

Property Rights – Exploring Their Role in Natural Resource Management

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SUMMARY

There have been many calls for rights and restrictions over property to be clear and enforceable in order to achieve more sustainable land use outcomes. The 2002 UNDP/UNEP/WB/WRI publication *World Resources 2002-2004: Decisions for the Earth: Balance, Voice and Power* provided a blueprint for assessing effective environmental governance and argued that “Insecurity of ownership, mismatches between state and indigenous forms of ownership, and unequal distribution of ownership are frequent sources of conflict and poor environmental decisions”. This paper provides an overview of the arguments put forward for more certainty in property rights and explores the manner in which these rights may benefit natural resource management. The benefits that secure and certain property rights may have for natural resource management in developed and developing countries are also considered and an argument is made that these benefits provide a strong case for public investment in land reform.

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1. INTRODUCTION

There have been many calls for rights and restrictions over property to be clear and enforceable in order to achieve more sustainable land use outcomes.

The publication *World Resources 2002-2004: Decisions for the Earth: Balance, Voice and Power* made the connection between effective environmental governance and argued that “Insecurity of ownership, mismatches between state and indigenous forms of ownership, and unequal distribution of ownership are frequent sources of conflict and poor environmental decisions” (UNDP/UNEP/WB/WRI, 2002).

This paper describes the nature of property rights and tenure security and explores the links between these and poverty. Property rights to land are a key element of personal wealth and for many are the primary means of generating a livelihood. Tenure security has a close correlation with credit and investment to improve productivity of land. Secure property rights provide the foundation for economic growth and social development.

Poor access to land leads to a decrease in the sustainability of human settlements, inequality, increased poverty, and increased environmental degradation. It has been argued, therefore, that improvements to tenure security may be the catalyst for an increase net wealth, food security, and livelihood opportunities. However, these improvements are conditional on other factors. This paper argues that there is also the potential for improvements to land use and resource management.

The benefits that secure and certain property rights may have for natural resource management are considered in this paper and an argument is made that these benefits provide a strong case for stronger public investment in land reform.

2. UNDERSTANDING PROPERTY RIGHTS TO LAND

“In the most general terms, property rights can be described as social conventions that define who has the rights to enjoy certain benefit streams arising from the use of assets and the length of such enjoyment. This includes the limitations society places on the use and disposition of assets so as to avoid undesirable outcomes and the structures put in place to enforce property rights, including the mechanisms that can be invoked to grant such protection through the state. Three elements are of particular relevance, namely the breadth, duration, and assurance of property rights.” Deininger and Feder (2002, p4).

The statement by Deininger and Feder (2002] described property rights in their broadest sense. In this paper the particular asset of interest is land and therefore when the term ‘*property rights*’ is used it refers to property rights to land. ‘*Land*’ is used here to refer to the physical asset and includes the natural resources (for example soil, water and vegetation).

Property rights can be private (the assignment of rights to a private party), or communal (where each member of a community has a right to land), open access (where specific rights are not afforded to anyone, and no member of the community can be excluded), or State (rights are assigned to a public authority) (FAO, 2002]. Ownership rights can also be movable or immovable.

The right a person has in land may be described as property. Typically several rights over land exist and have often been described as a ‘*bundle of rights*’, which may range in the level of rights to access (FAO 2002, UNDP/UNEP/WB/WRI 2002]. The range of possible property rights is extensive, may be held by several different people, and often includes some restrictions on resource use (FAO, 2002].

Property rights are often simplified into categories including the following:

- **Use rights** - The most primary rights is the use rights — the right to occupy, use or develop the land and often involves rights to exploit the natural resources (FAO 2002, UNDP/UNEP/WB/WRI 2002].
- **Transfer rights** - The transfer rights give the owner the right to sell, mortgage, or lease the land and its resources, and often includes the right for the owner to keep others from using the land (FAO 2002, UNDP/UNEP/WB/WRI 2002].
- **Enforcement rights** - guarantees all other rights by providing for financial or social consequences when they are not honored. Together, these property rights provide the basis of tenure—what we commonly think of as property ownership’ (UNDP/UNEP/WB/WRI, 2002].
- **Control rights** – the rights to make decisions about ‘how the land should be used including deciding what crops should be planted, and to benefit financially from the sale of crops, etc.’ (FAO, 2002, p10].

In addition land rights are often categorized into whether they are ‘*formal*’ (explicitly acknowledged by the government) or ‘*informal*’ (lack official recognition and protection). The difficulty with this categorization is that informal rights ‘may, in practice, be quite formal and secure in their own context’ (FAO, 2002, p11]. Property rights may exist over private land or government held land. The discussion in this paper will focus on property rights for private land involving formal or informal tenure arrangements.

UN-Habitat [UN-SSHSSDD, 2003, p7] stated:

‘Any analysis of tenure and rights to land needs to take into account that firstly, there are a range of land rights in most countries which occupy a continuum, with a number of such rights occurring on the same site or plot. Secondly, it is not

possible to separate the different types of land rights into those that are legal and those that are illegal. Rather a range of informal-formal (illegal-legal) types along a continuum, with some settlements being more illegal in comparisons to others’.

The FAO [2002, p5] noted that land rights ‘are often a vital element when rural households balance their capabilities and assets, and determine their resulting strategies to cope with their daily production and food security. However rights to land are not just a source of economic production, but are also a basis for social relationships and cultural values, and a source of prestige and often power’. The FIG Agenda 21 [International Federation of Surveyors, 2001, p7] noted that ‘In every continent there are people whose customary rights to land and natural resources have been ignored. In many countries the rights of indigenous people to own, possess or use land are still not properly recognised’.

Two terms often used in discussion by development agencies and organizations are ‘*tenure security*’ and ‘*access to land*’. The FAO [2002, p18] stated: ‘Tenure security is the certainty that a person’s rights to land will be recognized by others and protected in cases of specific challenges. People with insecure tenure face the risk that their rights to land will be threatened by competing claims, and even lost as a result of eviction. Without security of tenure, households are significantly impaired in their ability to secure sufficient food and to enjoy sustainable rural livelihoods’. The FAO [2002, pp3-4] noted that a livelihood is sustainable ‘when it can cope with, and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base’.

The FAO [2002, p43] defined access to land as

‘the ability to use the land and other natural resources (e.g., use rights for grazing, growing subsistence crops, gathering minor forestry products, etc.), to control the resources (e.g., control rights for making decisions on how the resources should be used, and for benefiting financially from the sale of crops, etc.), and to transfer the rights to the land to take advantage of other opportunities (e.g., transfer rights for selling the land or using it as collateral for loans, conveying the land through intra-communal reallocations, transmitting the land to heirs through inheritance, etc.).’

3. EXPLORING THE LINKS BETWEEN TENURE SECURITY AND POVERTY

In response to problems with food security and increasing levels of poverty the international development agencies and organisations such as the UN Habitat, the UN FAO and the World Bank promote the importance of security of tenure and equitable land ownership. The World Bank [2003] noted that land is the primary means of generating a livelihood for most of the poor in developing countries, and a key element of household wealth. Deininger (2004, p1) argued ‘Land is a key asset for the rural and urban poor that provides not only a foundation

for economic and social development but also helps to empower them to adjust to the challenges posed by recent trends of globalization in a number of ways.’

UN-Habitat is concerned with human settlements and stated:

‘legal access to land is a strategic prerequisite for the provision of adequate shelter for all and for the development of sustainable human settlement affecting both urban and rural areas. The failure to adopt, at all levels, appropriate rural and urban land policies and land management practices remains a primary cause of inequality and poverty. It is also the cause of increased living costs, the occupation of hazard-prone land, environmental degradation and the increased vulnerability of urban and rural habitats, affecting all people, especially disadvantaged and vulnerable groups, people living in poverty and low-income people’ [UN-SSHSSDD, 2003, p7].

Providing secure tenure to land that people already possess can greatly increase the net wealth in areas subject to poverty. The FAO [2002, p1] noted that ‘Land tenure problems are often an important contributor to food insecurity, to restricted livelihood opportunities, and therefore to poverty’. Cord [2002], in the World Bank’s *Poverty Reduction Strategy Handbook* suggested that land policies that provide for equitable land ownership and tenure security offer direct benefits for the poor, as well as indirect benefits via economic growth, strengthened local governance, and improved resource management. It must be said at this point that these principles are more relevant to some areas than others. For example, in rural areas with reasonable capacity for agricultural production there may be considerable benefit in establishing secure property rights and individual titles. However, in informal settlements or urban areas with squatters the benefits of secure property rights are unclear. The likelihood of these people securing credit and investing in the properties is low. A gradual transition to tenure security is more feasible in these circumstances.

The first of the indirect benefits mentioned by Cord [2002] above is economic growth. In theory, secure property rights increase the incentives for landholders to invest in the property and provide the landholder with improved access to credit and rural markets [World Bank, 2003]. Improved investment also raises the rate of growth in the local economy [Cord, 2002]. If, however, the property rights are poorly defined the possessors and others with an interest in the land are compelled to spend resources defending their right to use the land, diverting effort from other purposes [World Bank, 2003]. In addition, an equitable distribution of land increases the capacity of agricultural production across the local region.

The second indirect benefit involves improvements to local governance. Providing landholders with tenure security and the ability to exert control over land use empowers the individuals and provides them with a voice in discussions on land policy and land use. This provides that basis for more participatory and democratic local governance. Cord [2002, p85] noted ‘Improved management of land assets can support decentralization and local government fiscal responsibility (via land taxation), make land management institutions more accountable, and can reduce conflict generated by unequal access to land. This paper will also

argue that effective environmental governance is central to improved natural resource management.

The third indirect benefit of improved resource management is central to the main theme of this paper – that secure property rights are important in natural resource management. Cord [2002, p85] stated:

‘Without well-defined and enforceable access rights, the natural resource base, and in particular common property resources, are easily threatened by encroachment and opportunistic behaviour’.

There has been extensive discussion on the economic benefits of tenure security and effective property rights to land markets and rural economies. As discussed above, there are also opportunities for environmental benefits depending on the manner in which land reform is undertaken. It is argued here that the benefits of clear and enforceable property rights to natural resource management are significant and that land reform should place a priority on these benefits. This will be more feasible in developed countries, however it is argued that the establishment of effective environmental governance is possible in all countries if the political will exists to implement appropriate frameworks.

4. HOW PROPERTY RIGHTS MAY BENEFIT NATURAL RESOURCE MANAGEMENT

The publication *World Resources 2002-2004: Decisions for the Earth: Balance, Voice and Power* [UNDP/UNEP/WB/WRI, 2002, p16] argued for effective environmental governance to improve decisions made about natural resources and stated:

‘One of the greatest environmental vulnerabilities that poverty brings is a high dependence on natural resources for subsistence, particularly in rural areas. Low-income households typically rely much more on resources such as collectible forest products, fish, bushmeat, fodder, or surface water sources than better-off families...The poorer the household, the greater the share of income from natural resources...That means greater hardship when these resources degrade or disappear altogether. The poor face even higher risks from environmental degradation because such a high percentage of poor families live on marginal lands. These lands may be arid, steeply sloped, or have low natural fertility—factors that limit their agricultural potential and make them subject to large swings in productivity such as conditions change. Marginal lands are often prone to drought and are particularly vulnerable to land degradation, erosion, floods, and landslides. This makes them sensitive to changing land use patterns and increased population pressure, and increases the need for careful management.’

Secure tenure, including secure and enforceable property rights provide an environment in which landholders are able to make investments in the land. These investments may involve the construction of buildings and roads, or the purchase of labour-saving technology. They

may also involve conservation measures. This is possible where the landholder recognises the threat of natural resource degradation on the land, and considers that the benefits of investment in conservation measures will flow to them. Conversely, if the effects of land degradation are imminent and obvious, the landholder may be compelled to respond or face regulation by government. Landholders in developed countries and developing countries alike may face these issues. The conditions required for the landholder to consider investment in improved land management practices are security of tenure, a demonstrated threat posed by degradation, and viable alternative land management practices. It is also critical that the land is seen as having some productive capacity or economic value. Clear and enforceable property rights alone will not necessarily lead to improved land use. However, they play an important role.

The FAO [2002, pp 23-24] suggested that ‘land tenure and environmental conditions are closely related: land tenure can promote land use practices that harm the environment or it can serve to enhance the environment...Insecure land tenure is linked to poor land use which in turn leads to environmental degradation. Lack of clear rights can reduce the incentive to implement long-term resource measures’. The FAO [2002] argued for rural development projects to ensure that existing, successful land tenure arrangements are strengthened, rather than threatened. It may also be possible to improve tenure arrangements in order to strengthen natural resource outcomes. They added ‘In order to improve the sustainable use of natural resources, land tenure strategies should be linked with appropriate land management tools, such as agro-ecological zoning, to ensure that the land is put to a use that is suitable for its soil, land form and climatic characteristics. Increased participation and the empowerment of community structures are also required to ensure effective self-management of the natural resource base.’ [FAO, 2002, pp24-25].

The UNDP/UNEP/WB/WRI [2002, p10] stated ‘Ownership is a common avenue to authority over resources. Ownership of land or the right to use a resource found on it—such as water, mineral, or harvest rights—means control. A land or resource owner often controls physical access to a site and has the principal say in all sorts of land use decisions: how often to harvest trees and whether to reforest, the number of livestock to graze, whether to clear land for crops and how much pesticide to use. While it may seem simple, ownership actually has a complex relationship with environmental governance. How property rights or ownership are defined, who benefits from these rights, and how they are enforced are central issues.’ However, not all landholders have control over resources. In Australia, for example, rights to mineral resources vest with the Crown (government).

World Resources 2002-2004: Decisions for the Earth: Balance, Voice and Power developed seven rules for effective environmental governance and one of these was property rights. This report - a significant joint publication by leading development agencies - argued that the creation of secure and enforceable property rights, along with effective frameworks for public participation and governance, provide a strong platform for improved decisions about the use of land and its associated natural resources.

4.1 Property rights and natural resource management in developed countries

In developed countries tenure security and land markets are reasonably well developed. However, the level to which property rights are clear and enforceable is varied. The UNDP/UNEP/WB/WRI [2002, p10] stated:

'private ownership is the most prevalent tenure arrangement in Western Europe and North America, with an emphasis on carefully drawn titles and formal leases. However, building codes, local zoning rules, and environmental regulations circumscribe the rights of the private property owner, giving the state—and often the public—a voice in private land use. In fact, how much the state should be able to modify private property rights to protect the environment is currently a controversial governance question in the United States. In response, some new ownership arrangements try to accommodate public conservation and environmental objectives within the private property regime...These include creation of conservation easements, where a private land owner sells or gives up the right to develop or harvest a site, while retaining other ownership rights. Land trusts— nongovernmental groups that negotiate conservation easements or acquire land outright to maintain as open space—help bridge the private property market and the preservation of public goods like open space, access to recreation, and intact natural habitat'.

In Australia, until recently there was an attitude that the natural resources were unlimited. Rights over resources such as water and vegetation were randomly allocated with tenure and the level of control that governments held over land management practices was limited.

Rights to water allocation have been the subject of considerable discussion because there are significant economic and environmental benefits in stable water rights. Australia is the driest continent and water is a scarce resource. Not surprisingly the discussion over rights to resources has initially focused on water rights. We no longer consider that building dams will solve all our future water needs, and the federal government has sought ways to limit water use – particularly urban use and irrigation. Under Australia's constitution the federal (Commonwealth) government has limited responsibilities for natural resource management. Natural resource and environmental management has primarily been the responsibility of State and Territory governments [Attorney-General's Department, 2003]. Each jurisdiction had a different system for water allocation and difficulties existed where water catchments and water reserves spanned across state boundaries. In recent years markets for trading of water rights have been established in all states and territories and the allocation of water rights reduced ('capped') in an attempt to direct water to those farmers who most need it. Over the last decade the Council of Australian Governments' (COAG) have actively sought to break down the state control of water allocation. They have achieved this through economic incentives and microeconomic reform. The objective has been to develop a national set of principles for water entitlement and allocation, and to clarify assistance to landholders where adjustments are made [CEO's group on Water, 2002]. However, the

current systems have limitations and Young and McColl [2002, p18] noted that ‘the existing plethora of water allocation systems have been derived piece-meal over time and have not been built for trading’. Although the trading of water may be more advanced than other natural resources the nature of the water rights allocated is still under debate. Young and McColl [2002] called for a robust system for describing and allocating water rights and suggested that such a system would need to facilitate the resolution of allocation issues, cost efficient trading, articulation of where responsibilities and risks lie, and the management of externalities associated with use of the resource.

In the last twenty years the Australian state governments have (to varying degrees) legislated to control the clearance of native vegetation and limit rights to water for irrigation and agriculture. Other initiatives include the ability of landholders to sell the carbon rights over forested land, and indeed ‘*profits a prendre*’ may be established allocating the rights to plantations over freehold land [Blair, 1997].

The most recent push in Australia is for the introduction of trading of salinity credits. The idea is that landholders higher in a water catchment are paid by landholders lower in the catchment to undertake works (such as re-vegetation) that will reduce the impact of dryland and irrigation salinity. There are significant challenges in implementing a salinity credits scheme involving quantifying the economic benefit of these works to those lower in the catchment.

4.2 Property rights and natural resource management in developing countries

In Africa, Asia, and South America, tenure security and access to land is variable and (in many areas) largely informal. Land ownership in the form of titles sanctioned by the government is relatively rare, especially for indigenous and in rural areas. In Africa, for example, historically land was not owned as a tradable commodity, but instead farming or grazing rights were allocated based on community rules. In these areas, governance problems concern the often uneasy transition from informal traditional ownership to more formalized arrangements [UNDP/UNEP/WB/WRI, 2002]. Cord [2002] argued that there are three broad issues that constrain the emergence of tenure security and more equitable land distribution. The first constraint is that shortcomings in the institutional or statutory framework may prevent the successful implementation of land reform. Second, ineffective land markets may prevent land from being allocated to its most sustainable use. The final issue is that there several specific constraints – such as biased policies, poor land reform legislation, or ineffective land markets – can prevent the ability of the poor to achieve secure tenure.

Cord [2002, p84-85] proposed public intervention in three areas to strengthen land tenure security and access to land: ‘(1) land regularization and titling, (2) land reform, and (3) strengthening local land management systems’, but added:

‘However, while these specific interventions are important, it is more often the legal, policy and institutional frameworks affecting land issues that are the most important levers in promoting land tenure security and access for the rural poor.’

Also land tenure security and access are not enough to achieve rural poverty reduction. Access to markets, physical and social infrastructure, technical assistance and complementary investments are also required to maximize returns from land ownership’.

The issue of poverty reduction in developing countries is at times overwhelming. To include improved environmental governance in land reform projects therefore provides a significant challenge. There are, however, economic benefits to improved environmental governance. Deininger and Feder [2002, p3] argued:

‘ In view of pressure on natural resources in rural areas of many developing countries, institutional mechanisms and incentives to ensure the maintenance of what is often a fragile ecological balance are of increasing relevance to maintain the productive capacity of rural areas, to provide non-market services (e.g. regulation of hydrological flows), and to preserve biodiversity and other global public goods. Access to common property resources and common lands does often provide significant components of income for the poor, is critical to reduce vulnerability, and affects people’s identify and sense of belonging not only in traditional tenure systems. Well-defined access rights that allow to exclude outsiders can help reduce the threats to the natural resource base from encroachment and opportunistic behavior’.

5. CONCLUSIONS

All countries experience land use that is not sustainable to varying degrees. Natural resource degradation issues must be addressed in order to achieve more sustainable land management. It is argued here that for developed countries the implementation of clear and enforceable property rights (especially use rights over resources) will lead to improved decisions on land use and should be a priority for government. Dale [2000, p35] in his paper on land markets and land consolidation in central Europe stated ‘In many countries there is still a tendency to separate land ownership rights from land use rights and to have no effective institutional mechanism for linking planning and land use controls with land values and the operations of the land market. The problems are often compounded by poor administrative and management procedures that fail to deliver the services that are needed. Investment in new technology will only go a small way towards solving a much deeper problem, which is the failure to treat land and its resources as a coherent whole’. This failure to consider land and resources together in central Europe is also evident in other countries.

In developing countries the environmental threats may be even more difficult to address. However improvements to security of tenure may foster economic growth. With economic growth comes an increased capacity to improve land use and respond to degradation, and to enforce adherence to land management practices within the scope of property rights. However there are also risks with land reform. Poorly implemented reform and corruption can result in tenure security with adverse effects including land degradation. For example,

land tenure provided to foreign investors will little interest in the environmental sustainability of the land.

The benefits of secure and enforceable property rights to natural resource management have been outlined in this paper. These benefits are significant and, along with the economic benefits of improved tenure security, provide a strong case for public investment in land reform. However, this land reform requires social and environmental safeguards.

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BIOGRAPHICAL NOTES

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