

An Institutional Analysis of Forest Resource Uses
in Nueva Segovia, Nicaragua

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Institutioneller Wandel der Landwirtschaft und Ressourcennutzung

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Aim and Scope of the Series

„Nothing endures but change“. Heraclitus the Ephesian (ca. 535–475 BC)

Institutions, defined as “the rules of the game”, are a key factor to the sustainable development of societies. They structure not only the multitude of human-human interactions of modern societies, but also most of the human-nature interactions. Poverty, famine, civil war, degradation of natural resources and even the collapse of ecosystems and societies often have institutional causes, likewise social and economic prosperity, sustainable use of resources and the resilience of socio-ecological systems. Agriculture, forestry and fisheries are those human activities where the interdependencies between human-human and human-nature interactions are perhaps most pronounced, and diverse institutions have been developed in history to govern them.

Social and ecological conditions are, however, ever changing, which continuously challenge the existing institutional structure at a given point in time. Those changes may be long-term, like population growth or climate change, medium-term, such as new technologies or changing price relations, or short-term, like floods or bankruptcies, but all of them pose the question whether the rules of the game need to be adapted. Failures to adapt timely and effectively may come at a high social cost. Institutional change, however, face a principal dilemma: on the one hand, institutions need to be stable to structure expectations and effectively influence human behaviors; on the other hand, they need to be adaptive to respond to the ever changing circumstance mentioned above. Understanding stability and change as well as developing adaptive institutions and effective, efficient and fair mechanisms of change are, therefore, of central importance for societies and an ongoing research challenge for social scientists.

If we want to improve the effectiveness, efficiency and adaptability of institutions, it stands to reason that we have to develop a good understanding of the causes, effects, processes and mechanism of stability and change. This is the aim of the series “Institutional Change in Agriculture and Natural Resources,” which attempts to answer the questions “How do processes and mechanism of institutional change actually work? What and who are the main determinants and actors driving, governing and influencing these processes? What are the economic, political, social and ecological consequences? How can adaptive institutions be designed and developed, and what governance structures are required to make them effective?” These are the questions at the heart of the series. The works published in this series seek to provide answers to these questions in different economic, social, political and historical contexts.

Volker Beckmann and Konrad Hagedorn

Ernst-Moritz-Arndt-Universität Greifswald und Humboldt-Universität zu Berlin

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Berlin, April 10th 2015

Mario Alberto Aráuz Torres

Zusammenfassung

Die Pinienwälder im Nordosten Nicaraguas, insbesondere in der Region Nueva Segovia, sind die weltweit südlichsten Wälder ihrer Art. Sie markieren eine ökologische Übergangszone im Zentrum Mittelamerikas und sind damit Teil eines eigenständigen international anerkannten Bioms. Schon seit langer Zeit vor der Kolonialisierung durch Europa sind sie bis heute eine wichtige Quelle für Nahrung und andere materielle Ressourcen für die dort lebende Bevölkerung. Es gab vielfältige institutionelle Regeln, wobei sich insbesondere während bewaffneter Konflikte eine de facto anarchische Selbstregulierung lokaler Waldnutzer etablierte. Entwaldung und Waldschädigung sind ein seit langem existierendes und bis heute stark zunehmendes Problem in der Region. Um die Jahrtausendwende initiierte die Regierung Nicaraguas einen Prozess institutioneller Reformen. Im Zuge der Reformen wurde ein neues Waldschutzgesetz verabschiedet, das u. a. die Nutzung der Waldressourcen formal stark einschränkt und die Etablierung neuer Überwachungsbehörden vorsieht. Dennoch wurde die Abholzung der Pinienwälder Nueva Segovias trotz dieser Anstrengungen uneingeschränkt fortgesetzt.

Die vorliegende Arbeit versucht zu erklären, warum die Unvereinbarkeit zwischen der am Waldschutz orientierten formalen Gesetzgebung auf der einen Seite und den informellen, auf eine Sicherung des Lebensunterhalts ausgelegten lokalen Institutionen auf der anderen Seite jegliche Anstrengungen für eine nachhaltige Waldnutzung verhindert. Die empirische Analyse basiert methodisch sowohl auf umfangreichen Feldstudien in der Region Nueva Segovia als auch auf einer Auswertung der Geschichte der Waldbewirtschaftung der Region, einschlägiger Gesetze sowie wirtschaftlicher und demographischer Daten und Wald-Statistiken. Die zahlreichen Verstöße gegen bestehende Vorschriften, die die vorliegende Arbeit aufzeigt, sind nicht nur Ausdruck der Notwendigkeit, einen minimalen Lebensunterhalt zu sichern. Darüber hinaus sind sie eine Form politischen Widerstands gegen ein institutionelles System, das den Bedürfnissen traditioneller lokaler Waldnutzer konträr entgegensteht.

Aus der vorliegenden Analyse der aktuellen Probleme der Waldbewirtschaftung in Nueva Segovia leiten sich eine Reihe konkreter Politikempfehlungen für eine Reform der bestehenden Waldregulierung in der Region ab. Ein Hauptziel einer solchen Reform sollte der Versuch sein, die formalen Institutionen schrittweise sowohl mit dem Ziel des Waldschutzes als auch mit den Bedürfnissen und Alltagspraktiken der lokalen Bevölkerung in Einklang zu bringen. Die vorliegende Arbeit kann zur Gestaltung dieser institutionellen Anpassung einen wichtigen Beitrag leisten.

Abstract

The temperate pine forests located in the north western corner of Nicaragua, mainly in the region of Nueva Segovia, are the most southerly of their type in the world. They mark an ecologically distinct transition zone in the middle of Mesoamerica and are, in their own right, an internationally relevant biome. In addition, they have long served, before, during and after the European colonial period, as an important source of food and material resources for people living in their proximity. The regulation of their use has taken many forms, including several recent periods of *de-facto* self-government, and anarchy, when armed conflict was the dominant 'governance' form in the region. Deforestation and forest degradation in the region are substantial and ongoing. At the turn of the millennium the government of Nicaragua initiated a major process of institutional reform, involving the establishment of new laws, mainly regarding different forms of use prohibition, and new monitoring authorities, in an effort to halt deforestation and ensure the protection of these forests. However, deforestation has continued.

This research documents and reviews the incompatibilities between the conservation oriented logic of the institutions established under these new laws and the local subsistence oriented use of the forest. This review is based on extensive empirical field work conducted in Nueva Segovia, including both direct observation and semi-structured interviewing, and detailed reviews of the history, relevant laws, economic and demographical data and forest statistics for the region and the country. Employing principles drawn from both New and Classical Institutional Economics, this study proposes that an important factor contributing to the continuing deforestation in the region is a clearly observable conflict between the official forest management rules of the Nicaraguan government, which prohibit use of the forest, and the rules-in-use in the local communities, whose livelihoods depend on making use of the forests and their resources. The study categorizes continuing local forest use, in contravention of existing regulations, as a form of political resistance to regulations that literally prohibit people from making any living from the forest.

The study sets out to develop a reasonable picture of the economic logic and requirements of the local individuals engaged in forest resource exploitation. The investigation concludes with a set of concrete recommendations for how existing forest regulation institutions in the Nueva Segovia region could be revised, step-by-step, over time, in order to bring them more directly in line with the daily practices that can reasonably be expected in the region, while still maintaining due regard for internationally established criteria regarding forest conservation and protection.

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List of Abbreviations

ADEPROFOCA	Forest Owners Association from the Municipality of Dipilto
AID	Agency for International Development
ALBA	Bolivarian Alternative for the Americas
ALN	Nicaraguan Liberal Alliance
AMUNSE	Municipalities Association of Nueva Segovia
APROFOSC	Forest Owners Association from the Municipality of Santa Clara and San Fernando
AS	Action Situations
CECOFOR	Central of Forest Cooperatives from Nueva Segovia
CLR	Coffee Leaf Rust
CNRC	National Commission on the Review of Confiscations
CIE	Classical Institutional Economics
CIM	Indigenous Community from the Municipality of Mozonte
CODEFOR	Regional Forest Commission from Nueva Segovia
CONAFOR	National Forest Commission
CORFOP	People's Forest Corporation
CORNAP	People's National Corporation
CSJ	Supreme Court of Justice
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMGPs	Forest Management General Plans
FONADEFO	National Forest Development Fund
FSLN	Sandinista National Liberation Front
GDP	Gross Domestic Product
GONIC	Government of Nicaragua
Ha	Hectares
IAD framework	Institutional Analysis and Development Framework
IMF	International Monetary Fund
INA	Nicaraguan Agrarian Institute
INAFOR	National Forestry Institute
INETER	Nicaraguan Territorial Studies Institute
INRA	Nicaraguan Institute of Agrarian Reform
IoS Framework	Institutions of Sustainability Framework
IPES	International Payment for Ecosystem Services
Km	Kilometres
MAGFOR	Ministry of Agriculture, Forest and Animal Husbandry
MARENA	Ministry for the Environment and Natural Resources
MEC's	Municipalities Environmental Commissions
MFMPs	Minimum Forest Management Permits
MIFIC	Ministry of Promotion Industry and Trade

NAAS	Network of Adjacent Action Situations
NGO's	Non Governmental Organizations
NIE	New Institutional Economics
NS	Nueva Segovia Region
NTON	Nicaraguan Obligatory Technical Norms for Forest Management
OCI	Office for Quantifications of Indemnifications
OTPs	On-farm Timber Permits
OTR	Rural Titling Office
PLC	Liberal Constitutional Party
PLI	Independent Liberal Party
PLN	Liberal Nationalist Party
PFN	National Forest Programme
REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation
REDD+	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation (including conservation, protection of biodiversity, forest management and carbon sequestration)
RNF	National Forest Registry
SAPs	Structural Adjustment Programs
SEP	Strategic Environmental Plan
SNAF	National Forest Service
SNV	Netherlands Development Organization
TCE	Transaction Cost Economics
UNO	National Opposition Union
USA	United States of America
USAID	United States Agency for International Development
UTR	Urban Titling Office
WB	World Bank