ability of government to interfere in situations where stable management scenarios are being achieved through customary means. However, the power of local people to exercise their rights is not absolute and remains contingent upon it being in line with government policy of the day. The State's role in providing oversight is not, therefore, an immediate threat but still open to misuses of power that could potentially (and unilaterally) reduce the benefits that Lamza residents receive from resources within the *hiza'ti*.

Design Principle 8: Nested Enterprises

Given that the *hiza'ti* system is not part of a larger CPR, Ostrom's eighth design principle was not included in this study.

CONCLUSIONS

This study reports on a community in the Eritrean highlands, holding a long tradition of communal resource management, which has developed a set of comprehensive village bylaws to enable the sustainable use of biologically diverse woodland enclosures of livelihood importance to local people. The study finds that these bylaws, or operational rules, play a major role in protecting, monitoring and enhancing the regenerative capacity of these enclosures, and appear to fulfil most of the design principles (Table 2)

that Ostrom (1990) developed to characterise robust commons institutions and management systems.

The study provides an illustration of how Ostrom's Design Principles have stood the test of time (Cox et al. 2010) as a tool to assess CPR management, where trust and reciprocity is crucial to sustaining collective action in the management of shared resources.

However, while the *hiza'ti* system of commons management appears robust and successful in terms of resource sustainability, this study also shows how tenuous certain aspects of the system can be (in this case, the arrangements around collective choice and the right to self-organise) because of their dependence upon supportive government policy—a situation that can easily change with political upheaval at the state level and/or the influence of evolving market economies.

Yet despite the threat of upheaval, this study also shows how important it is to properly assess the effectiveness of local resource management efforts ahead of instituting any kind of external intervention that could fundamentally change a system's dynamics. In this case study from Eritrea, locally-crafted institutional arrangements, evolved over many decades, have enabled a sustainable resource management system based around customary practices and norms. At the heart of this system is a degree of autonomy that provides resource users with the political space to craft operational and collective choice rules—a situation that requires continued statutory recognition and the kind of tenure security that incentivizes local people to use and protect the resource over the long-term.

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³ Land Proclamation (No 58/1994) declares a fundamental change to the customary tenure system and proclaims all land to be property of the state in which villages are allowed to 'continuous use and control' of their communal land including woodlands.

OSTROM'S DESIGN PRINCIPLES	FULFILLED / NOT FULFILLED
Clearly defined boundaries and users	Fulfilled
Congruence between appropriation and provision rules and local conditions	Fulfilled
Collective choice arrangement	Fulfilled but potentially threatened by interference of government institutions
Monitoring	Fulfilled
Graduated sanctions	Fulfilled
Conflict resolution mechanism	Fulfilled
Rights to organise	Fulfilled but dependent on future government interventions continuing to be supportive of self-organisation

Table 2: *The hiza'ti woodland management system and Ostrom's Design Principles*

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5

**GOVERNING THE COMMONS THROUGH CUSTOMARY LAW
SYSTEMS OF WATER GOVERNANCE**

The Case of the Marakwet

Elizabeth Gachenga



5

Governing the Commons Through Customary Law Systems of Water Governance

The Case of the Marakwet

Elizabeth Gachenga¹

Abstract

The resilience of customary law systems of natural resource governance in many parts of the world lends credence to Ostrom's theory on the governance of commons. Ostrom argued that resource users who enjoy relative autonomy in the design of rules for governing and managing common-pool resources, frequently achieve better economic (as well as more equitable) outcomes than when experts do this for them.² In support of this theory and acknowledging that most common pool resource governance regimes are based on a customary law system, Bosselman has sought to demonstrate a link between customary law systems and positive outcomes for sustainable development.³ Using a case study of the customary law system of water governance of the Marakwet community of Kenya, this paper tests and builds on the design principles and tools developed by Ostrom, to study normative institutions in a dynamic environment.⁴ The paper proposes an analytical framework that helps identify the features that strengthen customary institutions and ensure their adaptability and resource sustainability. This exercise illustrates the parallels between commons governance and customary law governance of natural resources.

Keywords: *commons, common pool resources, customary, law, natural resource governance, irrigation system, sustainability, sustainable development, property, water*



Plate 1: *The River Embobut, which is the source of the irrigation furrows used by the Marakwet people. (Photo credit: Elizabeth Gachenga)*

¹ Elizabeth Gachenga (PhD) is a law lecturer and researcher at Strathmore Law School in Nairobi, Kenya. This paper is based on research undertaken as part of her doctoral research at the University of Western Sydney. Email e.gachenga@gmail.com

² (Ostrom 1990); (Agrawal and Gupta 2005); (Gibson, McKean, and Ostrom 2000); (Tang and Ostrom 1993); (Schlager and Ostrom 1992); (Ostrom and Basurto 2011)

³ (Bosselman 2005)

⁴ (Ostrom and Basurto 2009)

THE CONCEPTS OF CUSTOMARY LAW AND COMMON POOL RESOURCE GOVERNANCE SYSTEMS

Common pool resource (CPR) governance systems refer to the various models of norms and institutions used by communities to manage the use of a shared resource. The field of CPR governance gained popularity in the 1990s following the publication of Elinor Ostrom's book: *Governing the Commons: The Evolution of Institutions for Collective Action*.⁵ Her work provided a highly insightful critique into the theoretical foundations of prevalent policy on natural resource governance, and motivated a reconsideration of the two-dimensional approach to the 'problem' of limiting the governance of common pool resources to state or 'market' (through privatisation) solutions.

Most of the work done in the area of CPR governance has been contextualized in economics and more specifically in institutional economics. However, since the publication of Ostrom's book, legal property theorists have also demonstrated an interest in the conclusion she drew; that tragedy is not a necessary fate for all commons. Consequently, in legal property literature, there is a growing appreciation of successful institutional arrangements for the management of commons that do not fall within the two-dimensional framework of private property or state control.⁶ Despite reference by legal property theory to Ostrom's work, its practical implications have not been widely researched in the context of law. This paper seeks to explore one such application by investigating the linkages between the work of Ostrom and colleagues on the commons, and customary law governance systems for natural resources such as water.

Modern legal frameworks tend to associate customary law systems with the traditional norms and practices that local and indigenous

communities have crafted/developed over an extended period of time. Although it is true that these systems are often closely related to long-standing activities of resource-dependent people, customary law constitutes a more dynamic reality. In this paper, the term 'customary law systems' refers to the norms and institutions whose moral authority and force emanates from the contemporary as well as traditional culture, customs, religious beliefs, ideas or practices of the people to whom it applies, rather than from the state.⁷ Notions such as 'community-based', 'informal' or 'local' forms of governance are used regardless of their antiquity or association with tradition. In this context, customary law systems of resource governance are understood as a popular normative pattern reflecting the common understanding of valid compulsory rights and obligations relating to the resource.

Customary law systems for natural resources governance provide an ideal opportunity for investigating the emerging theories on commons' governance in a legal context. This is because most customary law systems of natural resource governance are based on a CPR governance system. In recognition of this, Ørebech et al (2005) have sought to explore the implications of commons governance research on customary law, suggesting a link between customary law and sustainable development.⁸ This paper contributes to these efforts by exploring how Ostrom's work on commons can be applied to customary law systems for water resource governance. Focusing on a case study of the Marakwet people of western Kenya, and by applying Ostrom's work to Ørebech et al's research into customary law systems, I propose an analytical framework to help identify the main features of successful customary law systems for natural resource governance. The paper confirms that parallels do exist between the salient design principles identified by Ostrom and others as indicators of successful

⁵ (Ostrom 1990)

⁶ (Rose 1986)

⁷ This definition is adapted from that of the International Council on Human Rights Policy. See (Policy 2009) 43.

⁸ (Ørebech et al. 2005)

commons institutions and features of resilient customary law systems of governance. Above all, it establishes that customary law systems that enjoy autonomy over the design of rules and norms, and which are open to adaptation and change, are more likely to result in positive sustainable resource governance outcomes.

MARAKWET'S CUSTOMARY LAW SYSTEM FOR WATER GOVERNANCE

The Marakwet community of Kenya have a tradition of customary law and governance that predates colonial rule.⁹ The community's customary law also forms the backbone of a robust water resource governance regime based on an irrigation system that runs along more than 40km of the Marakwet Escarpment from south of Aror to north of Tot.¹⁰ The community practices a form of hill furrow irrigation common in East Africa, described as a slope off-take irrigation system. The irrigation furrows of the Marakwet, which date back to the initial occupation of the community in the valley, more than 200 hundred years ago, are the main source of freshwater resources both for agricultural and domestic use. As the country's oldest customary irrigation system, the Marakwet's water governance system thus provides an excellent case for analysis of a customary law system of water resource governance in Kenya.

Methodology

The primary data used for this case is based on a field study conducted from November 2010 to February 2011. A qualitative research methodology was used that combined various data collection methods, including semi-structured interviews, three focus group discussions, and participant observation. The population sampled came from Sambalat, the area of Marakwet that borders West Pokot.

The participants of the first focus group discussion were purposefully chosen from among clan council elders who are

responsible for management of the furrows and thus knowledgeable on customary law norms and institutions for water governance in the community. The objective of the focus group discussion was to provide background information on the furrows, their management, and allow for an in-depth analysis of the Marakwet's customary law system for water governance.

Under this customary law system, women do not have a direct role in the management of the irrigation system. This research nevertheless sought to obtain the views of female members of the community and to determine the extent of their participation in the design and implementation of customary rules for water governance. A focus group discussion was thus organised with both a selection of older and younger women. The stratification of age groups was useful to determine if perspectives around the perceived roles of women in water governance had changed over time.

Data was also collected from randomly selected water users with the aid of semi-structured questionnaires. Forty-three water users, consisting of men and women of different ages and from different households, were interviewed. Interviews were also conducted with the local chief of the area, an official working in the Eldoret Water Services Company (ELDOWAS) and a representative of the Lake Victoria North Water Services Board (LVNWSB) Office in Eldoret.

The Marakwet's Customary Law System for Water Governance

Among the Marakwet community, it was clear that customary law continues to play a central role in societal life. In the case of water resource governance, customary law constitutes the primary regulatory framework for managing shared water resources.

Community members demonstrated a keen knowledge of their customary water resource governance system. The clan elders in charge

⁹ This is evidenced by the early accounts of the Marakwet's law and custom. For example (Beech 1921)

¹⁰ (Watson, Adams, and Mutiso 1998)

of furrows explained that the origin of the system dates back more than two centuries. According to oral histories, the first four furrows, belonging to the Lakeno, Kapterit, Shaban and Kabishoi clans, were constructed in 1882. Construction of the furrows was triggered by drought in the region. Irrigation furrows were considered the only means by which to bring water from the Embobut River to people on the valley floor, which lies more than 1000m below the escarpment.

An important feature of Marakwet's customary water governance system is that it is entirely home grown or autochthonous, with the norms that underpin the system developed solely by the community. In the case of local water law, the rules governing development and use were designed by the clan elders, in consultation with the wider community, following construction of the furrows. This autonomy in design (both in terms of rules and their implementation) is considered sacrosanct. One discussant expressed the centrality of autonomy in the following way, 'There is no law that will come to tell us who will or how we will use the water. The water is for us and for our children from our elders. No one will tell us how to use it'.¹¹

Although ultimately geared towards conservation and sustainability of the water resource, the scope of their customary water law is relatively broad and includes directives on the use of land and other natural resources. While the rationale for crafting rules is often based on environmental indicators, the connection between rules and ecological conditions is not always evident. For instance, some of the rules and norms are encoded within a sacred religious system that include taboos and prohibitions associated with the felling of trees, the contamination of furrow water, or the requirement to plant indigenous trees, which are regarded as sacred, around rivers and streams. In the course of discussion with village elders, it was confirmed that the underlying objective of these rules is to conserve water resources and foster a sense of respect for water among

community members.

Although the clan council in charge of the furrows are viewed as custodians of customary law on water resources, the design, implementation and modification of the rules is carried out through a broad consultative process. Consequently, rules are subject to negotiation and modification with relative ease. For instance, most of the water users interviewed talked about the rule that stipulates how households whose male members do not contribute to furrow maintenance and repairs are not entitled to water provided by the irrigation system. However, before this rule is implemented, there is a consultative process in which the offender is given an opportunity to present his case. Depending on the reason for default, other sanctions may be applied to avoid punishing the entire household, such as a monetary fine. Young clan members unavailable for furrow work due to school or work commitments outside of the community may substitute their physical labour with monetary compensation.

This type of rule modification can be seen as a response to emerging circumstances. While based largely on norms and practices that date back many years, there are still changes that the rule system of the Marakwet has undergone in recent times. For instance, the custodian of the customary law system was traditionally a group of clan elders selected on the basis of their age and thus knowledge and experience of the furrow system. However, recognising the value of formal education, the community has begun to allow some younger community members to join the clan council. While obviously lacking in experience, younger members are often very resourceful and savvy in their relations with external organisations and donor agencies, as well as holding greater knowledge of (potentially useful) new technologies.

¹¹ Focus Group Discussion with Clan Elders and Representatives of Furrows Council (Marakwet District- Kenya, February 10 2010)

REVISITING THE DESIGN PRINCIPLES OF SUSTAINABLE COMMONS MANAGEMENT AND THEIR APPLICATION TO CUSTOMARY LAW SYSTEMS

As noted in the introduction, Ostrom's *Governing the Commons* illustrated how different communities develop rule-based institutional arrangements for the sustainable management of their shared natural resources. Ostrom's analysis culminated in the identification of eight design principles that appeared characteristic of successful commons management regimes.¹²

Salient Features of Successful CPR Systems and their Application to Resilient Customary Law Systems

One of the fundamental observations made by Ostrom is that appropriators who enjoy relative autonomy from government or other external actors in the design of their institutional arrangements are more likely to develop sustainable management regimes.¹³ Such autonomy ensures that the users of the resource play a role not only in the design but also the modification of the rules that regulate access and use. The case studies also demonstrated that CPR governance systems with collective choice arrangements (that allow individuals affected by operational rules to participate in their modification) often result in positive outcomes.¹⁴ Apart from participating in rule modification, the users in these successful CPR systems are also charged with the implementation of those rules¹⁵, as supported by subsequent research that analysed multiple communal irrigation systems in Nepal.¹⁶

Based on the work of Ostrom and others, Ørebech et al (2005) argued that adaptability is also an indispensable characteristic of success in any complex resource management system.¹⁷ Adaptability relates to the inherent capacity of a system not only to deal with the

present but also continue to be relevant in the future. In other words, a system that has the capacity to adapt to changing conditions. Given that the social, economic and ecological factors that impinge upon and influence natural resources use and management are in a state of constant flux, any ideal system of resource management needs to be capable of adapting itself to such changes, whether anticipated or not.¹⁸ This is what Ostrom and Basurto (2011) were pointing to when stating that CPR governance systems, in order to be successful, need to have a tested capacity for adaptability and openness to change,¹⁹ typically by means of a normative system that exhibits substantial variety in its rules, with changes in rules driven by institutional memory as well as socio-economic and/or environmental change.²⁰

As a result of their genesis and nature, customary governance systems also tend towards versatility and flexibility in the sense that rules and institutions reflect the prevalent social, economic, cultural, political and ecological circumstances in which they operate.²¹ To this extent, such systems contain an inherent adaptive mechanism that makes them suitable for natural resource management. However, as noted by Bosselman, not all customary law systems integrate this adaptive management strategy effectively.²² A successful customary law system will recognise the structure of adaptations that it has made in the past and it is this that offers an effective vehicle for making changes to existing rules, encourages fine-grained rules that can be modified without having to modify the entire system, and has a meaningful feedback mechanism in place.²³

Bosselman's principles of resilient customary law systems are comparable to the design principles identified by Ostrom and built upon by others, and the synergy that exists between the two will be looked at in more detail in the following section.

¹² (Ostrom 1990)

¹³ (Ostrom 1990), 101

¹⁴ (Ostrom 1990), 93

¹⁵ (Ostrom 1990), 94

¹⁶ (Ostrom and Basurto 2011)

¹⁷ (Bosselman 2005) 245

¹⁸ (Ørebech et al. 2005)

¹⁹ (Ostrom and Basurto 2011)

²⁰ (Ostrom and Basurto 2011), 336

²¹ See for example (Australian Law Reform

Commission 1986) for the Australian Aboriginal experience and (Pradhan 2002)409-446 for experience from India

²² (Bosselman 2005)

²³ (Bosselman 2005)

AN ANALYTICAL FRAMEWORK FOR IDENTIFYING SUCCESSFUL CUSTOMARY LAW SYSTEMS OF NATURAL RESOURCE GOVERNANCE

Figure 1 encapsulates some of the main contributing factors that lie behind the success of customary law systems for natural resource governance. Departing from the premises put forward by Ostrom and building on Bosselman's work, the framework identifies five main indicators of successful systems all of which are dependent on users enjoying some level of autonomy in system design and implementation.

1. Knowledge Management System

Both Ostrom's and Ørebech's work point to the need for a rational process for the development and modification of rules in order for any normative CPR governance framework to work effectively. Based on insights drawn from the Marakwet case study, this paper recognises this crucial feature and develops it further.

First, any successful customary system for governing a CPR needs to have a record (oral or written) of how the system works under different conditions and that this knowledge and experience ought to be institutionalised. The term 'knowledge management' is used to denote this characteristic. For purposes

of this framework, knowledge management signifies the capacity of the normative system to identify the insights and experiences necessary to develop rules that result in the sustainable governance of common pool resources. Knowledge management thus implies the capacity to capture the accumulated experiences of responses to environmental, socio-economic or other types of change. It is this record of past experiences that forms the basis for institutional memory and a repository of knowledge that is maintained for the purposes of improving the system down the road.

An insight into the importance of this feature was gained during fieldwork among the Marakwet. Through focus group discussions, the responses of water users, and the observations of the researcher, it was evident that an implicit system existed for accumulating knowledge of the conditions affecting water resources and associated rule system. Most interview respondents demonstrated knowledge of the origin of the furrow system in response to prolonged drought in the valley and of their water rules. The rationale for the rules and their relation to past experiences was not always evident as respondents often associated non-compliance of the rules with taboos and religious sanctions. However, as noted in the focus group discussions, clan elders explained that the objectives of water rules

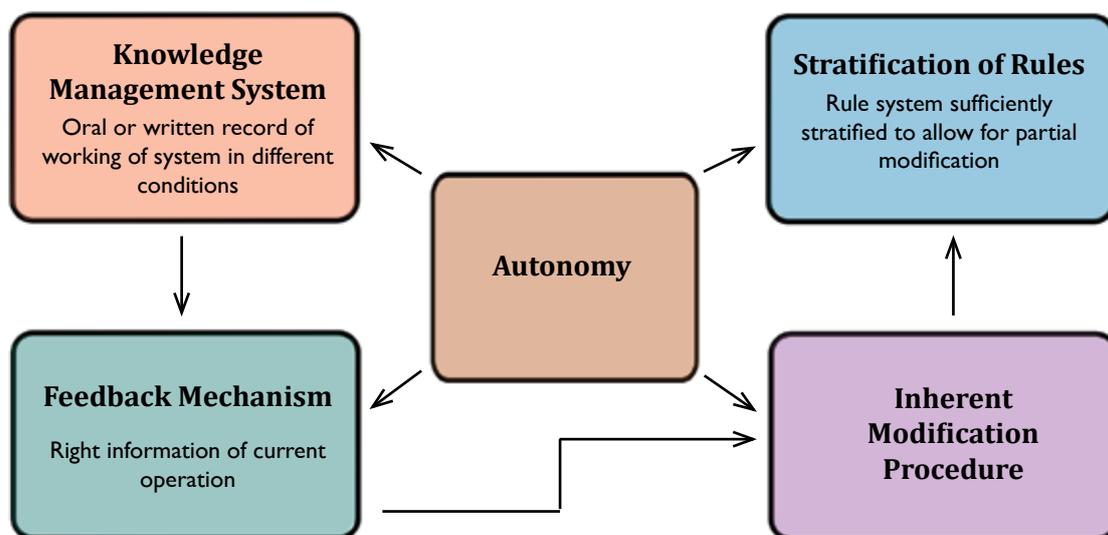


Figure 1: Framework for Analysing Successful Customary Law Systems of Water Resource Governance

were the preservation of water resources, environmental conservation, or the socio-economic welfare of local people.

2. Feedback Mechanism

A second feature characteristic of successful customary law systems is the presence of a feedback mechanism. A successful system must have ways of ensuring that accurate information is promptly fed back into the system and that information then used in the decision making process.²⁴ This mechanism is dependent on the knowledge management system, which ensures that relevant information is captured and used to drive the appropriate adaptation of resource rules and institutions.

The Marakwet's customary water governance system provides clear evidence of this. The flexibility of rules on water and land use point to their adaptation to ecological conditions. For instance, while commercial mango farming was not a traditional practice among the community, many women are currently involved in growing mangoes that are proving successful given their higher tolerance to the increasingly dry climate. Further, some of the respondents indicated that they are testing the feasibility of farming green gram commercially, along with other non-traditional crops that require less water. The customary law rules on farming and use of irrigation water have consequently been adapted to allow for commercial farming and changes in cultivation practices.

The Marakwet case thus points to the importance of an effective feedback mechanism and suggests that successful customary law systems need to include a wider base of knowledge inputs that encompass not only environmental change but economic and social shifts also. As Ostrom and Basurto (2011) note, the success of any such system is also dependent on an enabling environment that facilitates learning from the success and failure of others.²⁵ Such an

informal social learning mechanism can be observed in the community habits of the Marakwet, whereby customary norms are crafted, implemented and enforced by means of member consultation—further aided by a physical space, the Sambalat trading centre, which acts as a hub for irrigation users to share experiences.

3. Inherent Rule Modification Procedure

Bosselman developed this feature by building upon Ostrom's work on rules and game theory in the context of institutional arrangements for natural resource management.²⁶ It concerns a procedure by which any given resource rule system can be improved and thus ensure its continued relevance in the context of changing circumstances. It is both considered an essential attribute of system sustainability²⁷ and requires the maintenance of an open-minded attitude to rule making by those involved—thus assuring congruence between rules in use and local conditions.

As noted, Marakwet's customary water governance system, while based on traditional norms and institutions, continues to evolve to adapt to changing circumstances. For instance, the incorporation of younger men into the clan elder council responsible for irrigation furrows is one important example of institutional flexibility that allows for rule modification when needed.

4. Stratification of Norms

One of the necessary conditions for designing an effective feedback mechanism is a rule system that is sufficiently stratified. Bosselman refers to this feature as 'fine graininess',²⁸ and involves rules that can be easily modified; that partial changes can be made without having to affect the entire system. Although this feature guarantees the sustainability of the rule system rather than the sustainability of the resource system, resource sustainability is closely associated with a resilient governance system that exhibits institutional adaptive

²⁴ (Bosselman 2005)

²⁶ (Ostrom, Gardner, and Walker 1994)

²⁷ (Ostrom and Basurto 2011)

²⁸ (Bosselman 2005)

capacity. A system with a great potential to deliver sustainable development outcomes would be useless if it were to fail in its actual operation as a rule system—for example, a system whose design requires an entire overhaul each time a single rule is changed.

While most rules of the Marakwet's water resource governance system were broadly defined, implementation takes place through consultation with all water users, which subjects rules to negotiation and also allows them to be modified with relative ease. For instance, while there are clear rules on clan allocation of water resources from the furrow systems, the elders explained that these rules could be altered to grant more water resources to those families in greater need.²⁹ In other words, discretion is sometimes used in the application of rules, but this occurs without having to change the major institutions that fall under customary law.

5. Autonomy

Lastly, as was noted in the work of Ostrom and Basurto (2011), evidence from research on irrigation systems from different countries around the world has clearly demonstrated that the autonomy of resource users to design, operate and modify rules governing the water resources they use and depend on, ensured better and more equitable outcomes. This finding resonates strongly with the analysis of the customary law system of the Marakwet, where the community itself develops norms. The operation and implementation of rules is thus in the hands of resource users, with such autonomy in rule design regarded as inviolable.

LESSONS FROM OSTROM FOR CUSTOMARY LAW SYSTEMS

This paper confirms the parallels that exist between CPR governance systems and customary law governance systems. While the former focus on the normative structures (rules in use) for managing shared resources, customary law systems for natural resource

governance are interested in a similar institutional framework albeit one where the basis of authority rests in informal rather than formal/statutory norms and institutions and where the focus is the relationship that connects actors and their environment to those rules. Given these parallels, Ostrom's pioneering work on commons management provides a set of most useful insights into the operation of resilient customary law systems for the governance of common pool resources, such as the irrigation system of the Marakwet.

The centrality of autochthony for building resilient customary law systems confirms Ostrom and Basurto's (2011) observation that, in places where commoners enjoy autonomy in CPR rule design there is an increased likelihood for positive outcomes. As noted, while the origin of customary law systems is often linked to past traditions and customs, the systems themselves

must continue to evolve in response to changing environmental and socio-economic circumstances. Consequently, Ostrom and Basurto's tool for analysing ever-changing commons governance institutions also provides a most useful framework for the analysis of customary law governance systems.

The centrality of autochthony for building resilient customary law systems confirms Ostrom and Basurto's observation that, in places where commoners enjoy autonomy in CPR rule design there is an increased likelihood for positive outcomes.

²⁹ (Focus Group Discussion with Clan Elders and Representatives of Furrows Council (Marakwet District- Kenya, February 10 2010) 2010)

As is the case with successful CPR management systems, customary law systems must also contain mechanisms to ensure adaptability to changing circumstances if they are to persist. The analysis presented in this paper lends credence to Ostrom's central thesis that 'tragedy' is not a necessary outcome for commons scenarios and by extension customary law systems for natural resource governance. As demonstrated by the analysis of Marakwet's customary water governance system, autochthonous or home grown normative and institutional frameworks for governing CPRs, providing they can successfully adapt in the face of change, can produce positive and sustainable resource outcomes.

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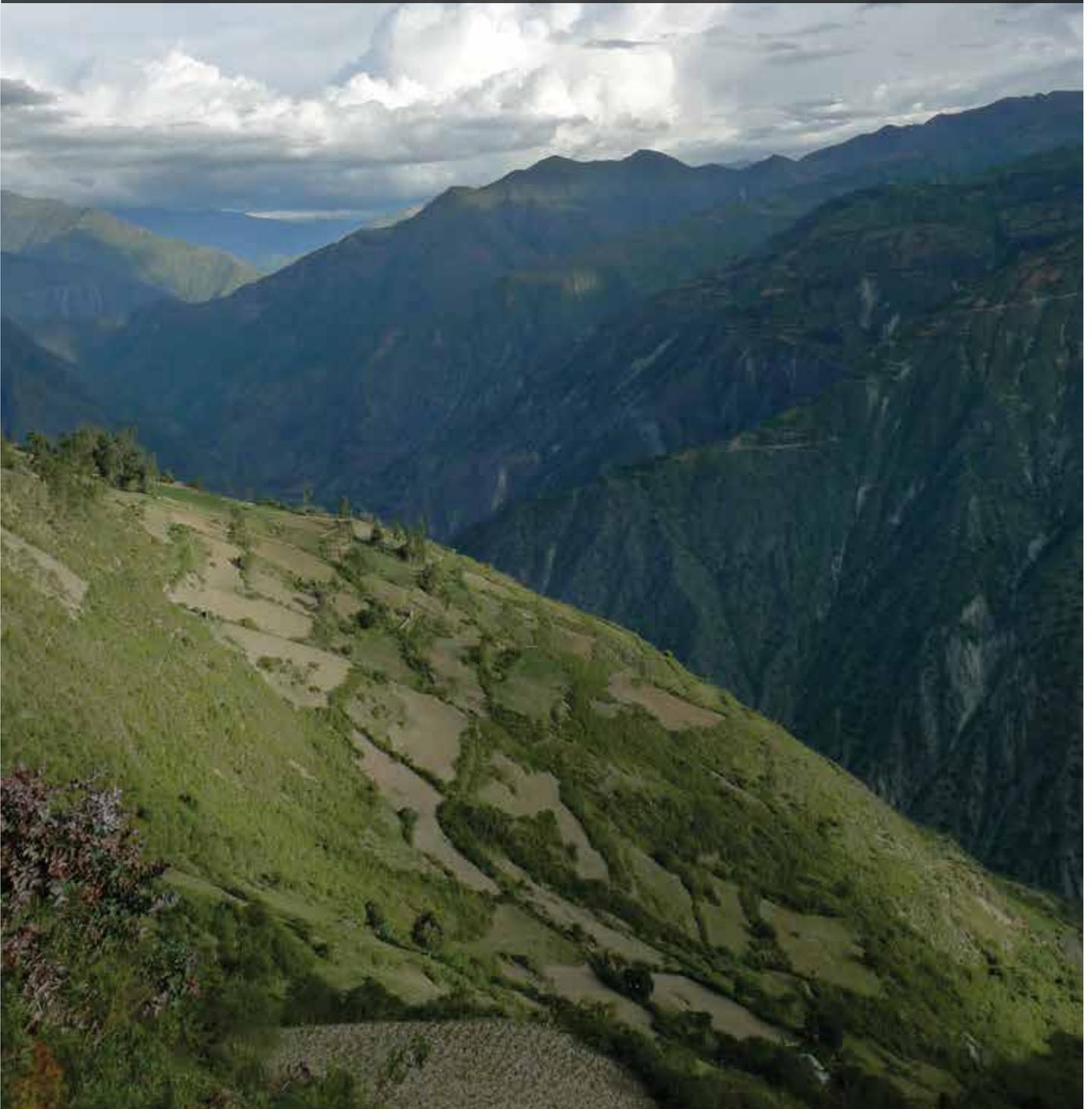
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6

RESEARCHING COMPLEX GOVERNANCE ARRANGEMENTS **Elinor Ostrom's Legacy for Research Methods and the** **Analysis of Institutional Design**

Derek Kauneckis



6

Researching Complex Governance Arrangements

Elinor Ostrom's Legacy for Research Methods and the Analysis of Institutional Design

Derek Kauneckis¹

Abstract

Many of our most threatened natural resources involve complex interactions with human and technological systems, each with their own rule structures that govern interactions within and across systems. The complexity of governing systems characterized as networked commons, multi-level nested institutional arrangements, socio-technological commons, and ecological knowledge production systems challenge our existing analytic toolbox. The study of these complex systems face multiple methodological and theoretical challenges, such as how to examine the multi-scale nature of institutional arrangements, dealing with the influence of endogenous and exogenous change on systemic-level properties, accounting for the variety of incentives and behavior of diverse social agents, understanding the impact of different nested structures of decision-making, and determining the influence of the configuration of networked interactions. Researchers and practitioners who seeks to understand the structure and function of complex governance systems often begin with Elinor Ostrom's seminal work on the commons, and more recent research on socio-ecological systems. This article traces how Ostrom's substantial body of research informs continued efforts to develop research tools for understanding the governance of complex systems. It begins with early work on the co-production of public goods in urban systems, traces her evolving thought on the critical role of institutions, and continues with recent research into developing a framework for the analysis of socio-ecological systems. The article highlights the centrality of Ostrom's research for understanding increasingly complex natural resource systems and the co-evolution of management arrangements. It concludes by proposing that Ostrom's work should not be seen as limited to the study of the commons per se, but rather represents the beginning of a new science of governance.

Keywords: *Complex Systems, Governance, Institutional Analysis and Development, Methodological Approaches, Natural Resource Management*

¹ Associate Professor, Department of Political Science, University of Nevada, Reno. Email: kauneck@unr.edu

UNDERSTANDING GOVERNANCE IN COMPLEX SYSTEMS

Many of our greatest natural resource management and conservation challenges involve highly complex systems that include combinations of ecological systems, resource utilization and management, and increasing technological infrastructure and interventions in natural processes. One of the hurdles facing those involved in researching effective policy is the need to develop methodologies to study resource systems that involve multi-scale interactions, dynamic change and threshold effects, heterogeneous social agents, and multi-level governance arrangements. While different disciplinary approaches offer insight into various aspects of these systems, the research community at large has yet to adopt a broad enough theoretical lens that is able to capture the system as a whole. Yet, progress is being made in untangling linkages and causality in these complex systems, and at the forefront of this has been the work of Elinor Ostrom and colleagues at The Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis.

The work of Elinor Ostrom has had a profound influence on the study of environmental resources and, more broadly, on public policy and public goods dilemmas. Long before being awarded the 2009 Nobel Prize

in Economics, the institutional analysis and development (IAD) framework had already emerged as a major theoretical approach in public policy analysis. The seminal work of Elinor Ostrom, *Governing the Commons: The Evolution of Collective Action* (1990) has been cited over 16,000 times (Google Scholar) in almost a thousand different journals that vary in subject matter from engineering to eco-criticism, mathematics to music, and information sciences to cellular biology (Web of Science). Citations (Figure 1) have increased steadily year on year since its initial publication, pointing to the increasing relevance of Ostrom's work.

This contribution to the special issue of *Policy Matters* examines the intellectual development of a theoretical approach known as the "Bloomington School of Institutional Analysis and Development" (Aligica and Boettke 2009), along with recent work on the socio-ecological system (SES) framework (Ostrom 2009). It outlines how this body of work has garnered theoretical relevance for so many divergent fields of inquiry, and ends with discussion of its role in the future of research on resource governance systems. The article traces early work on the management of large-scale water systems and the co-production of public goods in urban local governance systems, the role of institutions and collective action, and Ostrom's later endeavors developing a framework for

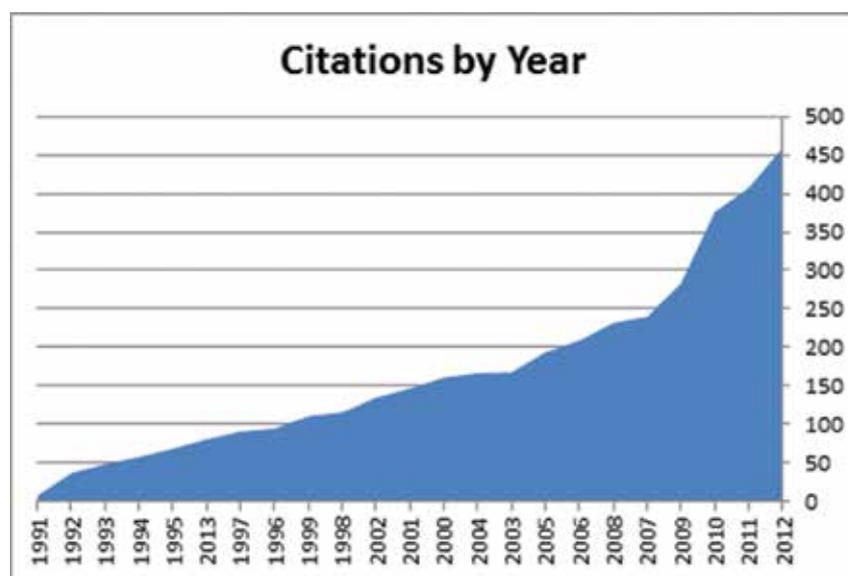


Figure 1: Citations by Year (Web of Science)

the comparative analysis of socio-ecological systems (SES).

In the spirit of *Governing the Commons*, I attempt to discern “common principals” and the qualities that have allowed Ostrom’s work to resonate across so many fields, and better understand how her legacy, as well as that of her husband, Vincent Ostrom, has helped set the foundations for new areas of inquiry.

THE DEVELOPMENT OF THE OSTROM FRAMEWORK

Those aware of Elinor Ostrom’s contribution to rational choice theory might be surprised to know her dissertation at UCLA was focused on public entrepreneurship. *Public Entrepreneurship: a case study in ground water basin management* is primarily a qualitative case study analysis based on documentary material. As in later work, her dissertation includes chapters on such non-political topics as “Topography” and “Seasonal and Cyclic Variation in Precipitation”, which she used in order to develop an explanation of public entrepreneurship around water management. A vision of what would evolve 25 years later into the Institutional Analysis and Development framework is found in the summary of that dissertation:

...strategies of those who functioned as public entrepreneurs are examined in a case study which involves (1) the organization of a water producers’ and users’ associations to function as a forum for the consideration of common problems, (2) the creation of a municipal water district to provide a supplemental surface supply, (3) the use of litigation to achieve a limited pro-rata rationing of the local ground water resources, (4) the development of institutional arrangements to test the effectiveness of a fresh-water barrier against the sea and to place a prototype barrier into operation along a one-mile section of the exposed coastline, (5) the design and creation of a water replenishment

district as a ground water basin management enterprise and (6) the development of a management plan involving the coordinated action of several public water agencies... (Ostrom, 1965: xvii).

The work begins with the nature of the problem, both in terms of the physical resource under study as well as the market/governance failures associated with the current system. Considerable effort is expended toward laying out the multitude of different private and public organizational actors involved in water management. Collective action organizations are prominent. The focus on public entrepreneurship marks the beginning of an implicit model of how individuals are able to create new institutions in order to prevent damage from overuse of the resource in certain situations. Based on work by Vincent Ostrom (Ostrom, Tiebout and Warren, 1961), the important distinction between production and provisioning arrangements is made, allowing for a subtle yet important differentiation of the role of formal government organizations and that of inter-organizational relationships. Constitutional arrangements become an explanatory variable in understanding the outcome of the particular case her dissertation considered. The work is rich in discussions on property rights to land and water, legal structures and litigation, voting rules and sanctions, forums for negotiating water sharing arrangements and resolving conflict, and attempts to understand how these endogenous systems are able to adapt as the economic uses of water and changing technologies shift over time.

The dissertation foreshadows a long career investigating collection action problems by concluding with the statement, “Every society faces the task of finding appropriate institutional means for providing the goods or beneficial consequences desired by members of that society and avoiding the harms or adverse consequences resulting from competition among individuals for the limited quantities... This task may be accomplished in a variety of different ways involving some

combination of individual effort and initiative on the one hand and centralized direction and control on the other.” (Ostrom, 1965: 588-589).

Research activity during her early career was focused on investigations into urban service delivery, inter-organizational arrangements, the size and allocation of responsibilities among local governments, and involvement in the debate over urban consolidation. At this point, her approach is firmly rooted in the public choice school of thought (Ostrom and Ostrom 1971; Ostrom 1972; Ostrom, Smith et al. 1975). Public choice theory, based on Buchanan’s *The Calculus of Consent*, provided the theoretical foundations for those finding that empirical evidence countered the belief that organizational centralization would invariably lead to improved efficiency. In developing their own method for measuring urban service delivery, Ostrom and colleagues rejected any single measure of performance such as efficiency, and called for a plurality of measures in order to capture the complexity in these highly localized and heterogeneous systems (Ostrom 1973; Ostrom, Ostrom et al. 1977; Ostrom, Parks, 1979). The central theme emerging from this body of research was that highly complex management systems are by necessity organized into smaller units of responsibilities that correspond to local conditions, and often have overlapping and even redundant responsibilities. While these could appear inefficient and cumbersome to an outside observer, they have evolved to effectively address local problems (Ostrom and Whitaker 1973; Ostrom 1976; Ostrom, Parks et al. 1978).

Building upon this work, Elinor Ostrom turned to developing a more general theory of how institutions impact both citizen participation and individual behavior (Ostrom, Parks et al. 1978). These questions were considered in the context of the complex common pool resource problem that characterized the governance of Southern California’s water, which had been the focus of her doctoral work. The connection between institutions and common pool resources had its roots in the work of Vincent Ostrom on water and natural resource politics.

Elinor’s participation in this work had led to a jointly authored piece entitled “A Political Theory for Institutional Analysis” (1971). The articulation of institutions as the critical factor in successful common pool resource management was then fully articulated in the 1977 paper, “A Theory for Institutional Analysis of Common Pool Problems”, which incorporated insights from the wide variety of systems the Ostroms had studied in order to develop a framework for analysis.

Throughout the 1980s, a large body of empirical research highlighted international case studies of successfully managed commons, which were then analyzed to enable identification of shared governance characteristics that appeared to form generalizable principles. The results inspired the eight design principles reported in Ostrom’s best known work, *Governing the Commons*, which in turn spurred the development of a cottage industry of researchers who sought to apply and modify the principles by means of empirical case study work (Agrawal 2002; Kauneckis and Imperial 2007; Quinn, Huby et al. 2007; Cox, Arnold et al. 2010). Elinor Ostrom continued to experiment with and develop new methodological approaches for understanding the impact of institutions both at the micro-level of individual behavior and the macro-level of landscapes. Experimental methods were increasingly incorporated to better understand the foundation of trust and reciprocity that lay at the foundations of cooperative behavior (Ostrom, Gardner et al. 1994), and remote sensing technology and geographic information systems were used to link institutions and collective action to landscape-level effects (Ostrom and Nagendra 2006; Evans, York et al. 2008).

Elinor Ostrom continued to experiment with and develop new methodological approaches for understanding the impact of institutions.

By bringing her work on institutional analysis and development together with that of colleagues (Berkes, Folke and Colding 1998, 2003) on social-ecological systems (SES), Ostrom was able to further our understanding of complex governance systems (Ostrom 2009). This work, in particular, focused on the presence of local self-governing systems that are able to achieve sustainable management of resources and outlined 10 subsystem variables associated with successful management. The framework provided a comprehensive list of variables associated with resource governance and specific details on the utilization of terminology related to interactions between social institutions and natural systems.

WHY HAS OSTROM HAD SUCH A PROFOUND IMPACT ON THE STUDY OF GOVERNANCE?

I began with the assertion that scholarship on the governance of complex systems often begins with the work of Elinor Ostrom. But what are the characteristics of this body of research that have led to such a deep and lasting impact among both the academic research community as well as practitioners in the field? Large scale urban groundwater systems, police service delivery, and coupled socio-ecological systems are all complex management arrangements, often with multiple overlapping organizational jurisdictions and responsibilities, diverse sets of social agents with claims and counter-claims on resources and the arrangements through which they are managed, and layers of legal, technological and social interactions across which governance arrangements are negotiated. It is often reported that Elinor Ostrom's principle contribution was in understanding how the tragedy of the commons could be avoided. However, any such view constitutes a narrow reading of a much larger body of work. The central puzzle that motivated her was how human beings are able to develop governance arrangements for creating order in enormously complex systems, sometimes of their own design (such as urban services or political systems), at other times natural (environmental commons), or combined technological-

natural systems (water and transportation infrastructure). Focusing on the origin of order and the structure of governance arrangements, Elinor's work (as well as that of her husband, Vincent) is the logical starting place to help us understand how natural resources might be managed in an increasingly fragile global ecosystem.

From her extensive body of work, there are common themes that point to its applicability across a broad range of fields and its role as a foundation for the next generation of scholarship on resource governance. While not having the pretense to offer a comprehensive analysis, a reading of the literature suggests the following characteristics as being particularly pertinent: (1) highly localized empirical work; (2) contextualized knowledge balanced with generalizable principles; (3) empirical research rooted in big theory; (4) methodological pluralism; and, (5) complex problems with diverse complex solutions. Each aspect is discussed in more detail below.

Highly localized empirical work

Elinor Ostrom's research used empirical evidence to challenge our assumptions about how complex systems function. Academics develop their own sets of simple cognitive heuristics based on disciplinary training and expertise to understand complex systems through research. For example, there is a continued line of thinking in water management circles that creating an agency with authority over an entire watershed will necessarily lead to improved management, despite the fact that such policy actions are rarely feasible and there is little evidence the outcomes generated are any better. In work on climate adaptation, the focus continues to be on national policy despite the most interesting innovations taking place at local and regional levels. By focusing on how citizens and local resource users themselves were able to deal with the challenges faced in the management of complex systems, Ostrom provided an empirical test of our assumptions about the relationship between people and natural resources, and pointed the way to developing better theory in the process.

The wide array of field locations in which the Ostrom approach was developed also provides the entry point for researchers from other disciplines. Water engineers interested in understanding how built systems fail to provide the services for which they are designed, invariably stumble across the Ostromian framework that shows just how important governance arrangements are for understanding outcomes. Conservation biologists, intrigued by the presence of extant forests in communally managed areas adjacent to private agricultural lands, can access research that helps to explain the impact of tenure arrangements and their impact on the ecological system. While the natural tendency of academic researchers is to migrate toward the most theoretical of our disciplinary journals, the very broad base of diverse journal outlets and continual engagement with the world of practice that Ostrom contributed to and actively encouraged, has helped to generate a broader audience for the theory and dialogue across disciplines.

Contextualized knowledge balanced with generalizable principles

While fieldwork provides “ground-truthing” for theoretical assumptions, the Ostrom approach is about generating broad principles that can test scientific hypotheses. Studies of complex systems tend to be approached from two perspectives, by those who seek generalizability and thus omit inconsistent data from the final analysis, and those who are so focused on the intricacies of a single system that they are unable to offer theoretical lessons that extend beyond their particular case. Approaches rooted in Ostrom’s work are able to achieve that careful balance of capturing the details of a specific system while looking for those broad generalizable patterns of behavior. Inconsistencies in specific cases become new hypotheses to be tested later in the field, the detail-rich case studies become raw material to be carefully coded into spreadsheets and analyzed for discernible patterns. The lessons for the rest of us working on complex governance systems is to pay attention to the enormous laboratory of constantly evolving systems around us and the

details that may provide the next theoretical puzzle.

Empirical research rooted in big theory

Part of Ostrom’s ability to achieve that balance between contextual knowledge and generalizable theory was an underlying awareness of the big theoretical questions. While it is rare (except in her later work) for Ostrom to make explicit theoretical statements, some of the biggest questions facing social science underlie her studies on neighborhoods in Indianapolis, irrigation systems in Nepal, and common pool resource lab-based experiments. Are human beings inherently cooperative or competitive? Is human behavior fundamentally rational? What has allowed us to create human-made systems of such dazzling complexity as modern urban areas, airplanes and the internet? Is self-governance possible when individuals exhibit such varying preferences, desires and demands? What mechanisms do we have available that will allow us to maintain healthy ecosystem services with increased human demands? Anyone who considers such questions eventually comes across evidence to help answer them in Ostrom’s body of research.

Methodological pluralism

One of the lasting contributions of Elinor and Vincent Ostrom is a strong and dedicated commitment to methodological pluralism (see Poteete, A., M. Janssen, and E. Ostrom, 2010). This legacy is, in part, due to the training of Vincent Ostrom as a political theorist and Elinor Ostrom as a political economist, but also emerged because of the very nature of the problems they investigated and the inability of any single method to capture the information they sought for analysis.

Elinor Ostrom’s scholarly pursuits took in fieldwork and ethnography, statistics and formal modeling, experimental methods both in classroom settings and in field locations around the world, systems and agent-based modeling, and analysis with remote sensing and geographic information systems (GIS). It is a challenge to think of

any single researcher who has employed so many diverse methods in their scientific inquiry. This methodological pluralism played a big part in Ostrom's balancing of contextual knowledge and generalizable theory (Ostrom 2002). It emerged for very pragmatic reasons, given that no single method of inquiry was able to address the questions raised in the cycle of investigations and the new puzzles that emerged. How could questions about individual-level behavior be addressed without experimental methods in laboratory settings that were able to eliminate the effect of contextual variables? How can one understand the impact of cooperative behavior and collective action among groups without comparative studies of community characteristics? How can the impact of human behavior on the physical landscape be understood without determining ecological change through remote sensing data? There was also a cautious modesty in not over-extending the applicability of evidence from one setting into another. The complexity inherent in each setting required careful analysis, not the creation of a new set of simple assumptions to replace former misapplied generalizations (Ostrom 2000; Ostrom 2001).

Complex problems require diverse and complex solutions

One of the dominant themes in Ostrom's research was how the dizzying variety of institutional arrangements—evolved over time to deal with the multitude of collective action problems at multiple scales—represented the outcome of continued experimentation and evolution, and that attempts to simplify the institutional landscape tended to weaken effective governance. She considered complexity in governance as testimony to human innovation and creativity, not as fragmentation and a barrier to improved efficiency and more effective policy. A theme that emerged in her PhD research, and that permeated subsequent work on municipal public services, was that external measures of a local system are unlikely to reflect the needs and preferences of local users. She understood that the multi-scale and multi-level nature

of policy dilemmas require policy responses that are likewise multi-layered and scaled at the appropriate levels. This was an enormous challenge to the traditional modes of policy analysis, which prefer simple answers to complex questions, and to disciplinary theory that rewarded parsimony over complexity. Ostrom proposed that the solutions to complex diverse problems could be found in similarly complex diverse governance arrangements (Ostrom 1995; Ostrom 2007).

TOWARDS A NEW SCIENCE OF GOVERNANCE?

The legacy of the Ostroms, both Elinor and Vincent, cannot possibly be covered in this short essay. The ability to carefully disaggregate different units of analysis in complex multi-tiered systems, develop a rich body of theory on the interconnections between human and natural system, and recognize the linkages between scales of governance are just some of the key lessons they offer those of us researching resource governance systems.

The *Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis* includes a welcoming statement on the webpage that the research conducted there focuses on how, “governance institutions can be crafted to enhance human well-being, while promoting democratic principles and sustainable resource management”, and it remains one of those rare intellectual centers of true interdisciplinary research.

The significance of the Ostroms' research is such that it will likely underpin future scholarly endeavors to improve our collective understanding of ecological systems, human behavior and governance systems. Many of the focal areas of their work, such as institutional analysis, trust, reciprocity, emergent systems, networks, and coupled dynamics are themes that are not confined to any single discipline. As we grapple with the generation of new knowledge to better understand and manage a rapidly changing world and adapt academic training to reflect new research challenges, the work of the Ostroms offers a unique

model of inquiry to follow. In the same way we understand a physical landscape to incorporate multiple overlapping and interacting systems (geological, hydrological, ecological, atmospheric, etc.), the Ostroms allow us to envision and investigate the way in which human-environment governance systems function. Rather than research that differentiates into academic specializations, we can begin to envision a new science of human governance—one that draws on insights from multiple disciplines, and is directed toward understanding the institutional and organizational structures through which we interact with the natural and manmade systems around us. Elements of such an approach are beginning to develop, and trans-disciplinary research centers such as the Center for the Study of Institutional Diversity at Arizona State are beginning to gain prominence. The Ostrom legacy offers a body of canonical literature to seed not only new areas of inquiry, but also the potential to develop a new science of governance.

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7

**ADVANCING ALGONQUIN RECOGNITION AND
PARTICIPATION IN FOREST MANAGEMENT
IN QUÉBEC, CANADA**

Rosanne Van Schie



7

Advancing Algonquin Recognition and Participation in Forest Management in Québec, Canada

Rosanne Van Schie¹

Abstract

The work of Elinor Ostrom was, in part, oriented towards understanding and promoting institutional arrangements crafted by local appropriators of common pool resources (CPRs). She examined and analyzed many cases “to develop a series of reasoned conjectures about how it is possible that some individuals organize to govern and manage CPRs and others do not” (Ostrom 1990). She was an advocate of “true” collective action, underpinned by a set of principles to address CPR dilemmas, such as “coping with free-riding, solving commitment problems, arranging for the supply of new institutions, and monitoring compliance with sets of rules.” Wolf Lake First Nation (WLFN) is an Algonquin community in Canada that occupies traditional lands in what are now the provinces of Québec and Ontario. This paper examines Wolf Lake’s struggle with “true” recognition and participation in the management of forest CPRs under the Province of Québec’s new Sustainable Forest Development Act (SFDA). The paper argues that Québec’s lack of recognition of Aboriginal Title and Rights deprives the community of their right to self-determination and equality in managing such resources. Yet, as Elinor Ostrom herself enjoyed pointing out, “people don’t like to be suckers!” The paper thus explores how changes to the international principles of Forest Stewardship certification offers communities such as WLFN an opportunity to address the inequitable distribution of forest resources and the limited role of Algonquin peoples in forest management on their own unceded territories.

Keywords: *Aboriginal Rights and Title, Algonquin, Collective Action, Commons, Forest Stewardship Council (FSC), Human Rights, Québec, Sustainable Forest Management*



Plate 1: Algonquins, Jim St Denis and Chris Wabi peel birch bark to craft a birch bark canoe. (Photo credit: Mark Grandlouis)

¹ Economic Development Advisor for Wolf Lake First Nation. Email: development@wolflakefirstnation.com

"If we are not at the table, are we on the menu?"

Chief Harry St Denis, Algonquin Nation of Wolf Lake
during a presentation to the Commission on Agriculture Energy and Natural Resources
with regards to Bill 57, the Occupation of Forest Land in Quebec and the
Constitution of Forest Management Corporations. Quebec City, Quebec, 2009.

INTRODUCTION

On March 23, 2010, the members of the National Assembly of the Province of Québec, Canada, gave unanimous assent to the Sustainable Forest Development Act (SFDA), which changed the way that public forests are managed throughout the province. Key orientations of the new regime include science-based ecosystem management, integrated land and resource management, regionalization and certification. Although forests lie at the heart of First Nation culture and livelihoods, the SFDA was created in order to govern common pool forest resources through the constitution of regional forest management corporations—a process that would dilute First Nation representation and rights.

Wolf Lake First Nation (WLFN), or *Mahingan Sagaigan*, is one of ten communities representing the Algonquin Nation in Canada.

The traditional territory of the Algonquin Nation includes the entire Ottawa River watershed straddling the Canadian provinces of Québec and Ontario.

The community of WLFN is made up of 205 people, living not on reserve lands but traditional lands within the Provinces of Québec and Ontario, where they assert Aboriginal Rights and Title as recognized by the Canadian Constitution. The First Nation is in opposition to Québec officials following Bill 57 (*the Occupation of Forest Land in Quebec and the Constitution of Forest Management Corporations*), which was crafted without adequate aboriginal consultation and rights provisions. Criticism is leveled at a 'sustainable forest development' act that continues to deprive their people of equitable distribution of forestlands and legitimate participation in their governance. For WLFN, a key component of self-determination is a forest commons



Map 1. The Algonquin Nation (Cartography by Marcel Morin)

framework that enables the community to participate in the management of forest resources without compromising their long-held values, rights and title towards customary lands or their independence as a sovereign people. In appearing before the Commission in 2009, Chief Harry St Denis of the WLFN demanded that the community's full spectrum of rights and title be recognized rather than disenfranchised through the development of new forest legislation. His requests on behalf of WLFN were demonstratively ignored.

Elinor Ostrom has suggested that respect, trust and reciprocity are among the preconditions needed to move "beyond the tragedy of the commons"—crucial to building the social capital needed to create workable property rights (Ostrom 1998; Ahn and Ostrom 2008). This paper examines the historical devaluation of the role played by Algonquin peoples in Québec forest management, the damage this has caused, and how this needs to change. It is the work of Elinor Ostrom and other commons scholars that could help to inform such change in Québec, and specifically Ostrom's (2008) call for diversity in natural resource institutions in order to match the social-ecological complexity of the commons. In addition to helping fix historical injustices, the creation of diverse institutional landscapes would improve the current conditions for First Nation recognition and participation in Quebec's forest commons.

DIVERSITY IN SOCIAL ORGANIZATION AND ECOLOGICAL KNOWLEDGE

Traditionally, Algonquin peoples' social, political and economic organization was based around watersheds, which served as their transportation corridors and family land management units (St. Denis 2009). Speck (1915) notes how members of each regional band traditionally held a territory in common, and this collectively held tenure was recognized in alliance with other bands. Today, ten Algonquin bands are recognized under the Canadian Indian Act, nine in Quebec and one in Ontario. Together they form the Algonquin Nation, a people who regard themselves as 'keepers of the land', with 'seven generations'

worth of responsibilities for livelihood security, cultural identity, territoriality, and biodiversity (Van Schie and Haider, *In Review*). Algonquins have developed culturally distinct ways to assess changes in their environments, using such assessments to adjust their resource use and occupation. As Roark-Calnek (2013) notes, Algonquin knowledge should be recognized, considered, and actively incorporated into the monitoring of ecosystem and socioeconomic health. However, while international frameworks such as the Convention on Biological Diversity (CBD) recognize the benefits of using Aboriginal knowledge for natural resource management and conservation, there is currently no room within the Québec Sustainable Forest Development Act (SFDA) to make use of traditional ecological knowledge in this way.

For several years, WLFN has prioritized long-term strategies to restore ecosystem health through alternatives to government- and industry-led intensive forestry operations. These include eco-tourism and renewable energy projects, along with improved forest management planning and conservation. All such initiatives are based on a model of self-determination and a history of traditional knowledge and land governance (Van Schie and Haider, *In Review*). As Dr. Sákéj Henderson, of the University of Saskatchewan's Native Law Centre, states, "Pursuing self-determination will allow First Nations people to be as they truly are, as opposed to how they have been re-created by Crown governments through such mechanisms as the Canadian Indian Act" (Henderson 2010).

HISTORICAL CHANGES TO ALGONQUIN FOREST LIVELIHOODS

From the late 1800s onwards, the regional economy around Wolf Lake was focused on extractive timber harvest and later pulp and paper production. To facilitate the development of a forestry industry, Québec gave 'open access' to First Nation lands, including those of WLFN, so that forest companies could maximize yields and create more jobs. By the early 1900s, WLFN

traditional livelihoods came under severe pressure not only from forestry but also from farming, mining and trapping. Algonquin property rights were flagrantly ignored during expansion of these activities (Morrison 2005), as were the inherent 'conservation' practices of the WLFN—the 'seven generations' obligation to ensure all environmental resources were sustained over the long term. Indeed, beaver and other fur-bearers were brought to near local extinction by the 1920s. More contemporary forestry operations surrounding WLFN have been based on a 'roving system' that logs in different areas from year to year, based on stand age and distance from the mill. Ostrom (2008) referred to this as 'roam and steal' resource management, arguing against it by simply stating that if, "you use something year after year it just might just disappear". Regional forestry tenures continue to physically displace WLFN members, while resource revenues flow directly to the forestry companies and to the government in taxes. For WLFN, like most First Nation communities in Canada, this brings issues of 'privilege and oppression' to the fore, issues over which they historically have had very little control or means to object.

It wasn't until the mid-1980s that forest company practices in Québec came under increased public scrutiny. Civil society groups began to demand that the forestry industry be held more accountable and both public and private industrial forests subject to greater regulation. New forestry laws and environmental best practices were applied and organizations emerged with an explicit interest in sustainable forest management certifications and forest conservation. Despite this, and the work of certification programs such as the Forest Stewardship Council (FSC), public concern about the sustainability of the province's forest management remained. Things came to a head in December 2007, when 400 industry, union, native, outfitter, and government representatives attended the first 'Summit for the Future of the Quebec Forest Industry'. Among the conclusions drawn was a need for greater consolidation, innovation, as well as co-operation with local communities. The summit led to the

development of the Québec Sustainable Forest Development Act (SFDA), which came into effect in April 2013. Among the main changes introduced, the Québec Ministry of Natural Resources (MNR) was given responsibility to develop a sustainable forest management strategy (SFMS) and sustainable forest management regulation (SFMR), along with tactical integrated forest development and operational plans. The new Act also introduced the concept of 'local forests'.

ABORIGINAL TITLE AND RIGHTS AND FOREST DEVELOPMENT IN QUEBEC

Despite much rhetoric and fanfare, the SFDA still sees decision-making power remain firmly in the hands of the Minister, while First Nation communities, forestry communities, forestry workers, the municipalities and the regions only need to be consulted prior to a ministerial decision (*TML Daily*, May 24, 2013–No. 63). Wyatt et al. (2010) state that aboriginal peoples in Canada present a particular case in relation to citizen involvement in forest governance, given specific legal rights that need to be recognized in consultation processes (House 1998, Natcher 2001, Newman 2009, Pesselac-Ross and Potes 2009). In this way, aboriginal peoples are 'not just another stakeholder' but expect to be consulted on a 'nation to nation' basis (Smith 1996, Stevenson and Webb 2003).

In 2008 and 2009, WLFN, the Algonquin Nation Secretariat, the Assembly of First Nations of Québec and Labrador, and numerous other First Nations, made submissions to the Québec National Assembly's Commission on Labour and Economy to have their aboriginal rights and title recognized in what is now the SFDA. Appearing before the Commission in 2009, Chief Harry St Denis of the WLFN stated that:

Our experience with the internal bureaucracy of the MNR leaves us wary of Bill 57 resting these types of project development decisions or approvals in the hands of a Chief Forester, MNR or a regional CRE Committee. As such, there is the outstanding question for

us: If we are not on the table, are we on the menu? I think it's important that Bill 57 recognizes our aboriginal rights and treaty rights. And I think it's going to be very difficult for us to be equal participants, given the, you know, the regionalization. And so, what does that mean for the future, you know? Is it going to be like that for any major project that the First Nations want to realize, that the mayors can simply say: No... and it's always been our position that our relationship is with the Crown, not with the, you know, with the mayors. At first, the relationship is with the federal Crown and, since the federal Crown has passed the, you know, passed the responsibility for lands and managing lands to the provincial Crown, well, now that's our... our relationship now with the provincial Crown, and we don't want to see that further diluted... for it to be a relationship with, you know, with the table of mayors, who don't necessarily have, you know, First Nations' interests at heart. But in this case we are put in a very difficult situation, and it's something that we just cannot accept.

– CAERN-6 page 24, Quebec National Assembly September 2009

Chief St Denis's message was clear—if a government-to-government relationship is not recognized then WLFN would not participate. The Commission could have focused on the political process as a way to address the conditions within the draft legislation that undermined Aboriginal rights and title recognition. Instead, after completion of the Commission hearings, the Government of Québec stuck with Aboriginal rights exclusions and other than removing the requirement within the Act for First Nations to obtain permits for firewood, Québec ignored all First Nation requests to structure Aboriginal rights provisions as per current Canadian Supreme Court case law. Continuing the institutional culture of Aboriginal misrecognition and devaluation, the current version of the SFDA simply “takes account” of First Nations “interests, values and needs” (section 6), which are then limited in scope and content by being tied to “domestic, ritual or social activities pursued by the community” (section 40). Decision making support for WLFN economic rights and self-determined interests within their Aboriginal Title territory is not included in the forest legislation, thus exacerbating continued problems of social and economic inequality.



Plate 2: Chief Harry St Denis expresses his opposition to Bill 57 at the Québec National Assembly's Commission on Labour and Economy 2009.

DEVELOPING PROTOCOLS FOR MEANINGFUL CONSULTATION

In light of the above, how does the Government of Québec begin to meet the consultative expectations of Wolf Lake and other First Nations? The starting point must be in recognising that Algonquins, like all First Nations in Canada, began with both rights to their territories and rights as people governed under customary laws. As Roark-Calnek (2013:13) explains, “Mutuality, respect and consultation are integral to Algonquin social and political organization on a number of levels: family to family, band to band, and nation to nation. From an Algonquin perspective, the current consultation process should be harmonized with that expectation.” The Algonquins have never relinquished the rights to their territory or their rights as Anishinabe people. Yet neither have they been hostile in the face of persecution from outside powers. Indeed, they enjoyed many co-operative arrangements in the early beginnings of what is now Canada. They were allies with the French and assisted in the exploration, settlement and development of Nouvelle France. They then signed treaties of Peace and Friendship and the Royal Proclamation with the British between 1760-1764, as co-operative agreements to protect their peoples and territory (Van Schie and Haider, *In Review*) and acknowledge their rights. In 1982, the Government of Canada passed the *Constitution Act*, within which Section 35 recognizes and affirms “existing” aboriginal and treaty rights in Canada.

Because of this history, WLFN has told the Government of Québec that the answer lies in coming together under a meaningful consultation protocol—one that allows both parties to speak on a government-to-government basis. WLFN believes that the SFDA can be amended so as to recognize and respect the ‘wide spectrum’ of aboriginal rights and title. If this doesn’t happen, First Nations will continue to be treated as mere ‘stakeholders’ without regard to their constitutional status and internationally recognized human rights as indigenous peoples (Diabo 2013).

BUILDING INSTITUTIONAL DIVERSITY THROUGH POLICY AND LEGISLATIVE REFORM

Today, Canadian Indian lands, whether on-reserve or traditional territories, are subject to a federal fiduciary duty and as such, the Province of Québec, like any other Canadian province or territory, is party to the Government of Canada’s Comprehensive Claims and Self-Government policies and processes. These set the framework for negotiations around the extinguishment of First Nations’ Aboriginal Title and Rights. Diabo (2012) explains:

Not only are these federal policies inconsistent with the pre-existing sovereignty and constitutional protection of Aboriginal and Treaty Rights, which Canadian First Nations have fought and struggled for over the centuries, but these federal policies are in breach of internationally recognized human rights of Indigenous Peoples.

Even the best intentioned efforts of the Constitution Act (Section 35) and subsequent Supreme Court decisions in Canada are estranged when it comes to Québécois provincial policies, which consider that all negotiations take place under the paternalistic framework of the federal comprehensive claims policy rather than co-sovereign arrangements. Consequently, Ministries and their agents fail to listen to and support the bio-cultural and economic interests of communities such as WLFN as part of a meaningful forestry consultation or planning process (Van Schie and Haider, *In Review*). When government officials presume that *only* they can make authoritative rules, then sustaining a self-organized regime becomes very difficult (Johnson and Libecap 1982).

This brings us back to Ostrom’s work, which provides an insight into what may be needed to move things forward. In 2008, she talked about how governments should ‘evolve institutional diversity’. What this refers to in the Québec case is the adaptation of the

existing mono-cultural institution and/or the fostering of new institutional arrangements that recognise aboriginal rights and title thus empowering communities to enter into co-operative schemes—schemes that respect and recognize First Nation rights, values and priorities even when different to those of dominant society. As Ostrom (2008) stated, “We have got to understand the institutional diversity that is out there, because if we are actually going to protect biodiversity and not just have simple systems where there are many species interacting we have to have local knowledge that is rich about those ecologies. So we have to have institutions that match the complexity of the systems that are evolved and those systems have to be complex, so my motto will be, ‘Build enough diversity of the world and allow multi-tier systems at multiple scales so that you don’t have an uniform top down panacea that is predicated to cure everything and instead of curing it, kills it.’” It is this kind of respectful multi-tier system that could provide WLFN with the political space to work in partnership with industry and government agencies. However, it remains to be seen whether the Québec SFDA can be reformed to recognize traditional ecological knowledge and other legal specificities of First Nations land use, and allow the kind of institutional diversity that Ostrom calls for to flourish.

THE IMPACT OF THE FSC CERTIFICATION TRANSFER AND NEW PRINCIPLES

Under the new SFDA legislation, all industry-held FSC certificates in Québec were intended to transfer from industry to government in 2013 (Ministère de ressources naturelles - MRN). In 2011, at the FSC Canada Annual General Assembly, WLFN tabled a motion pertaining to the Québec transfer plan, which was seconded by the National Aboriginal Forestry Association. It proposed, “FSC Canada shall establish a Québec regional working group process with participation from FSC Canada, Québec government, FSC certifiers, FSC certified companies and interested First Nations, as soon as possible, to clarify the obligations and responsibilities

of the Québec government and FSC certified forestry companies to First Nations in order to ensure continued compliance with FSC Principle 3 in the FSC Great Lakes St. Lawrence and National Boreal Standards prior to the Québec Sustainable Forest Development Act taking effect on April 1, 2013.” The motion was passed and the Québec Tenure Transfer Transition Team (QTT-TT) was developed. FSC Canada then commissioned a Gap Analysis Report (August 2012), prepared by Sara Teitelbaum and Stephen Wyatt, that analyzed the gaps and synergies that exist between the authority of the Québec regime and FSC forest management requirements (GLSL and National Boreal Standards). Specifically related to the rights of aboriginal peoples, the following principle and criteria were highlighted:

Principle #3: Indigenous peoples’ rights

The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.

3.1 Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.

3.2 Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.

3.3 *Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers [emphasis added].*

3.4 Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their

free and informed consent before forest operations commence.

In 2012, MRN reiterated its intent to assume forest companies' FSC Forest Management certificates for 30 million hectares of forest lands and developed a Protocol for Forest Management Certificate Transfer, which was approved by FSC International. However, in 2013, the Quebec government decided to transfer responsibility back to the forest companies. They cancelled the Forest Management Certificate Transfer Protocol and entered an agreement with the Quebec Forest Industry Council that would enable industry to remain the FSC certification applicant and certificate holder under the new SFDA.

In 2015, FSC International will improve and align its certification standards in accordance with a set of new principles and criteria being developed around key articles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). This UN Declaration makes clear that Indigenous peoples *have the right to participate in decision-making* and that States must obtain their *free, prior and informed consent* before adopting and implementing legislative or administrative measures that may affect them (Hill Sloan 2008). Given this situation, local forest companies find themselves in a rather uncertain position when trying to retain their forest certificate on WLFN lands, precisely because WLFN asserts Aboriginal Title and Rights but have yet to be meaningfully acknowledged or consulted by MNR with regards to their forestry plans. An opportunity thus exists through FSC for WLFN and other First Nations in Québec to work with government and local forestry companies to implement aboriginal principles and criteria outside the scope of the current SFDA legislation.

It is here that Elinor Ostrom's work on collective action theory offers further lessons and guiding principles. As Ostrom (2009:11) noted, when resource user groups work side-by-side, "they may have back up arrangements that enable them to utilize each other's resource under commonly understood

conditions". While more work is obviously needed, the FSC's newly aligned international certification standards could be a foundation towards broader legislative reforms of the SFDA in Québec—presuming that the Québec government does not replace the FSC framework with its own lesser version or industry abandons FSC certification under the burden of evolving compliance.

CONCLUDING REMARKS

In his preface to *Deepening Democracy: Institutional Innovations in Empowered Participatory Governance*, Wight notes that, "nurturing clear-sighted understandings of what it would take to create social institutions free of oppression is part of creating a political will for radical social changes to reduce oppression". Moving forward with 'true' (sustainable forest) management actions in Québec will require partnership with First Nation communities like Wolf Lake, but for this to happen, political will is needed to end First Nation discrimination and carry out amendments to SFDA policy and legislation.

After a long history of oppression, it is time that aboriginal communities like WLFN are able to establish a common vision of sustainable forest management through co-sovereign relationships. If Québec and the federal governments continue to play a version of what Ostrom (1990) described as "the Prisoner's Dilemma Game", which forces First Nation's to take a disempowered role in a forest regime to which they do not subscribe, it is likely that costly legal and international forest certification challenges will ensue. As long as mainstream society continues to devalue First Nation peoples and their historical knowledge of complex ecosystems, we will not succeed in developing truly sustainable forest management practices in Canada. It is for this reason that First Nation communities like WLFN will continue the struggle for recognition and participation in the management of Québec's forest commons—a struggle that will hopefully encourage other collectives to strive for the kind of participatory, democratic governance

arrangements that Ostrom pushed so hard for in both her scholarship and advocacy.

This case highlights the struggles that First Nations face in managing their commons, especially in the face of competing and often very powerful interests. For WLFN, as well as other First Nations in the Province and in Canada more generally, a key component of their struggle for self-determination concerns development of a forest commons framework that enables communities to participate in the management of local forest resources without compromising long-held values, rights and title or their independence as a sovereign people. Elinor Ostrom's work offers guidance to Wolf Lake, industry, and government alike, by helping forest actors envision what a collective action partnership requires, both in terms of institutional change as well as an enabling policy/legislative environment. In the spirit of Ostrom's undimmed optimism, this paper shows that despite the myriad of issues and tensions to be negotiated, the opportunity for First Nations to partner with industry on a more equitable footing, based on key articles of the United Nation Declaration on the Rights of Indigenous Peoples (UNDRIP) and key criteria of the Forest Stewardship Council (FSC) is apparent. This would be a critical step in developing resource management approaches that challenge and ultimately begin to erode Canada's institutionalized culture of Aboriginal misrecognition and economic inequality. Proposed revisions to FSC Principle 3, based on UNDRIP, will provide communities like WLFN a means to increase their influence over land use without extinguishing their rights or devaluing who they are as a people. This reflects the true definition of sustainable forest management and a growing international consensus that forests should be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations.

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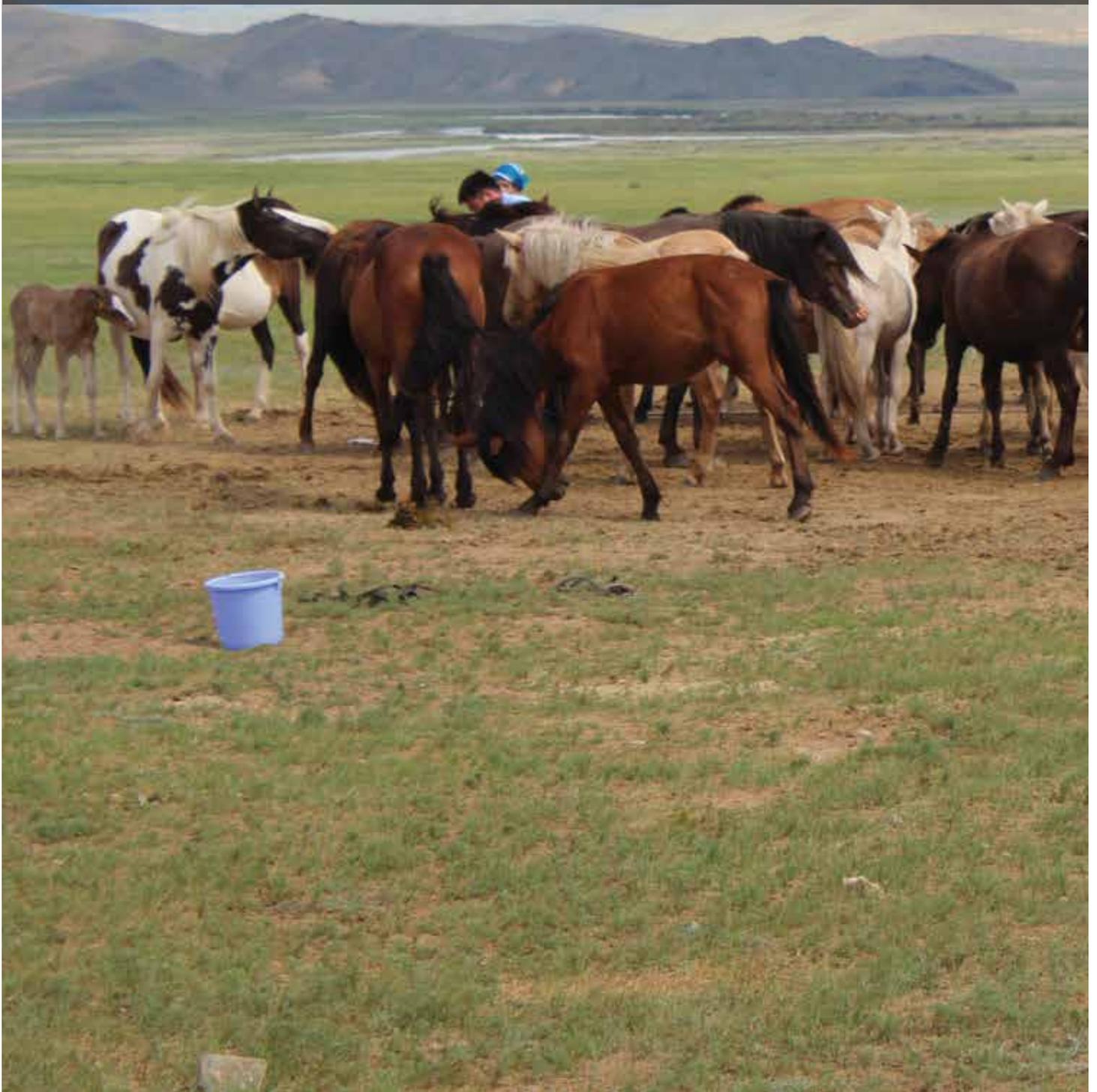
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8

FROM THEORY TO PRACTICE **A Decade of Co-managing Pasture and** **Other Natural Resources in Mongolia**

Hijaba Ykhanbai and Ronnie Vernooy



8

From Theory to Practice

A Decade of Co-managing Pasture and Other Natural Resources in Mongolia

Hijaba Ykhanbai¹ and Ronnie Vernooy²

Abstract

Elinor Ostrom's work has been the principal inspiration for a number of research and development initiatives in Mongolia aimed at designing, testing and assessing viable forms of natural resources co-management that build on traditional nomadic practices. One such initiative, begun in 1999, introduced co-management in four different ecosystems of the country. It was based on the hypothesis that under Mongolian state ownership of pastureland and private ownership of livestock, a co-management system—with clear roles and responsibilities among herders, their communities and local governments—could offer a means to reduce the pasture degradation and overgrazing that had been increasing in intensity over recent decades. Based on the results and lessons learned from fifteen years of participatory action research, the efforts at these four sites demonstrate that if all stakeholders strongly support co-management it can be a tool to overcome the “tragedy of the commons.” For this to happen, appropriate policies and legal support is needed to enable local- and multi-level collaboration. Introducing sustainable management methods such as pasture improvements, combined with new livelihood options, including the production and marketing of local products, can reduce the degradation of pastures, contribute to better livelihoods and recover the cost of environmental externalities.

Keywords: *Ostrom, co-management, Mongolia, pasture, natural resources*

¹ Director of Environment and Development Association “JASIL” Email: ykhanbai@hotmail.com

² Genetic Resources Policy Specialist, Bioversity International. Email: r.vernooy@cgiar.org

INTRODUCTION

Pasture management systems in Mongolia cannot be characterized as open access systems; rather, their features are more akin to those of a common property regime (Ostrom 1990). In the context of Mongolia, Ostrom's work on common property institutions has been used to introduce, put in practice and assess co-management strategies and community-based natural resource management (Ykhanbai et al. 2004). Common pool resources exist where one person's use of a resource subtracts from another's, and where it is often necessary, although difficult and costly, to exclude other users outside the group from using the resource (Ostrom 1990). Around the world, the work by Ostrom and colleagues has been instrumental in contextualizing and critiquing Hardin's "tragedy of the commons" argument. This is also the case for Mongolia (Ykhanbai 2011, Vernooy 2011).

The work of Ostrom and others has been important for identifying the shortcomings of "tragedy" thinking. However, the alternative theory they put forward has been criticized for not paying enough attention to the dynamic nature of (local) history and for embracing a "deductive model of individual decision-making and rational choice to explain the ways in which different types of property rights arrangements emerge and change over time" (Johnson 2004: 409). Central to the criticism of their work has been a political economy approach that focuses on the role of rights, negotiated access, and conflict over resources, including an analysis of socio-economic and gender inequality, and inclusion and exclusion in relation to natural resources. Such a rights- or entitlements-based approach centres on relations between natural resources (management) and poverty.

We acknowledge the important contributions made by both of these theoretical schools and their relevance to a Mongolian context, as illustrated by our own research during the last fifteen years. It has been Ostrom's work that has been the principal inspiration for several Mongolian research and development

initiatives aimed at designing, testing and assessing viable forms of so-called co-management of natural resources, which build on and further develop traditional nomadic practices in the country. Our applied research efforts can be counted among these initiatives. Starting in 1999, a multi-disciplinary research team was formed with members from two Mongolian ministries, three universities and two non-government organizations. In each of the four project sites, we partnered with members of district-level co-management teams, including the district governor and other officials, herder leaders and representatives of civil society, such as teachers. We promoted co-management arrangements based on the hypothesis that clear roles and responsibilities among all stakeholders, including herders, their communities and local governments, working under Mongolian state ownership of pasture land and private ownership of livestock, would help reduce the pasture degradation and overgrazing that had been increasing at an alarming rate (Ykhanbai et al. 2004) (Photo 1). Environmental degradation was taking place parallel to the erosion of traditional customary practices as a new Mongolian state structure and associated governance process emerged, influenced by contemporary theories of natural resource management.

Our efforts have been largely inspired by one of Ostrom's (1990) main insights, i.e., that there

It has been Ostrom's work that has been the principal inspiration for several Mongolian research and development initiatives aimed at designing, testing and assessing viable forms of so-called co-management of natural resources...



Plate 1: Overgrazing has affected many regions of Mongolia (Photo credit: Hijaba Ykhanbai)

are many indigenous institutions that have endured for centuries in the sustainable management of natural resources and that there is much to learn from them. As she argued, under the right conditions, the people in a community who enjoy an interdependent relationship with their natural resource base, can organize and govern themselves to continue to obtain joint benefits despite all temptations to free-ride, shirk, or otherwise act opportunistically. In 1999, we began the journey to see what promise local-level arrangements held in a rapidly changing Mongolia.

In this article, we will summarize our attempts to introduce, test, and institutionalize co-management in Mongolia. As such, our work represents one of several initiatives in the country to find novel, feasible applications of Ostrom's work (1990, 2009), in particular concerning the design principles she identified as being associated with sustainable commons management. Based on in-depth fieldwork that took place across the country between 1999 and 2013, our results demonstrate that if all stakeholders strongly support co-management, then it can be a tool to overcome the "tragedy of the commons." For this to happen, the roles and responsibilities of stakeholders need to be clearly established,

regular face-to-face interactions are paramount, and both effective monitoring mechanisms and viable short-term livelihood improvement options developed.

But local level action alone is not enough. Legal and policy support is also critical in order to scale-up co-management (by involving more herders and stakeholders that operate at higher levels). Introducing sustainable management methods, such as pasture improvements, small-scale agricultural production techniques, water conservation methods, and community-based forest management, through a process of collaborative learning involving the active participation of all, can reduce the degradation of pastureland and cover the cost of environmental externalities. However, in Mongolia, where severe poverty and resource mismanagement is commonplace, co-management did not begin in a wholly endogenous fashion. External facilitation and technical and financial support were instrumental in mobilizing herders and other stakeholders to take part in a novel example of collective action. This kind of facilitation has perhaps not received as much attention as it deserves, and that includes the writings of Ostrom and colleagues.

HISTORICAL OVERVIEW OF NOMADIC PASTORALISM IN MONGOLIA

In Mongolia, pastureland has always been a shared resource. From ancient times to 1959, herders all over the country practiced some form of customary land use with variations according to local conditions. Historically (until 1921), open rangeland and pastureland were under the control of feudal officials, clans, and tribal groups. The Khalka Djurm [literally: the Code of Act for all Khalka people; the Khalka making up the majority of Mongolians], enacted in 1709, defined the codification of customary law on the steppe. Late in the eighteenth century, neighborhood groups enacted formal regulations, and long-distance movements across territorial boundaries were prohibited in some cases. Herder groups or family clans tended to use ranges in the vicinity of their seasonal camps and traditional rights were widely recognized and respected. The enforceability of rights to campsites was greatest when herders had used the same campsite for years or generations. Campsites were widely recognized as the common property of a given herder clan known as *khot ail*. The *khot ail* comprises one to eight households which camp together for at least one season and cooperate in livestock production activities, e.g., herding, shearing, transport, fodder preparation. They are mostly related by blood or marriage, but occasionally comprise different groups brought together. The ultimate size of the group is usually limited by the local pasture capacity, water availability and the resulting number of animals that can be maintained.

During the early years of the Soviet period (1921-1990), herders were forced to adopt commune-style management in which production goals, herding operations and husbandry practices were established by Soviet command for specific groups of herders. This was followed by the full-fledged collectivization of all resources from 1959 to 1990. From 1990 to the present, after the withdrawal of the Soviet Union, subsequent governments developed policies and laws to allow a transition from a centrally planned system to one based on democratic and

market economy principles. Following the privatization of livestock in 1992, herders increasingly relied on ownership of shelters to claim de facto rights to the surrounding campsites and pasture (Fernández-Giménez 2002).

Eighty percent of Mongolia is covered by grassland, home to about 250,000 herders and 36 million horses, cattle, sheep, goats, and camels. Half of the country's population of 2.78 million depends directly or indirectly on livestock production, which contributes more than 20 percent of the country's GDP (National Statistics office of Mongolia 2012). What these numbers fail to tell, however, is just how much nomadic pastoralism is a way of life for many in Mongolia. For centuries, herders have roamed the grasslands "following our animals," as the herders' adage goes, building, packing, and rebuilding their traditional gers, or tents, to make their living from nature's bounty. But making a living from herding is not easy. The country's per capita GDP is among the lowest in Asia, with poverty and hardship common features in many rural areas and cities alike. Since 2006, rural poverty has been on the increase, despite several years of macro-economic growth (National Statistical Office of Mongolia 2012). Some herders have benefitted from the growth, but most have not. Increasingly, the ancient lifestyle of nomadic pastoralism is under threat.

More than a decade ago and before climate change discourse emerged in development debates, herders first observed and commented on the impacts of climate change and the increase in severe weather events like storms, droughts, and extremely harsh winters, known as *zdud*. The 2010 *zdud* was one of the worst ever, resulting in the death of approximately 8.5 million livestock animals or 20 percent of the national herd. Seven hundred and seventy thousand herders were affected, with 43,500 herders left without a single animal. 164,000 lost more than half of their livestock (United National Mongolia country team 2010). Previous *zduds* in 1999-2000 and 2000-2001 had already killed over three million animals, or a little over ten per cent of the total herd. While climate events

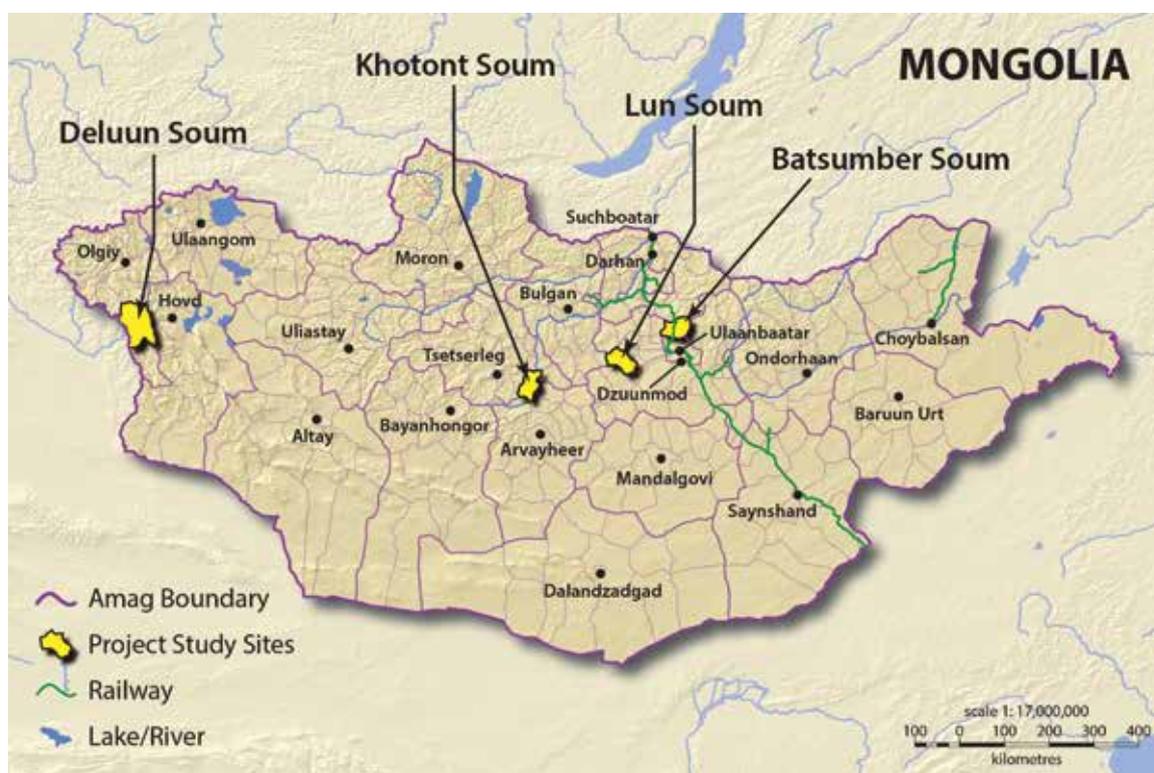
had decimated many herds, overgrazing has also been a problem, resulting in degradation of already scarce natural resources. Up to 30 percent of Mongolia's grassland biomass production has been lost over the past 40 years. At the same time, the Gobi desert, which dominates the southern half of the country, has been steadily expanding north at a pace of 150 kilometers every 20 years.

CO-MANAGEMENT IN PRACTICE

Traditionally, herders use pastureland according to certain kinship relationships, combined with the sharing of a common area that they move around in accordance with continuously evolving community arrangements. Co-management builds on these systems, but adds new features. Co-management brings together formally organized herder groups, government and researchers. It is based on the observation that the limited capacity of herders and local government to sustainably manage pasture resources can be complemented by the participation of other stakeholders at various levels. Together, they can manage the

resource base more effectively. The increasing degradation of the natural resource base, widespread biodiversity loss and climate change impacts—all observed in Mongolia—are such that action is required at levels beyond that of the individual household or group of households.

We introduced co-management of pasture resources in Mongolia at the end of the 1990s in a number of pilot sites across the country (Map 1), including the dry steppe region, the forest steppe areas, and the high Altai Mountains (Ykhanbai and Enkhbat 2006). Our efforts addressed the challenge of environmental degradation through a combination of participatory and action-oriented field research in three districts or *sums* (there are 330 *sums* in the country) of three provinces or aimaks: Khotont (district) of Arkhangai (province), Deluin of Bayan-Ulgii, and Lun of the Central province. Later, in 2008, we expanded activities to a main forest ecosystem by selecting Batsummer *sum*, also in the Central province. These four districts represent various herding systems that can be found in the country's major eco-regions



Map 1: Pilot Co-management sites. Source: Hijaba Ykhanbai 2011. (Cartography by Marcel Morin)

(steppe, mountain-steppe, steppe-forest, and forest). They also represent different forms of social organization based on history, socio-economic conditions and ethnic background (see map).

Co-management processes establish effective roles and responsibilities for the stakeholders who manage, directly or indirectly, livestock (privately owned), land and water (state owned), and other natural resources (e.g., wildlife). The main stakeholders are herders and herder groups, local leaders, local government authorities, and the state. In the case of transitional economies such as Mongolia's where the role of the state is being redesigned through complex processes of political consultation, negotiation and struggle, the implementation of co-management approaches requires both time and a clear stipulation of what the government will and will not do to support such agreements (Ykhanbai et al. 2004, Ykhanbai 2011). Implementing co-management includes activities that address material, socio-economic and institutional dimensions of pastoral livelihoods and associated vulnerabilities. They cover the drafting (discussion, negotiation) and signing of co-management agreements with the *sum* and local governors and its members to ensure access to community pasture areas. This makes use of site-appropriate seasonal pasture shifting methods at the community level to allow for the restoration of degraded grassland; to protect wells and rivers, or accumulate snow and rain water (in small reservoirs); to clear forest, using stumps or dried branches for fuel use, and forest restoration or transplantation of trees from densely wooded area; and to create salt-marshy areas as a drinking source for livestock (Vernooy 2011).

Co-management also requires the development of a variety of skills: to design and formulate contracts with community members; to register each family and members as belonging to the community and (co-management) group; to register forest and other natural resources in the community area as belonging to the community and (co-

management) group; to set up a community fund; to involve young people in community activities as a way to train the new generation of herders; and, to make useful information (for example, related to markets and prices, related to weather dynamics) available through newspapers and other means of communication.

Co-management Design

The research team developed a holistic and bottom-up research and development approach combining insights from pasture/rangeland ecology, livestock management and breeding, natural resource economics and rural sociology (including gender analysis). Methods used included resource mapping, vegetation monitoring, surveys and interviews, participant observation as well as methods from participatory action research (Ykhanbai 2011). Since no examples were available for how to introduce and test novel approaches for collaborative management and learning in Mongolia, the team adopted an experimental, "learning by doing" approach. New ideas and methods were implemented at the field level in the four sites, then systematically monitored and evaluated. These ideas and methods were adapted as the work progressed; over time, the methodological basket expanded and the team became more experienced in using it.

Participatory rural appraisal tools used at the start allowed herders and other stakeholders to better understand one another and identify opportunities to work together. Herders and government staff jointly identified and discussed local priority problems using resource and area mapping, historical analysis, social network analysis, problem matrix scoring, among others. The herders also described and analyzed the strengths and weaknesses of their pasture management practices, the pros and cons of their seasonal pastures, and the challenges related to the use of water sources, public services and infrastructure. Priority issues identified by the herders during these assessment exercises were different in accordance with the different ecological and socio-economic characteristics of the study sites. Women played an active



Plate 2: Women and men herders speak out about co-management. (Photo credit: Hijaba Ykhanbai)

role and were supportive of proposed co-management measures—envisioning the improved livelihoods that could result and how their needs and interests could be more meaningfully involved.

Over time, the co-management communities became a useful learning mechanism to adopt and adapt new practices of herding and farming, forms of decision-making and service provision. After some experiences were built up, insights and lessons were generated and when feasible, “translated” to national level policy suggestions/recommendations through direct involvement of research team members in policy and law making processes. The experiences and lessons learned from the four sites have served to formulate and implement several new policies and laws concerning natural resources management. For example, lessons learned from pasture co-management were more recently used to develop forest co-management policy and law. In addition, at local levels there have been important changes in how the government operates and implements policies and laws.

The role of co-management communities

In our applied research, after the first participatory meetings and discussions were held at the local level, the herders then consulted with each other about the possibility of forming a new kind of natural resources

management ‘community’ based on the notion of collective consultation and planning and informed by traditional social and cultural relationships (photo 2). The majority of herders expressed a strong interest and effectively decided to combine forces to create such co-management communities, with six of Ostrom’s design principles appearing to underpin their initial establishment:

1. Clear group boundaries but based on the flexibility to bring new members in at any time;
2. Rules governing the use of common goods adapted to local needs and conditions;
3. Assurance that those affected by the rules can participate in modifying the rules;
4. A local system that effectively monitors the behavior of community members;
5. The use of graduated sanctions to correct rule breakers; and,
6. Accessible mechanisms for dispute resolution.

Women played an active role from the beginning and, after many years of top-down governance, perceived that they were now being given a chance to let their voices be heard and taken seriously (Ykhanbai et al. 2006b). It was the wealthier herders that were less enthused and less willing to join these ‘communities’ and the co-management system.

These herders thought they had nothing to discuss “on equal terms” with their poorer counterparts, who typically had less access to good pasture land and whose voices were not normally heard in decision-making arenas. It took time for them to understand how they could also benefit from improved pasture management.

The research team proposed that the communities be made up of herders who live in the same area, watershed, mountain, or valley, residing close to a commonly used pasture, and willing to restore their traditional pasture management system. Local herders would be formally recognized as the custodians of the pasture and forest resources and associated water resources. The herders themselves appreciated this approach, happy that their kinship and clan bases would be recognized. These discussions resulted in the widespread formation of formal herders’ communities (*nukhurlul*) i.e., groups of some 10–15 herding households in selected areas, with management goals to include livelihood improvements, shared labor and improved pasture and natural resources management. Community members agreed to operate as an economic unit (*khot ail*), a social unit (*sakhalt ail*) and an ecological unit (*neg nutgiinkhan*), with common interests driving collective efforts to improve pastoral livelihoods and conservation in Mongolia. The *nukhural* would be mobile in time and space as they follow their animals in the search of green pastures.

The second step in the formation of the new community groups was the establishment of workable relationships with authorities and agreement as to the actions necessary to make co-management work. In this way, the seventh of Ostrom’s design principles was put in place: rule-making rights of community members are respected by outside authorities. All communities of herders will sign contracts with local government on pasture use, according to the Land Law (2002), Environmental Protection Law (2005), Forest Law (2007) provisions, and according to the new Community-Based Natural Resource Management Procedure, developed by the team in 2006. In these contracts, boundaries

for seasonal pasture and forest are clearly agreed to (and specified on topographic maps), all regulatory measures described and rights and responsibilities concerning protection and use rights identified. The co-management agreements are evaluated annually and, if necessary, revised and re-approved. These are tri-party contracts that stipulate the rights and obligations between herders and the co-management community; between the co-management community and the bag (sub-district) governor; and between the co-management community and the sum governor.

The *Sum* (district) Level Co-Management Team consists of representatives of all stakeholders. These teams aim to facilitate and monitor co-management arrangements among the concerned stakeholders. They are also responsible for the scaling-up of co-management activities in the *sum*. A team, usually 8-14 strong, brings together representatives of herder and community groups, non-government organizations, local governors, local school and other leaders, and the researcher group. The team normally meets twice a year, or more if deemed necessary. It discusses the sum level co-management activities and consensual decision-making process. Each year, activities are evaluated and, based on the results, new annual plans discussed, drafted and agreed upon.

Ostrom’s eighth and final design principle builds responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system. This was put into practice step by step through subsequent stages of the research process. After several years of building up experience at the community level, co-management communities formed sum level associations. These associations worked to promote novel rotational grazing schemes, the introduction of more productive grassland species, intensified hay and fodder production, and better coordinated livestock movements throughout the season (Vernooy 2011; Ykhanbai et al. 2006a; Ykhanbai 2011). The associations also promote a range of income-



Plate 3: Discussing a fodder experiment. (Photo credit: Ronnie Vernooy)

generating activities, such as joint hay and fodder making, hunting, vegetable growing, making hand-made felt, quilted rugs and other handicrafts, making farm carts for community need and for sale, harvesting forest products, and the processing and marketing of dairy products. More recently, some co-management groups have initiated the establishment of community shops where local products can be sold at greater profit than through sales via middlemen. Since 2011, co-management groups have also started to integrate localized weather forecasting data in their operations through the novel use of information and communication technologies. The data allows herders to improve their decision making for key livelihood activities throughout the year. Herders have made multiple use of these forecasts, such as the timing of pasture rotation, planting and harvesting of crops, making hay and fodder (Photo 3), and the planning of seasonal movement (Vernooy, Ykhanbai and Tsogt 2013).

CONCLUSIONS

The challenges of managing the risk that Mongolian nomadic pastoralists face are numerous and complex. Herders move from

season to season, and are heavily dependent on the weather. Their livelihoods are centered on livestock-dependent income sources, and yet they must deal with scarce natural resources, which, in many parts of the country, have become seriously degraded. After the 'opening up' of Mongolian society and economy in the early 1990s, herders have become both more independent (individualized) *and* more vulnerable as protection by the State was withdrawn (employment, social security, health care, education services were no longer certain) and the country moved quickly to a free market development model. Parallel to great societal change, the impacts of climate change have become more visible, first observed and felt by herders about a decade ago. In the last decade, severe weather events, in particular storms, drought, and extremely harsh winters have been on the rise. The unpredictability of such events, even for a largely nomadic society where vulnerability is a part of everyday life, has become a major issue facing many in the country.

Based on more than ten years of experimentation and experience, the co-management efforts we have helped to

instigate have led to more productive pastureland, healthier herds, and increased incomes at the pilot sites. The co-management results and lessons learned have also led to changes in national policies and laws governing forests, water use, and environmental practices. A survey carried out in 2011, indicates that in some areas co-management has helped to reduce the loss of animals due to the disastrous winter of 2009-2010. It was the devastation that that winter caused that increased awareness among many herders of the necessity to adapt conventional practices. Co-management was seen as one possible way forward. This year (2013), our collective efforts will culminate with the allocation of pastureland to organized herders communities being included in the draft Land Law the Mongolian Parliament is set to approve in its spring session. This represents a great opportunity to legalize traditional land use rights of herders in Mongolia.

Yet when we began this applied research, it was Elinor Ostrom's insights about viable forms of collective action and design principles for the equitable and sustainable management of the commons that inspired us to work directly with herders, government staff and other stakeholders. One very important lesson that we learned was that for co-management to work, it is essential for herders' livelihoods to be improved in very concrete ways, particularly in the short term given the time it often takes to observe and reap the benefits from improved natural resource management practices. This can be achieved through creating and maintaining sustainable access and use of resources beyond pastures, in particular for those more vulnerable of households. Examples include the introduction of technologies that add value to local produce (dairy and felt products in particular), that establish small-scale garden plots (potatoes, vegetables), that create new forms of market access at local and national levels, and that provide novel credit, veterinary and meteorological services. More recently, experimentation with localized weather forecasting services show promise to strengthen the foresight capabilities of herder households and communities (Vernooy et al.

2013). This lesson from the field points to how collective action theory and entitlements theory can converge in practice.

As we have argued elsewhere (Vernooy 2011), Mongolia could serve as an inspiring example to other countries in the region. Neighboring countries in Central Asia, currently undergoing a similar process of transition, have started to study and learn from the Mongolian experience to overcome their own "tragedy of the commons." Researchers in Kyrgyzstan and Kazakhstan are trying to adapt Mongolia's co-management practices to the more sedentary forms of pastoralism found there. In several villages, herder-farmers, formerly belonging to state farms, have come together with local government representatives to establish small management groups to jointly plan sustainable forms of livestock management, while maintaining individual ownership of resources.

Yet despite the early successes and potential for replication elsewhere, effective adaptation practices and institutions are still urgently of need in Mongolia. Co-management was introduced across the country as a response to changing ecological, socio-economic and political conditions, and to reduce pressure on the natural resource base. Co-management takes considerable time and effort to be introduced, tested and integrated into local practice as well as national policy/law; only after ten years of experience are we beginning to see how collective action for natural resource management can strengthen the adaptability of herders and improve their futures. A start, however, has been made, and it seems apparent that risk can be managed more effectively for nomadic societies through joint actions and efforts, especially in light of the high interdependency of people with their natural resource base. Mongolian herders, never afraid of exploring new terrain, are showing the way. Their involvement, along with that of other stakeholders, represents a third way of co-management, not totally dependent on the state, yet neither totally dictated to by the market. It is a 'way' that, we feel, is very much a practical realization of many of Ostrom's ideas and recommendations.

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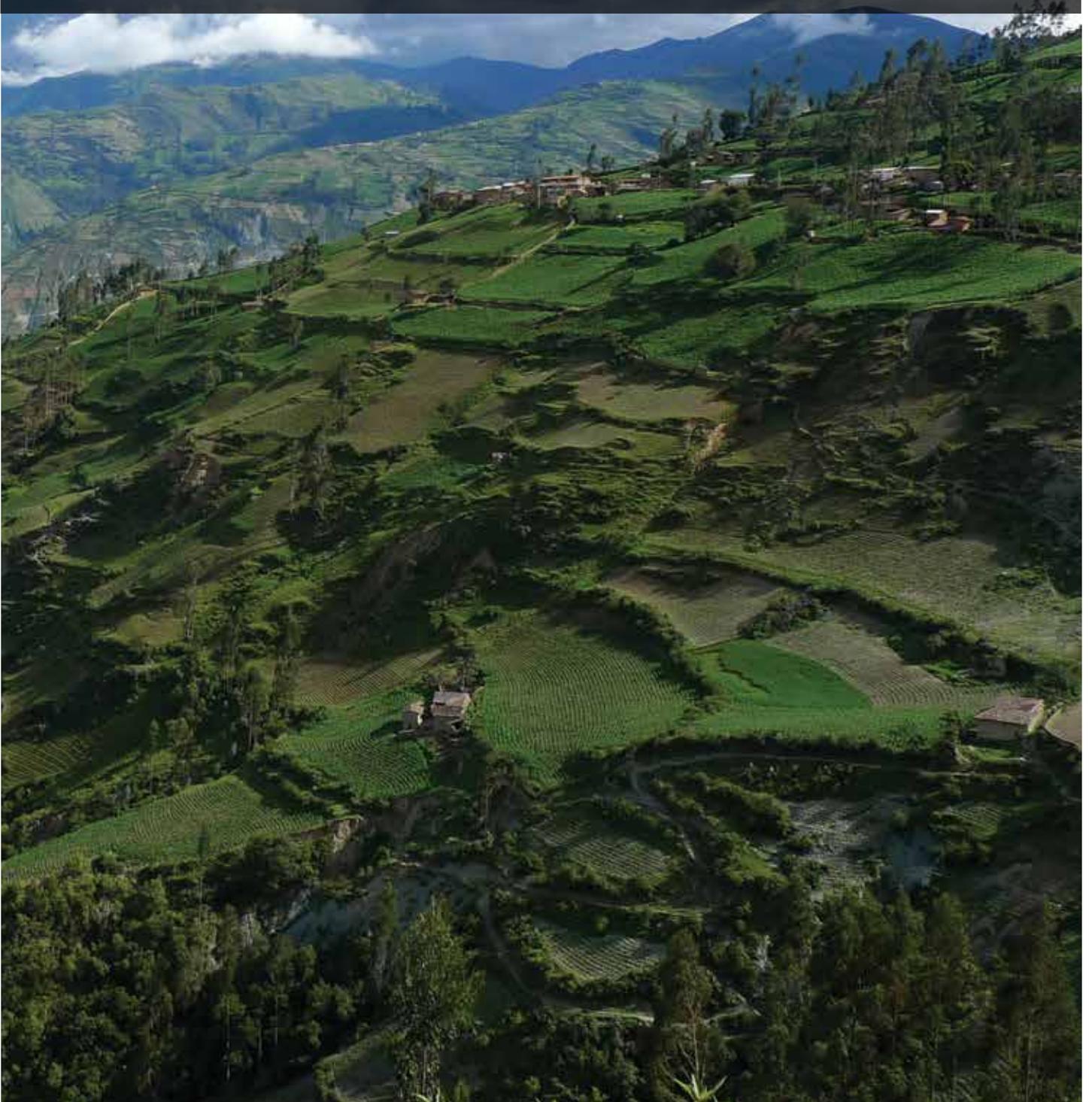
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9

RECOGNITION OF THE ROLE OF COLLECTIVE ACTION
among Indigenous Peoples and Local Communities
in the Convention on Biological Diversity

Diego Pacheco



9

Recognition of the Role of Collective Action among Indigenous Peoples and Local Communities in the Convention on Biological Diversity

Diego Pacheco¹

Abstract

The Eleventh Conference of the Parties of the United Nations Convention on Biological Diversity (COP 11 of the CBD), held in Hyderabad-India (8-19 October 2012), made an unexpected posthumous tribute to Elinor Ostrom by recognizing the importance of collective action and self-organized institutions in natural resource governance. This proposal was made by the Plurinational State of Bolivia, and Parties negotiating at the COP11 have considered that the Bolivian proposal enriches the current framework of the CBD. The COP11 declared its support for the underlying concept promoted by Elinor Ostrom, summarized in her own words as “we will all be the poorer if local, self-organized institutions are not a substantial portion of the institutional portfolio of the twenty-first century” (Ostrom, 1994). This paper explores the context of such recognition for both developing and developed countries in the context of the CBD and future implications for the conservation of biological diversity and the sustainable use of its components.

Keywords: *conservation of biodiversity; common-pool resources; collective action; self-governing institutions.*

¹ Rector of the University of the Cordillera (Universidad de la Cordillera-La Paz, Bolivia). Head of the Bolivian delegation at the CBD and alternate head at the UNFCCC. Email: jallpa@yahoo.com

INTRODUCTION

The Eleventh Conference of the Parties of the United Nations Convention on Biological Diversity (COP 11 of the CBD), held in Hyderabad-India (8-19 October 2012), has recognized in several of its decisions the theoretical contribution of Elinor Ostrom. In particular, in the development of the second generation theories of collective action, by identifying the importance of self-organized institutions in natural resource governance.

The need to incorporate the theoretical contribution of Elinor Ostrom in the discussion of the CBD was raised by the delegation of the Plurinational State of Bolivia, stating that indigenous peoples and communities have been ignored as the main stewards of Mother Earth and nature, whilst public and private resources have been identified as the only contributors to the conservation of biological diversity. In order for the CBD to recognize the importance of self-organized institutions for conserving biological diversity and the sustainable use of its components in the

twenty-first century, the Bolivian delegation suggested reviewing the major insights of Elinor Ostrom and particularly the role of collective action and institutional development in local organizations.

The process of negotiation undertaken by Bolivia resulted in an explicit recognition from signatory countries to the CBD of the research outcomes of Elinor Ostrom on common property theory and, in particular, her claim that self-organized institutions play an important role in biodiversity conservation and sustainable use. Therefore, the CBD decided to move forward the process for recognizing that the collective action of indigenous and local communities be included as part of a conceptual framework regarding biodiversity and development. Furthermore, that it should be considered in the establishment of baseline information and the reporting framework for the mobilization of financial resources oriented towards achieving the CBD's Aichi Biodiversity Targets (<http://www.cbd.int/sp/targets/>).



Plate 1: The author presenting at the Workshop “Scaling up Biodiversity Finance: Summary from a Dialogue Seminar held in Quito, Ecuador 6-9 March 2012”, organized by the Resilience and Development Programme (SwedBio) at Stockholm Resilience Centre and SCBD, Hyderabad, 9 October 2012. (Photo credit: Ministry of Foreign Affairs, Bolivia)

The CBD subsequently declared its support for the underlying concept promoted by Elinor Ostrom that, in her own words, “we will all be the poorer if local, self-organized institutions are not a substantial portion of the institutional portfolio of the twenty-first century” (Ostrom, 1994). As Elinor Ostrom herself would probably have wanted, India thus become the place where collective action of self-organized institutions was recognized by the international community as playing a critical and prominent role in meeting the objectives of the CBD.

This paper explains how and why the Plurinational State of Bolivia, using Ostrom’s lead, succeeded in having the role of collective action recognized and incorporated into the CBD via the Convention’s conceptual framework, the indicators of resource mobilization, and in the preliminary reporting framework of financing for biological diversity. As a result, indigenous peoples’ and local communities’ institutions will no longer be invisible on this particular stage but rather a constitutive part in the future history of global conservation policy.

THE TRADITIONAL VIEW OF THE CBD REGARDING THE CONTRIBUTION OF INDIGENOUS PEOPLE AND LOCAL COMMUNITIES

Until COP11 took place in Hyderabad in 2012, international negotiations about biodiversity conservation were understood as being primarily driven by public and private financial incentives. The role of collective action and stewardship of indigenous and local peoples’ institutions in the conservation and use of biodiversity was largely ignored. This reflected the position taken by developed countries that looked to shift most of their responsibility for conserving biological diversity onto the shoulders of the developing world. This was partly due to the fact that these States could no longer allocate significant amounts of public financing for this purpose. Instead, private funds needed to be mobilized through the economic valuation of ecological biodiversity and using the approach of “payment for ecosystem services” or

“payment for environmental services”.

A high-level panel on Global Assessment of Resources, charged with implementing the Strategic Plan for Biodiversity 2011-2020, has stated that several hundreds of billions of dollars (US) a year will be needed to achieve the Aichi targets (UNEP, 2012). The CBD is thus struggling to identify sufficient public and private sector financial flows to help meet their stated biodiversity conservation goals and objectives, and to this end they have developed a set of indicators for resource mobilization and a preliminary reporting framework to measure and determine how conservation funding can be sourced and used. Yet in this most pragmatic of strategies, the contributions being made by indigenous people and local communities are overlooked and thus our basic understanding of the economy of biodiversity incomplete. With the role of collective action by indigenous and local people’s institutions ignored, their role in conserving biodiversity and ensuring the sustainable use of its components is rendered largely invisible on this most global of policy stages.

The Economy of Ecosystems and Biodiversity, or TEEB (UNEP, 2009), was developed as a global framework to better address some of these issues – based on the idea that by expanding markets into nature, and assigning economic value to a range of ecosystem services, positive incentives could be created for conserving biodiversity components (TEEB, 2010). For the proponents of TEEB, this approach stimulates the environmental awareness of policy makers by following the rationale of the dominant political and economic capitalist model (Ibid.). For the Bolivian government, however, this is simply the first step towards the commodification of nature, and subsequently its trade in financial markets (Bolivia 2013).

The Plurinational State of Bolivia challenged the interpretation of the CBD that it was the private and public sectors that formed the two mutually exclusive parts of the economy of biodiversity, advocating instead for an approach that would also recognize the

collective action of indigenous peoples and local communities. They were also adamant that such recognition extend to both monetary and non-monetary elements—a crucial distinction in light of current emphasis of developed countries on prioritizing only the economic valuation of ecosystem services and to strengthen the role of the private sector in mobilizing finance for conservation and stemming biodiversity losses. In order to capture the distinctive nature of public, private and collective action, Bolivia suggested a focus on institutional economics and, in particular, the views held by Vincent and Elinor Ostrom concerning the distinctive nature of goods and services, and to Elinor Ostrom’s research on collective action and common-property theory.

OSTROMIAN ENLIGHTENMENT: THE ROLE OF COLLECTIVE ACTION BEYOND MARKETS AND STATES

According to Vincent and Elinor Ostrom there are more than private and public goods and services. Specifically, four types of goods and services can be identified according to their distinctive characteristics of jointness of use, or consumption, and exclusion, namely: public goods, private goods, common-pool resources and toll goods (see figure below: types of goods) (Ostrom, 2002).

According to the Ostroms (2002), most governmental services constitute a public good and the patterns of organization that can mobilize coercive sanctions are necessary for the operation of a public economy or governmental institutions. For private goods and services, for which exclusion is feasible, alternative use should be organized

through markets. In the case of common-pool resources, exclusion may not be feasible given the costs of denying users access. In such cases, it is necessary to have recourse to some form of collective action so that sanctions can be used to prevent overuse.

Since environmental functions mostly encapsulate public or common-pool resources, markets are arguably poorly placed to contribute significantly to biodiversity conservation and the sustainable use of its components. The CBD attempted to give markets a prominent role at a time of financial crisis in the public sector of developed countries, and yet given the distinctive characteristics of biodiversity-related goods and services this is not the most appropriate approach. Rather, there appears a clear need to broaden the conceptual framework of the TEEB to include the collective action of indigenous people and local communities because of the Convention’s primary concern with biodiversity and thus common-pool resource management issues.

When referring to environmental goods and functions, such as those performed and provided by biological diversity, it is important to recognize that common-pool resources are characterized by the difficulty in excluding others from their use or consumption. This can result in a threat to the resource through overuse and, if unchecked, eventual depletion, or what is known as the “tragedy of the commons”. Theories of collective action, however, have concluded that individuals are capable of self-organization through the mobilization of collective action, and crafting appropriate institutions and rules to

		Jointness of Use or Consumption	
		Alternative Use	Joint Use
Exclusion	Feasible	Private goods	Toll Goods
	Infeasible	Common-Pool Resources	Public Goods

Table 1: Types of Goods and Services. Source: Vincent and Elinor Ostrom, 2002

sustainably manage their shared resources (Ostrom, 1990). In this sense, the collective action of indigenous peoples and local communities becomes an additional key area to consider in conserving biodiversity as a common-pool resource.

The lesson here for conservation is that there is much more at work than a simple dichotomy between markets (private) and state regulated (public) economies, and that recognition of local people's collective action in developing sustainable resource management institutions is critical. As Elinor Ostrom stated (1994: 1):

The twenty-first century is just around the corner. Will the local, self-organized communities that have governed and managed many natural resource systems continue into the next century? Or will they slowly disappear—relics of a dying past? So many have disintegrated during the past century that some scholars worry that they will all be destroyed. Will all common-property institutions be taken over by states or by markets? Can indigenous resource governance and management regimes really cope with the problems of a modern age? Are these locally developed institutions, which rely on knowledge acquired over time, effective, or does modern science provide better ways of managing local resources?

During the Informal Dialogue on CBD strategy for resource mobilization, held in Geneva in September 2012, and then at COP11 of the CBD, held a month later, the Plurinational State of Bolivia suggested an alternative approach that was built around many of the theoretical and applied lessons generated by Ostrom's groundbreaking scholarship—specifically the role that collective action by indigenous people and local communities can play in helping to achieve stated biodiversity targets. In doing so, the Bolivian proposal strengthened the current framework of action of the CBD. The proposal received support at multiple levels, including the following remark:

I believe we need to promote

stronger recognition of and support for community-based approaches to pursuing the human benefits of biodiversity conservation, including food security and poverty alleviation. While we are aware of the critical role of local communities in the stewardship and sustainable management of natural resources, we often tend to take their efforts for granted. Not only do I think that we need to acknowledge this important contribution to the conservation and sustainable use of biodiversity, I am also convinced that there is a lot that we can learn from their approaches. (Opening remarks at the COP 11 of Bráulio Ferreira, Executive Secretary of CBD).

The Executive Secretary of the CBD, and Parties negotiating at the COP11, concurred that the Bolivian proposal enriched the current framework of the CBD. It received additional and explicit support from the Indian Government and other Parties to the Convention.

HOW THE CBD WILL INCORPORATE COLLECTIVE ACTION INTO ITS FRAMEWORKS

The COP11 took a consensus decision to add the collective action of self-organized institutions for the conservation and use of biodiversity to the existing roles being played by public and private finance. This implies that the reporting framework, previously limited to public and private funding, must now undergo a review process in order to incorporate some form of valuation of the collective action of indigenous people and local communities in biodiversity conservation, and that this would include both monetary and non-monetary aspects.

Nevertheless, this is simply the first step in recognizing the prominent and critical role of collective action by indigenous and local communities, and how that can lead to self-organized institutions for the sustainable management of natural resources and a reduction in the acceleration of the

destruction of valuable natural resources. The second step is to develop a methodological approach to effectively evaluate (monetary and non-monetary) local and indigenous efforts alongside those of public and private finance. This is needed before the reporting framework can be formulated worldwide as part of the CBD reporting process. The conceptual framework developed by Elinor Ostrom around common property governance looks set to contribute greatly to this endeavor.

This task will be undertaken by the Expert Group on Biodiversity for Poverty Eradication and Development, as follows:

The Expert Group on Biodiversity for Poverty Eradication and Development will “Develop a conceptual framework and guidance on how to assess the role of collective action and the efforts of indigenous and local communities in conserving biodiversity, considering the critical role of indigenous and local communities in the stewardship and sustainable management of natural renewable resources, including exploring the role of non-market-based approaches in this endeavor. (Paragraph 4(d). Elements of terms of reference for the Expert Group on Biodiversity for Poverty Eradication and Development XI/22, Biodiversity for poverty eradication and development).

The third step needed to effectively incorporate the role of collective action in the reporting framework of countries for conservation financing is related to the work being carried out by the Ad Hoc Open-ended Working Group on the Review of Implementation of the Convention, as established in the following COP11 decision:

Requests the Ad Hoc Open-ended Working Group on the Review of Implementation of the Convention at its fifth meeting to further review the preliminary reporting framework as well as the baseline information for each of the targets, including the role of collective

action including by indigenous and local communities and non-market based approaches for the achievement of the CBD objectives; and requests the Executive Secretary to prepare for that review, based on information received from Parties on its application, funding needs, gaps and priorities. (Paragraph 23. XI/4. Review of Implementation of the Strategy for Resource Mobilization, including the establishment of targets).

CONCLUSION

The Bolivian government is clear that collective action is of critical importance in the assessment of monetized and non-monetized efforts towards biodiversity conservation and use. It is a view that has garnered support from a number of other Parties to the Convention. An appropriate methodology will demonstrate in quantifiable terms the contribution of developing countries to the conservation of biodiversity and how that contribution is split between collective action, and public and private financial flows. This is notwithstanding the more qualitative contribution that collective action makes with respect to the vision and principles of many developing countries, by means of valuing the role played by indigenous and local communities in the conservation of global biodiversity.

For the Bolivian delegation at the CBD, the insights of both Vincent and Elinor Ostrom were critical in enabling them to successfully negotiate the recognition of collective action of indigenous peoples and local communities in the Convention. It was the Ostrom’s pioneering research and theory-building that has provided a scientific foundation to enable Bolivia and others to promote the role of self-governing institutions of indigenous peoples and local communities among biodiversity conservation negotiators and policy-makers, and thus ensure that their presence becomes ever more visible as the twenty-first century unfolds.

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10

**ARE OSTROM'S DESIGN PRINCIPLES
SUFFICIENT FOR DESIGN?**

Arun Agrawal and Jesse Ribot



Are Ostrom's Design Principles Sufficient for Design?

Arun Agrawal¹ and Jesse Ribot²

Elinor Ostrom's (1990) design principles for common pool resource institutions have found a receptive audience among both researchers and decision makers (Design Principles). Using a set of 14 studies of long-term commons governance, reflecting on resources that ranged from forests to fisheries to irrigation, Ostrom condensed in simple, everyday language ten key features associated with the long-term survival of resource institutions. Applied in many analytical investigations to understand how resource commons are managed, these Design Principles have repeatedly emerged as being relevant to effective resource governance (Alidina 2005, Dayton-Johnson 2000, Lane 1998). Although Ostrom herself did not view the Design Principles as being sufficient for effective governance, she did view them as essential elements that help account for the success of institutions (1990:90). The regularity with which scholars have found some subset of these principles to stand the acid test of empirical application suggests that they are a convenient starting point for analyzing resource governance.

A number of the studies included in this special issue demonstrate again, using examples from diverse settings and resource types, that the elements of Ostrom's design principles are present across enduring commons — and of great use in their evaluation. Ykhanbai and Vernooy (this volume) use them to analyze co-management arrangements for community-state-market Mongolian pastoral systems, while Haile (this volume) shows how they help assess traditional hiza'ti forest enclosures in Eritrea. Van Schie (this volume) draws

on the principles to evaluate sustainable forestry among the Algonquin of Canada in the context of inadequate state commons management policies. Nagendra, Ghate and Rao (this volume) show how the IFRI database launched by Ostrom has been essential for demonstrating the potential for self-governance of resources in India's forests and cities. Pacheco (this volume) applies the principles to show the viability of self-organized indigenous institutions for sustainable biodiversity use, which Bolivia is arguing should form a central application of the Convention on Biological Diversity (CBD). Gachenga (this volume) shows their utility in analyzing adaptability of customary law water management in Kenya. From Mexico, Pacheco-Vega (this volume) explores how Ostrom's principles have been used by the country's commons scholars to fight Hardin's tragedy narratives, while Merino (this volume) show how they can assist in developing a better understanding of the relationship that indigenous Mexican society has with nature. Finally, Kauneckis (this volume) takes a more theoretical approach to examine how the Design Principles have influenced more recent research on, and analysis of, commons institutions.

Each of these studies finds the elements of Ostrom's framework present and in operation in their cases. The authors use the Design Principles to assess areas of strength and weakness in the commons systems they are studying. The principles are thus a clear anchoring point to analyze whether an existing institutional arrangement has the features that will likely lead to positive commons management outcomes. They also enable

¹ Professor, School of Natural Resources and Environment, University of Michigan. Email: arunagra@umich.edu

² Professor of Geography and Director of the Social Dimensions of Environmental Policy Initiative, University of Illinois. Email: ribot@illinois.edu

analysts to assess institutional configurations and make preliminary judgments about whether a given common-pool resource institution is likely to endure. In conjunction with her later work (Ostrom 2011), they help sort through a bewildering variety of real-world contexts, institutional arrangements, user group characteristics, and resource features to enable systematic thinking about the governance of commons. They bring researchers a long way towards understanding the interactions among users, resources, institutions, and outcomes.

Thus, we agree that Ostrom's Design Principles enable researchers, and also practitioners, to identify and assess existing commons. In this postscript, however, we ask a different question: In what ways and to what extent are the Design Principles also useful in *designing* new institutions to govern the commons? Ostrom's distillation of regularities in institutional empirics is a tour de force when it comes to moving from the concrete to the abstract. But to what extent is this distillation of key governance features also adequate to design new institutions and organizations to manage the commons—to move from the abstract principles to concrete functioning commons?

This is no idle question. Part of the lure of the Design Principles is precisely their relevance to practice. Since the middle of the 1980s, governments in developing countries have pursued scores if not hundreds of distinct decentralization measures to devolve control over forests, irrigation systems, pastures, and fisheries to local users. Hundreds of NGOs have sought to involve local communities in managing resources. And given the simplicity with which the Design Principles are stated, the hope is evident that project managers, decision makers and policy analysts in NGOs and in government agencies can use them to shape new resource management institutions and revise existing institutions for better outcomes.

But, as stated, the Design Principles do not provide sufficient guidance to design new projects for managing common pool resources.

They appear to be concrete principles of design. But they are far too abstract to guide specific judgments about the kind of institutions that will yield positive outcomes in a given context. Applying them to design new institutions requires recourse to other elements in Ostrom's oeuvre. By themselves, the Design Principles are not enough to move from the abstract to the specific, from principle to practice.

An example will make the point clearer. Consider the design principle related to local enforcement of rules. As an abstract summary of whether local populations have the right and the power to enforce the rules for using and managing the commons, the principle turns out to be quite useful. Scholars examining any specific commons dilemma can examine the facts of the case to assess whether the powers of enforcement are locally vested, and analyze the association between this abstract principle and outcomes of interest. Local enforcement can be viewed as being present if there are local guards, or if the rules for enforcement are locally devised, or if the guards are appointed locally in specialized roles, or if specific local individuals are selected permanently as guards, or if households that rely on a resource sequentially monitor and enforce rules, or if guards are paid by locally raised resources, and indeed, for many other versions of what makes enforcement local (Agrawal and Waylen 2013). But it is quite unclear

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Functioning commons, and the specificity of each of their operating elements, emerge through a negotiated iterative social endeavor.

what the choice for local enforcement should be when it comes to deciding which of these choices makes the most sense in translating the principle of local enforcement into practice. By itself, this design principle is not enough to know what to do in any given effort to design the

enforcement mechanism in a project.

Nor is it of use to say that any one of these specific choices will do. Indeed, the specific choice that local users and managers made when deciding on enforcement was likely a result of many other factors that are not a part of the suite of Design Principles: income and wealth of users, stratified social statuses among users (e.g. caste, class, gender), available assets and capitals, levels of literacy, group size, nature of the resource system, value of harvested units, possibilities of accessing higher-level decision makers, levels of conflict among users—and the list goes on. Indeed, choices over any particular design principle are likely similarly affected by other features of the user group, the resource, the macro-governance context, and other institutional choices. Ostrom's approach of identifying abstract institutional features as Design Principles is extremely useful when it comes to analyzing the institutional characteristics associated with resource outcomes. It is less effective when it comes to converting design principles into institutional choices, combining and aggregating different institutional choices into an institutional arrangement, and judging which institutional arrangement is best suited for the social and ecological conditions and dynamics in which institutions play a regulating and moderating role. The principles do not inform us about the politics and constraints that shape institutional choices (Ribot, Chhatre and

Lankina 2008).

If the Design Principles are not useful by themselves to decide about how to design new resource governance institutions, for what might they then be useful when it comes to designing institutions and resource management organizations? We offer three answers.

Firstly, it is useful to recognize that the design principles are not, nor perhaps were they intended to be, a blueprint for institutional design. They are better viewed as heuristic devices or guidelines about where to start when crafting new institutions or choosing existing institutions for resource governance.

Secondly, even if the Design Principles cannot be translated directly into a concrete design for managing a resource system, they are extremely useful to decide what resource managers should *not* do when crafting institutions. It may be hard to decide how exactly sanctions should be graduated. But, a designer can avoid creating a sanctioning system that is *not* graduated or that is *reverse* graduated. Or, even if the choice of what to do to make enforcement local throws open more doors than it may be possible for a project designer to explore, it certainly allows the designer to close a large number of doors. Knowing what not to do is extremely useful. It narrows down the field of possibilities drastically for anyone interested in creating and implementing a program of resource management.

Finally, one might argue that the Design Principle are not and should not be used to substitute for the inventiveness that local users and managers necessarily display in iteratively selecting from among a multitude of possibilities the ones that are useful for them. Viewed thus, the abstraction inherent in the design principles is simultaneously a plea for faith in the capacities of the local users and managers. It is not necessary to seek to make them more concrete or to develop the knowledge necessary for making them applicable across a wide variety of contexts. The urge towards concretization may be the natural managerial impulse. But it is perhaps

better to sound a note of caution whereby the requisite concreteness for a given situation is best left to those who depend on resources locally and whose lives and fates are bound up more intimately with the fate of local common pool resources than might be the case for some distant project designers and institutional engineers.

Common property management institutions—from oligopsonies to pastoral systems—are constantly emerging and changing. Existing commons management systems can be evaluated and perhaps even guided using Ostrom’s design principles. But functioning commons, and the specificity of each of their operating elements, emerge through a negotiated iterative social endeavor. We believe Elinor Ostrom would have agreed with this conclusion. It is a corollary of the overarching argument about polycentric governance that is emblematic of Elinor and Vincent Ostrom’s work.

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11

UN SON PARA LIN OSTROM

Caña Dulce y Caña Brava

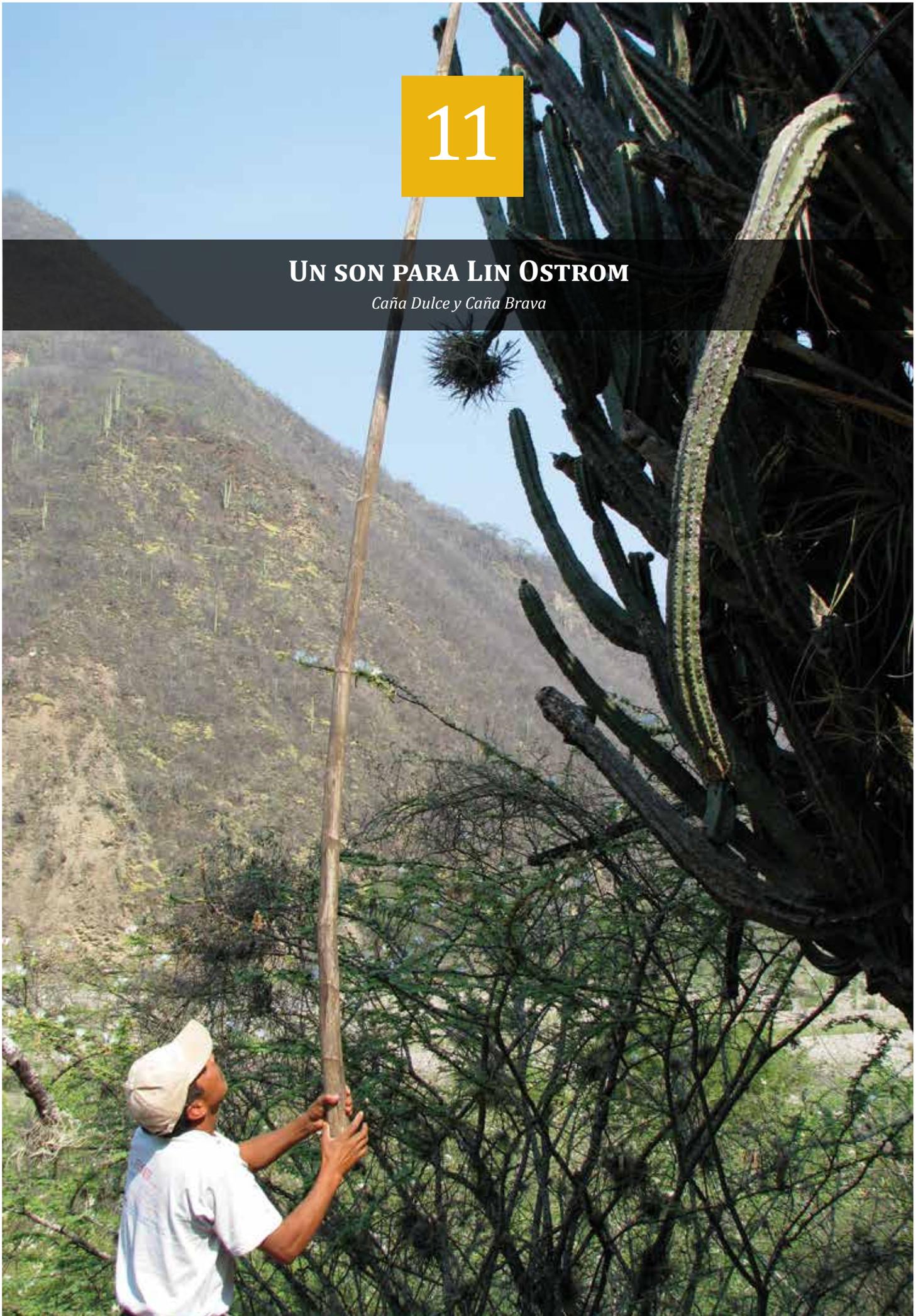




Plate 1: (Photo credit: Leticia Merino Pérez)

Un son para Lin Ostrom

Caña Dulce y Caña Brava

ELINOR OSTROM, te vemos
niña, vulnerable, inerme,
sin que lo adverso te merme
ni te haga soltar los remos,
de tu entereza aprendemos
que nunca hay que claudicar
que hay que aprender a luchar,
que hasta lo más conflictivo
tiene algo de positivo
que hay que hacer fructificar

ELINOR OSTROM, tu infancia
no fue una dulce empanada:
señalada, criticada,
víctima de la arrogancia...
¡nada apagó la fragancia
de la flor que siempre fuiste!:
de cara al sol, nunca triste,
a fuerza de pundonor
revertiste a tu favor
los golpes que recibiste

ELINOR OSTROM, ¡qué vivo
sentimos tu corazón!
confianza, cooperación,
el accionar colectivo...
cada concepto un motivo
para dedicarte una aria,
generosa, visionaria,
descubriste cómo fluye
¡y el poder que constituye
la fuerza comunitaria!

ELINOR OSTROM, lograste
ser nuestra, ser mexicana
y fue tu grandeza humana
lo mejor que nos legaste,
no es el Nobel que ganaste
lo que te da eternidad,
es tu firme voluntad
y el no andarte por las ramas
¡es tu inteligencia en llamas
y tu generosidad!

ELINOR OSTROM, pudiste
demostrarle a todo el mundo
el generador profundo
de energía que descubriste:
en cada individuo viste
no un dato aislado, un guarismo,
sino comunitarismo
y poder transformador
frente al monstruo predador
que es el neoliberalismo

ELINOR OSTROM, tu vida
resplandece con tu muerte
mujer sabia, mujer fuerte,
¡invencible!, ¡decidida!,
no es ésta una despedida
porque viva seguirás
nunca te has ido, ¡aquí estás!
y el memorial que te hacemos
sólo hace que te nombremos
¡y que te queramos más!.

Caña Dulce y Caña Brava nace como grupo en el año 2008; debido a la necesidad de interpretar la música que sus integrantes han heredado. El son jarocho les significa un lenguaje común de donde afloran las más diversas emociones a través del amplio colorido poético y musical propio del son tradicional veracruzano. La agrupación ofrece al público una sonoridad definida por las voces femeninas de sus integrantes y muestra una faceta del son jarocho en la cual las mujeres toman un papel importante en esta cultura ya que la música generalmente ha sido interpretada por los hombres. La agrupación se ha presentado en diversos foros y festivales nacionales e internacionales, llevando así su música a países como Canadá, Estados Unidos, Venezuela, Sudáfrica, Corea y Turquía.

Adriana Cao Romero, Arpa y Voz

Raquel Palacios Vega, Jarana y voz

Valeria Rojas, Percusión y Voz

Alejandro Loredó Ramírez, Guitarra de Son



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- Cover inset Elinor Ostrom. *Aroha Te Pareake Mead*, Chair, IUCN Commission on Environmental, Economic & Social Policy and Director, Maori Business, School of Management, Victoria University of Wellington. Email Aroha.Mead@vuw.ac.nz
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- Page 79 *Rosanne Van Schie*, Economic Development Advisor for Wolf Lake First Nation. Email: development@wolflakefirstnation.com
- Page 91 Mongolia. *Ronnie Vernooy*, Genetic Resources Policy Specialist, Bioversity International. Email: r.vernooy@cgiar.org
- Page 103 View across communal territory of Ayaccocha, Central Peru. *James Robson*, Visiting Professor, Department of Environmental Studies, University of Redlands, United States of America and member of IASC. Email james_robson@redlands.edu
- Page 111 Women working during a village meeting, Nagendra, India. *Rucha Ghate*
- Page 116 A man (Bimmangon Chummog) carrying the rice bundles home, Batad, Banaue, Ifugao, Philippines (2011). *Raymond Aquino Macapagal*, MFCC, MWHCPD, Assistant Professor, Center for International Studies, University of the Philippines - Diliman, Email batadklp@gmail.com
- Page 117 Harvesting pitaya roja on Zapotec communal lands, Oaxaca, Mexico. *James Robson*, Visiting Professor, Department of Environmental Studies, University of Redlands, United States of America and member of IASC. Email james_robson@redlands.edu
- Page 121 Agroforestry system, Chinantec cloud forest, Oaxaca, Mexico. *James Robson*, Visiting Professor, Department of Environmental Studies, University of Redlands, United States of America and member of IASC. Email james_robson@redlands.edu



Commission on Environment, Economic and Social Policy (CEESP)

The work of the Commission is progressed through six Themes, two Specialist Groups and three Taskforces. Three of these Themes/SGs are established across other IUCN Commissions. Together they form the diverse perspectives and experiences of the CEESP membership that implement the CEESP Programme priorities:

Development and promotion of a conservation ethic that supports diverse knowledge systems and values, delivers rights-based and equitable conservation with improved governance of natural resources and tangible livelihoods benefits, and links biological diversity with the cultural dimensions of nature conservation with a focus on the rights of indigenous peoples and local communities.

Increased use of rights-based approaches to natural resources management and governance that promotes social and cultural equity, indigenous and community governance, sustainable livelihoods and human security.

Nature based solutions to global challenges (climate change, conversion of forests and farm-land to biofuels projects, food sovereignty, poverty, inequitable economic and social development) are underpinned by economic policies that reinforce sustainability, social equity and environmental integrity.

Enhanced capacity of civil society, governments and the private sector to ensure corporate social and environmental accountability and reduce the negative impact of industries on climate change, bio-cultural diversity and food security.

CEESP THEMES

CEESP Theme on Environment, Macroeconomics, Trade and Investment (TEM TI)

OBJECTIVE: provide practical and enabling information, and relevant policy options on issues lying at the intersection between economics and environmental and social sustainability.

CEESP Theme on Culture and Conservation (TCC)

Objective: improve knowledge, policy and practice through linking cultural and biological diversity.

CEESP Theme on Governance, Equity and Rights (TGER)

OBJECTIVE: promote better understanding and action on the practice and theory of governance of natural resources, equity, and human rights.

CEESP Theme on Sustainable Livelihoods (TSL)

OBJECTIVE: improve coherence and coordination among initiatives for biodiversity conservation, poverty eradication and sustainable livelihoods.

CEESP Them on Environment, Conflict and Security (TECS)

OBJECTIVE: focuses on the intersection between environmental governance, environmental change and conflict and how this impacts on multiple dimensions of security.

CEESP Theme on Social and Environmental Accountability of the Private Sector (SEAPRISE)

OBJECTIVE: enhanced capacity of civil society, governments and the private sector to ensure corporate social and environmental accountability and reduce its impact on climate change.

**INTER-COMMISSION THEMES/
SPECIALIST GROUPS**

CEESP Theme on Indigenous Peoples, Local Communities, Equity & Protected Areas (CEESP & WCPA)

OBJECTIVE: improved governance of protected areas through equitable sharing of costs and benefits and appropriate recognition of governance types.

The Specialist Group on Indigenous Peoples, Customary & Environmental Law & Human Rights (SPICEH) of CEESP/CEL

OBJECTIVE: focus on indigenous people and human rights & the intersection of customary and environmental laws.

Specialist Group on Sustainable Use and Livelihoods (SULi) — a joint CEESP/SSC Specialist Group

OBJECTIVE: highlighting the importance of wild species for providing community benefits; analysing and communicating best-practice in aspects of sustainable use; promoting innovation in adaptive responses to the challenges of sustainable use; and developing practical tools and approaches to support sustainability and resilience in resource use.

In addition to the themes and specialists groups above, CEESP has established taskforces on Biofuels, Bio-Cultural Conservation, REDD++ and Indigenous Peoples. CEESP is actively developing a global youth network together with other IUCN Commission Young Professional Groups, and fostering greater opportunities for intergenerational partnerships with CEESP and IUCN through the CEESP Youth and Intergenerational Partnership Group.



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The International
Association
for the Study of
the Commons

CEESP, the IUCN Commission on Environmental, Economic and Social Policy, is an inter-disciplinary network of professionals whose mission is to act as a source of advice on the environmental, economic, social and cultural factors that affect natural resources and biological diversity and to provide guidance and support towards effective policies and practices in environmental conservation and sustainable development.

The International Association for the Study of the Commons (IASC), founded in 1989 as The International Association for the Study of Common Property (IASCP), is a nonprofit association devoted to understanding and improving institutions for the management of resources that are (or could be) held or used collectively by communities in developing or developed countries. The Association's goals are: to encourage exchange of knowledge among diverse disciplines, areas, and resource types; to foster mutual exchange of scholarship and practical experience; and, to promote appropriate institutional design.

