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Debt-for-Nature Swaps: The Case for Property Rights

Introduction

Debt-for-nature swaps provide a mechanism for the purchase of debt in secondary markets in exchange for a promise to preserve environmentally sensitive lands. These swaps have been used throughout Latin America, Africa, Asia and other regions as a means of aligning the interests of debtor nations with the environmental goals of non-governmental organizations (NGOs.) Inherent to these arrangements is a commitment to protect the lands for some specified period. Ideally, conservation organizations would establish defensible and enforceable private property rights in order to ensure the protection of the lands in perpetuity. Where private property rights are protected, this can be easily accomplished through purchase of the entire bundle of rights that accrue to outright ownership. However, outright purchase of the entire bundle is often viewed as cost prohibitive, and the goals of the environmental groups may be met by purchasing specific rights within the full bundle.

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A distinct advantage of private property is that private ownership greatly reduces the number of parties in the negotiation and hence, the transaction costs (Demsetz, 1976). This implies that individual property rights facilitate the depth and breadth of market exchange and the concomitant creation of value. However, clear property title is often not available in debt-for-nature swaps (DNSs) for a number of reasons, including: an institutionalized property rights framework that has never clearly delineated property rights; restrictions on foreign ownership linked to issues of national sovereignty; and/or domestic, political considerations. As a result of these issues and the costs associated with outright purchase, NGOs have turned to alternative arrangements that allow for control over the use of the lands for at least some period of time.

What debt-for-nature swaps (DNSs) have in common is the goal of protecting environmentally-sensitive areas with requisite *ex post* monitoring. This practice exists in other forms. For instance, environmental and wildlife conservation groups might purchase in-stream flow rights for the maintenance of fisheries or wildlife habitat. Conservation groups might also purchase timber rights, and then set them idle. These property rights

arrangements represent an attempt to control certain aspects of development through the purchase of a partial set of the bundle of rights that can be linked to the lands. An example of this occurred in December of 2001 when Conservation International bought the last logging concession in the Pilón Lajas Biosphere Reserve in Bolivia (www.conservation.org, 2003) and retired those rights unused.

The development of the first DNSs created palpable levels of interest among the global environmental community and lesser-developed country (LDC) governments. Both groups viewed DNSs as a new global institutional arrangement that could internalize the positive externalities that wide expanses of forest area provide to global environmentalists. While great hope was held out for these swaps initially, progress has been slow. Between 1987 and 1994 about $us 500 million of downgraded debt was retired worldwide but only about 40%, or $us 200 million, was related to debt-for-nature swaps (United Nations Development Program, 1998).

The purpose of this article is to explore the effect that property rights have played in the unmet expectations for DNSs. Well-defined, enforceable property rights play the foundational role in any efficient allocation of resources through market mechanisms (Coase, 1960; Demsetz, 1967). However, in many DNSs property rights are poorly defined. In particular, we maintain that property right definitions *a priori* and enforcement and monitoring *ex post* have had major impacts on the poor sustainability of DNS agreements.

Historical Background

Hobbs (2001) interpreted DNSs as an example of Coasian bargaining where US-based conservation organizations began paying foreign governments to provide stewardship over environmentally sensitive lands. In most cases, this involved ongoing monitoring of the ecological environment combined with some level of restrictions on extractive economic activities. The party receiving positive externalities—global conservation organizations such as Conservation International or the World Wildlife Fund—recognized that contributing to the costs of maintaining these positive externalities was in their interest. Previously, as cost-neutral third parties these organizations had little influence over the lands. Accordingly, they agreed to purchase some sticks in the property rights bundle, paying LDC countries to pursue environmental protection and monitoring. One reason DNSs created such initial interest is that they seemed to provide an institutional framework for internalizing both the benefits and the costs of environmental stewardship.

The first DNS originated in 1987 when Conservation International agreed to purchase $us 650,000 in Bolivian government debt at deep discount ($us 100,000) in the secondary debt market. Citibank Investment Bank brokered the debt to Conservation International and the *quid pro quo* offered by the Bolivian government was to protect a core conservation area of over 3.7 million acres known as the “Beni Biosphere Reserve.” The Beni province had been on the environmental map since 1982 when the Bolivian Academy of Sciences created the 334,000-acre Beni Biological Station (EBB.) The EBB was designated a biosphere in 1986 under the UNESCO “Man

and the Biosphere" program. This designation includes an explicit recognition of human activity and, in doing so, allows for multiple uses of the lands within the biosphere area. In November 1986, the *Corporación de Desarrollo del Beni* and *Centro de Desarrollo Forestal* reclassified the area from "protected status" to "production forest." The Chimane Permanent Production Forest was established, and seven timber companies negotiated limited extraction rights on over 590,000 hectares (Campos-Dudley, 1992). Simultaneously, the EBB was significantly expanded, and an extensive program of environmental monitoring ensued.

By 1990, seven additional swaps had been negotiated in Ecuador, Costa Rica, and the Philippines. Between 1987 and 1994 thirty-two DNSs were completed, accounting for $us 177,560,000 in face value of debt (United Nations Economic Commission for Latin America and the Caribbean, 2001). As of November 1998, Conservation International had spent over $us 6,503,000 leveraging $us 15,865,874 in seventeen projects in Costa Rica, Ghana, Guatemala, Madagascar and Mexico (Lewis, 1999). In August of 2002 a triumvirate of conservation organizations—Conservation International, the World Wildlife Fund and Global Conservation Fund—provided $us 1.4 million to negotiate a 37 % reduction in Peruvian debt payments (www.conservation.org, 2003.) These examples present a much slower progression than was originally anticipated by many in the environmental and LDC government communities. In order to address why DNSs have not grown as expected, it is insightful to provide an account of specific developments in the original 1987 Beni Biosphere Reserve swap.

Problem Identification

The 1987 Beni Biosphere Reserve swap was negotiated without input on the part of the indigenous Chimane Indians: an elemental oversight that rapidly and severely undermined the agreement. Once the government of Bolivia and Conservation International signed the swap and its conditions were made public, the native population of the area immediately protested the agreement and an escalating pattern of government concessions began (Campos-Dudley, 1992.) The essential problem was one of property rights definition.

In 1989, the Chimane were granted timber concessions within the interior of the Chimane Permanent Production Forest in addition to significant adjacent land grants. By November of the same year, the well-organized Chimane had formed an umbrella group to represent other native peoples in the Beni Biosphere Reserve—the *Central de Pueblos Indigenas del Beni.* This group rejected the 1989 land grants outright and pushed to further limit any non-native development of the region. Political problems for the Bolivian government deepened when it was revealed that *Corporación de Desarrollo del Beni* and *Centro de Desarrollo Forestal* had direct financial ties to the concessionaire timber companies. These government agencies were receiving their primary funding from the logging concessions: 35 % of the royalties from logging flowed directly to them—11 % for *Corporación de Desarrollo del Beni* and 24 % for *Centro de Desarrollo Forestal* (Theisenhusen, 1996).

In August 1990, over 300 Chimane Indians marched approximately 400 miles across the Andes to the central capital in La Paz in the "March for Dignity and

Territory" (Campos-Dudley, 1992). This brought the central government to the bargaining table once again. Subsequent negotiations halted all logging in the disputed areas, and the seven original timber companies were required to vacate the preserve and remove all felled logs by the end of 1990. Finally, the Bolivian government drafted and passed legislation that afforded legal status to local native leaders and their governing institutions. The Chimane were granted significant control of territory—including extraction rights—in October of 1990. In short, the swap became an international embarrassment for both Conservation International and the Bolivian central government.

As DNSs have played out, they have confronted conservation organizations and LDCs (the contracting parties) with two fundamentally intertwined property rights issues. First, DNSs have been criticized for impinging upon national sovereignty. A nationalist "eco-colonialism" argument has received high levels of internal domestic political support within many LDC nations because the LDC government does cede some level of control over national lands. For instance, Fabio Feldman, a prominent Brazilian environmentalist and member of the Brazilian Congress, has argued that governments should not enter into DNSs because they impose the environmental agenda of the rich nations on poor nations (Alagiri, 1992).

The second issue is more fundamental and complex. This involves the initial assignment and delineation of property rights over the lands pledged in the DNS. In other words, exactly *what* does the bundle of property rights contain, and *who* has claim to the bundle? The initial assignment problem occurs because the "rights" are ill-founded. Domestic political entities and NGOs have ignored the fact that the property rights may be well defined at "lower" levels of political and social organization. As Hayek (1945) noted in addressing the management of an economy, the question is not whether the economy is to be managed or not managed. All economies are managed. The real questions are *at what levels of organization* and *by whom*? A similar situation is present in property rights. The question is not whether or not property rights exist, but rather *at what levels of organization* and *who holds them?*

Alternative Property Rights Arrangements

It is firmly established that market exchange requires well-defined property rights (Coase 1960; Demsetz, 1967; Anderson and Hill, 1975; North, 1981 and 1990; Barzel, 1989). The traditional, neo-classical analytical focus has been on the relative merits of individual property rights versus state ownership. This binomial framework is misleading because property rights may exist in a continuum along a relatively wide range of sociocultural groupings between the individual and the state. A number of scholars have surmised that property rights thrive outside of this simple bifurcation.

Lueck (1993) notes that general common ownership tends to have the characteristic of excluding outsiders yet providing shared access to group members. In addressing alternative arrangements within common ownership of real property, he states: "Too often the analytical choice is between perfect property rights and no rights at all. [However] … Common ownership … implies exclusive rights and is distinct from no rights or

open access." Roback (1992) makes the point that "property rights theory makes no particular claim that individual ownership is the only way or even the least costly way of internalizing an externality," and that firms and households make decisions over property regularly. Simmons and Schwartz-Shea (1993) maintain that group identity is inexorably linked to the "problem of the commons" and that efficiency itself is rooted in terms of *relative* efficiency—where the most common comparison is between groups rather than individuals. Each of these scholars explicitly recognizes that property rights reside in socio-political groupings *between* the state and the individual.

This line of argument does not imply that group assignment of property rights diminishes the importance of individual rights. For any property rights arrangement to hold over time, the arrangement must elicit sufficiently widespread compliance among the individuals within the group to make the contract enforceable at acceptable costs. Ongoing, steadfast enforcement and monitoring will only occur when individual adherents believe that the individual benefits of group cohesion outweigh the costs.

While groups represent an important aggregation above the level of the individual this does not imply that the state represents the highest form of organization. As Smith (1993) observes, the contention that a minimalist state is required for the effective delineation and enforcement of property rights is, itself, a fiction: "Evidence for the existence of property rights and social contracting in stateless societies is incontrovertible." In short, property rights are part of a Hayekian natural order (Smith, 1998), and governments represent but one mechanism of enforcement and monitoring.

Scholars have provided ample evidence that the rational goals of individuals can be achieved when property rights are established, maintained and enforced at levels above the individual, yet below the state. Acheson (1988) addressed individual and communal norms among cohort lobstermen in Maine. Harbor "gangs" formed entry barriers, norms of cohesion, and exclusionary practices that evolved to both limit extraction among cohorts and to block entry. Ensminger and Rutten (1991) examined the influence of growing wealth on property arrangements among the Galole Orma, a pastoral society in Kenya. These authors explore the workings of a system of decentralized private enforcement of collective norms arguing for a "new institutionalist" approach incorporating ideology and politics in the analysis of property rights arrangements. An evolving system of self-enforcement by private individuals was observed in the mining camps of California during the mid-nineteenth century. The institutional frameworks for squatter law evolved very rapidly and had distinct features not found in the more established societies in the eastern United States (Pisani, 1994). De Alessi (1998) provides a comprehensive overview of the role that ownership arrangements lying between the state and the individual play in the market exchange of environmental amenities. Hernando de Soto (2001), Alcorn (1997), Brandon (1998), Borrini-Feyerabend (1997), and Sanderson (1998) have all documented extant property right regimes in many LDC settings and the problems that occur when broader political entities ignore them.

In DNSs the explicit inclusion of those who lay claims to the lands is a crucial, yet often overlooked, factor. Ignorance of local customs, rules and mores regarding property present a disastrous

bias in DNSs. The ignominious end to the first DNS was predictable, because agents of the Bolivian government and Conservation International ignored established, pre-existing practices in land use and tenure (i.e., property rights) among the local population. Those who felt they "owned" the land, however loosely defined, saw no economic benefits from the arrangements made by the external parties. For instance, the sole focus of Hyrnick's 1991 article on the first DNS is the legal enforceability of the project assuming the Bolivian government and Conservation International to be the only affected parties. Bolivia's own executive and congressional branches of government, in a direct attempt to reassure Conservation International, accorded the highest legal level of national protection to the area—Congressional Law status. Amazingly, it seems that both parties simultaneously ignored any and all extant customs, rules and procedures regarding property among the resident indigenous populations. *Ex post*, it is clear that the Chiname had well-established notions of what the extant property arrangements were, which probably embodied generations of social and cultural validation. As noted by Simpson (2004): "First and foremost, the local people whose actions determine the survival of biodiversity must be compensated for the opportunity cost of preservation." A far more palatable and workable group cohesion evolves where individuals within the group voluntarily form social contracts rooted in their individual interests with communal norms being incorporated.

Are Debt-for-Nature Swaps Viable?

The answer to this question hinges on how property rights are defined by the contracting parties. Ironically, the typical area where a DNS has occurred is also likely to be one within which property rights have been historically ambiguous because the costs of definition and enforcement have not been outweighed by the benefits. It is usually not the case that no property rights exist—it is just that the benefits of definition and enforcement are low. As Anderson and Hill (2000) note, good reasons exist for some areas of the world to lack well-defined property rights:

> American Indians understood the importance of using rules to limit access to the commons, but only devoted resources to the definition and enforcement process when it was economic to do so. *Property rights were not everywhere; they were only produced where and when Indians could capture economic rents from engaging in definition and enforcement activity* [emphasis added].

Numerous scholars have noted that definition and enforcement evolve in conjunction with economic growth (Demsetz, 1967; Barzel, 1989; North, 1990; Ensminger and Rutten, 1991; Anderson and Hill, 2000). In the case of debt-for-nature swaps, the economic interests of domestic governments and conservation organizations can "up the ante" very rapidly. It is certainly plausible that any economic interest strong enough to establish a debt-for-nature swap can act as a catalyst that would set off a recalculation of the costs and benefits of property right delineations and enforcement mechanisms. This implies that the recognition of nascent property rights among indigenous populations is a critical component for the future success of DNSs (Piccirillo,

1994; Gardner, 1997; Lewis, 1999). Yet, indigenous populations have been viewed as grossly underrepresented in DNS negotiations (Gibson and Schrenk, 1992; Gardner, 1997).

Eitman (2001) notes that where indigenous populations have been included in the initial negotiations and subsequent monitoring of DNSs, the results seem to be markedly better. This can be illustrated by reviewing the first nature set-aside in Bolivia. In 1977, the 200,000 hectare Ulla Ulla Reserve was established, with funds from the World Bank, in response to concerns of local *campesinos* over the loss of vicuña (a member of the camelidea family, related to the more familiar llama). The vicuña were important to the livelihood of the indigenous populations who were concerned about poaching and the loss of future economic value linked to fleece production and other products. Two critical aspects of the 1977 arrangement were the recognition of economic value and the centrality of the interests of the native population. Local interests were provided for and the multiple use, biosphere reserve designation worked: the Ulla Ulla Reserve still exists and functions well today.

In recognizing the dynamic development of defined property rights one can draw upon the analogy of the development of a firm. Coase (1937) maintains: "The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price system." Just as the firm has no reason to exist in the world of costless transactions, property rights above the individual level have no reason to exist, until there is enough potential economic rent available (perceived benefit) to offset the transactions costs associated with defining, monitoring and enforcing those rights (perceived costs). It is the combination of economic rents and transactions costs that create the *raison d'etre* for the formal definition and delineation of property rights.

Summary

Where DNS contracting parties fail to recognize extant (often informal) claimancy, debt-for-nature swaps have a slim chance of surviving over time. While national sovereignty is an important issue, the significance of integrating existing property right arrangements into the DNS framework cannot be overemphasized. In other words, who else but those with fundamental interests are going to enforce and monitor these agreements?

The most critical aspect of ensuring the long-term viability of DNSs is being certain that the negotiating parties understand and account for the underpinnings of property rights: the existing rules, laws, or cultural norms among those most impacted by the agreements. When western, conservation-based NGOs and domestic LDC governments ignore either preexisting property rights or the fact that the swap can act as a catalyst for initial definition and enforcement of property rights, *ex post* problems will likely doom DNSs.

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