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USAID ISSUE BRIEF

CLIMATE CHANGE, PROPERTY RIGHTS, & RESOURCE GOVERNANCE

EMERGING IMPLICATIONS FOR USG POLICIES AND PROGRAMMING

Climate change and associated policy responses will cause progressive, extreme and unpredictable shifts in the value of land and natural resources.

Climate change and societal responses will disrupt existing tenure regimes by contributing to the forces that drive migration.

Tenure considerations will be crucial to the equitable distribution of benefits and the management of transaction costs in mitigation efforts.

Responses to climate change will attenuate current land tenure claims and property rights of women, poor and marginalized peoples.

The Second Working Group of the Intergovernmental Panel on Climate Change (IPCC 2007) and other scientific bodies present the case that climate change profoundly shapes ecological, social, and economic interactions. As the specter of global climate change unfolds, existing struggles will deepen over use, control, and management of land and other natural resources. In unpredictable ways, climate change will provoke adjustments in the value of land and other natural resources; simultaneously, climate change will intensify human migration and displacement. These forces will invariably destabilize governance and property rights regimes, spur the evolution of both statutory and customary tenure arrangements, and open the door for powerful actors to expand their claims on land and other natural resources. Similarly, climate mitigation initiatives, such as carbon sequestration policies and programs, may profoundly alter institutions of governance and property rights. In some cases, promising mitigation initiatives like reduced emissions from deforestation and forest degradation in developing countries (REDD) may lead to the expropriation of land and other natural resources from poor and vulnerable peoples. In both climate change adaptation and mitigation, contentious struggles for access and control of resources may turn violent unless stakeholders from the local to the international scale engage in open and transparent processes to negotiate new rules of access to land and other natural resources. Dispute resolution must go hand-in-hand with policies to restructure both statutory and customary tenure.

National and international policy makers are beginning to explore the place of property rights and resource tenure in the discussions of climate change adaptation and mitigation strategies. International donors like USAID can play an important role in working with host country governments and civil society to integrate property rights and resource governance considerations into policies and programs to increase resilience to the impacts of climate change, and at the same time, foster mitigation activities. This issue paper presents a framework for categorizing analysis of the interface between climate change, governance, and property rights, and it describes ways for USAID to incorporate tenure considerations into climate change adaptation and mitigation initiatives.

ISSUES LINKING CLIMATE CHANGE AND PROPERTY RIGHTS AND RESOURCE GOVERNANCE

Resource governance, tenure, and property rights—the complex institutions and rules determining the ownership and allocation of land and natural resources—will be stressed, destabilized, and forced to evolve in response to climate change impacts. At the same time, these same governance institutions setting the rules for tenure and property rights will certainly mediate destabilizing impacts. Modifications in tenure regimes will also be needed for the successful implementation of mitigation activities. Five key implications for USG policies and programming stand out at this intersection of climate change, property rights, and resource governance:

1. Dramatic changes in land and natural resource-based asset values. Over much of the developing world, climate change will impact the relative value of land and productive natural resources. The resulting struggles over resources will modify tenure regimes and create new winners and losers, often to the disadvantage of vulnerable groups. Existing tenure relationships will play a role in shaping these struggles; they also hold the potential to provide incentives for investment to increase resiliency.

2. The displacement and migration of people. Climate change impacts, such as rising sea levels, melting mountain glaciers, and severe drought, are expected to lead to forced migration on an unprecedented scale. Tenure will play a critical role in efforts to forestall and recover from migration; and migration will test the capacity of tenure regimes to equitably allocate rights to resources and limit conflict.

3. Further marginalization of the disenfranchised. The impacts of climate change will be felt most by those people with the fewest means to adapt to changing environmental conditions. The poor, women, the disabled, the young, indigenous peoples, and other traditionally marginalized groups may suffer disproportionately as policy and programmatic responses to climate change exacerbate their tenure insecurity.

The USAID LAND TENURE AND PROPERTY RIGHTS FRAMEWORK identifies five common challenges to property rights and land tenure regimes. This framework can be used to hypothesize on the impact of climate change on tenure:

- **Violent conflict and post-conflict instability**
- **Unsustainable natural resources management and biodiversity loss**
- **Insecure tenure and property rights**
- **Inequitable access to land and natural resources**
- **Poor land market performance**

http://www.ardinc.com/upload/photos/654LTPR_Framework_FINAL.pdf

4. Transformation of resource management. The success of efforts to mitigate climate change through the creation of carbon markets will greatly depend upon the state of current tenure regimes and their deliberate modification at a number of levels. Of particular importance will be the allocation of rights and responsibilities between national governments and claimants to rights in customary regimes and the potential for leveraging resources associated with carbon mitigation to modify, clarify, and strengthen tenure regimes.

5. Challenges in the distribution of carbon benefits. The infusion of large sums of capital into mitigation efforts may overwhelm stakeholder capacity to develop governance and property rights systems to efficiently and equitably allocate the benefits of carbon financing between national and local levels, and among local participants.

ADAPTATION, MITIGATON, PROPERTY RIGHTS, AND RESOURCE GOVERNANCE

Of these five issues, the first three are discussed below in the context of adaptation, the process of preparing for, and responding to the impacts of climate change. The final two apply to climate change mitigation, efforts to reduce greenhouse gas emissions, and increase sequestration.

Dramatic changes in land and natural resource-based asset values. While climate change is expected to increase productivity in a limited number of regions, over most of the developing world, climate change will decrease the productive value of land and natural resources. As a result, pressures on adjoining ecological spaces of relative productive value will increase. For instance, as agricultural yields fall on the dry lands of Sahelian Africa due to irregular rainfall and extended drought, farmers will alter cultivation practices to reduce risk. As farmers shift cultivation into lowland and riverine areas, areas often claimed by pastoralist populations, conflicts over access to these more valuable areas may break out between agricultural and pastoralist peoples. Lands suitable for irrigation will become coveted, and as a result, tenure conflicts may arise as different claimants struggle for access to these prime lands. Similar shifts in land use value will occur in many parts of the world. In east and southern Asia, tenure conflicts may be most severe in low lying coastal areas subject to flooding from storm surges and rising sea levels. Lowland coastal lands damaged from salinization will be abandoned, and massive numbers of rural people will migrate out of these areas in search of new and productive lands. Existing tenure relationships will play a role in shaping outcomes of climate change impacts and determining resiliency. Invariably, conflicts will arise between indigenous peoples seeking to protect these valuable territories against the intrusions from “outsiders” fleeing damaged farm lands. While these general trends

“The general messages of the realities of climate change in relation to land tenure are not different from the principles of progressive land policies now widely recognized and promoted by international development agencies” (Quan and Dyer 2008).

will unfold in site-specific ways at specific moments in time, the magnitude of changes in values of resources will be hard to predict with accuracy. However, it is likely that government policies to respond to the unfolding land crises, population migration, and other reactions to biophysical changes, as well as the unpredictability of weather itself, will result in volatility in asset values. Undoubtedly, speculation will erupt around lands of particularly high value for agriculture and human settlement.

THE IMPACT OF BIO-FUELS

The demand for bio-fuels has been identified as one of the drivers of the still poorly understood but widely reported recent spate of land acquisitions across the globe. Increases in the amount of land dedicated to the production of fuel crops more clearly will have an impact on land values, although the size of this impact will be subject to a complex set of economic and social variables. (See USAID Issue Brief LAND TENURE, PROPERTY RIGHTS, AND FOOD SECURITY for a fuller discussion of national level land transactions associated with the global demand for land, minerals, and resources.)

These shifts in the value of land and natural resources will provoke the restructuring of both statutory and customary property rights systems. Groups defending traditional and long-held territorial rights to resources will invariably struggle to protect their rights from intrusions of outsiders trying to establish new rights of access and control. Realignments in the legal corpus underlying statutory tenure systems as well as the norms and practices of traditional customary tenure regimes will open the door for influential parties to claim lands deemed particularly suitable for less risky agricultural ventures and more secure human settlement. This struggle for access to more valuable lands by powerful claimants will certainly revive latent customary claims to lands controlled by others in the distant past. The resulting struggles over resources will create new winners and losers, often to the disadvantage of vulnerable groups. Land tenure struggles are an age-old phenomena—climate change simply exacerbates the situation in particularly prone areas like densely populated coastal zones around the world.

While statutory and customary tenure institutions will be the place where the struggle over access and use to natural resources occurs, these same institutions may also play a significant role in forestalling such conflicts. Customary tenure institutions, such as the traditional authorities who have long established the rules and practices for the acquisition, use, and transfer of land and other natural resources, may indeed possess considerable capacity to devise new tenure norms in the age of climate change. Many agricultural and pastoralist peoples are already familiar with climate variability; their hard-won experiences show how rural societies may build resilience in the face of climate variability (Quan and Dyer 2008). Pastoralist and agricultural communities have long sought to maintain mobility in the face of variation in seasonal precipitation. Historically, pastoralist and agricultural communities in semi-arid areas of the world have constructed flexible traditional tenure arrangements allowing for complementary uses of the landscape. Statutory property rights regimes are not necessarily as flexible. National laws and legal precedents evolve slowly in the face of new environmental pressures. The central policy challenge for many countries is thus to maintain flexibility in existing customary and statutory tenure systems, but also, on a case-by-case basis, foster rapid adjustment of property rights regimes to new environmental and social conditions. This entails clarifying not only existing tenure of multiple users of the land, but it also entails helping stakeholders negotiate new rules of resource access and use in the face of climate-induced perturbations.

The USAID ADAPTING TO CLIMATE VARIABILITY AND CHANGE guidance manual presents a 6-step approach to assist planners and stakeholders in assessing vulnerability and integrating climate change adaptations into the project cycle:

- **Screen for vulnerability**
- **Identify adaptations**
- **Conduct analysis**
- **Select course of action**
- **Implement adaptations**
- **Evaluate adaptations**

http://www.usaid.gov/our_work/environment/climate/docs/reports/cc_vamanual.pdf

Policy makers have proposed over the years a wide array of measures to improve security of tenure to rural and urban peoples, though few of these were designed to confront the new realities of climate change. While no single approach will suit the complexities of local situations, land tenure policies that equitably provide legal, long-term security for sustained tenure security include the following: devolution of power to local entities to negotiate and institute new rules of use and access to land and natural resources; recognition of customary rights through demarcation of territorially controlled lands; systematic registration of valuable lands and resources where records do not currently exist, accompanied by awareness campaigns and legal assistance; clarification of the status of occupants of state lands; creation of transparent conflict resolution mechanisms; and

at each step of the process, an unrelenting commitment to recognizing the special needs of the disenfranchised categories of society like minority groups, women, and the poor.

The displacement and migration of people. Migration may be one of the greatest challenges resulting from climate change impacts. The number of people affected by drought, water shortages, flooding, and other climate change is estimated at between 25 million and one billion (International Organization of Migration 2009). Communities will experience both gradual displacement resulting from environmental degradation and mass exodus caused by extreme events. In the majority of cases, climate-related biophysical change will be just one of many stress factors leading to migration (Brown 2007). Despite the variation in cause and duration of climate-related migration, in each case, tenure will play a critical role in efforts to forestall and recover from migration.

The USAID ADAPTING TO COASTAL CLIMATE CHANGE guidebook presents an approach to integrating adaptation measures into development programming for coastal communities.

Successful implementation of adaptation measures, many of which are presented in the guidebook, is likely to limit disruption in tenure systems, and reduce pressures to migrate.

http://www.crc.uri.edu/download/CoastalAdaptationGuide.pdf

When climate-related drivers of migration are relatively gradual environmental processes, like declining precipitation and rising sea levels, policy makers will most likely use adaptive planning to reduce the threat of widespread migration. Tenure security will be a critical factor in providing the incentives for adaptation to evolving conditions. Where migration does occur, tenure considerations will be instrumental in managing the increased population in migrant-receiving communities. Much of this migration will be from rural regions to urban centers, increasing the potential for a clash of understandings about what tenure is. Where tenure regimes are not commonly agreed upon in receiving communities, the arrival of migrants bringing with them their own “tenurial constructs” will add further ambiguity, increasing the possibility of disputes and conflict (Unruh 2008).

As to sudden-onset migration, the aftermath of the Indian Ocean tsunami of December 2004 has provided a wealth of lessons learned. They include the importance of the clarification and documentation of existing informal tenure relationships, and the protection of these records. Also important during the resettlement process is the provision of transparent and open dispute resolution mechanisms that are perceived as legitimate and are accompanied by information campaigns and legal assistance to the vulnerable segments of society.

Resettlement practice in post-conflict situations has also demonstrated the value of building up from informal claims based on history and practice, if not statute. Also critical has been the protection of these interests against political and commercial elites until transparent dispute mechanisms have been established and vulnerable residents and returnees are aware of and have access to legal support (HPG 2009).

Further marginalization of the disenfranchised. The poor, indigenous peoples, women, and other people with limited property rights are the most vulnerable to climate change impacts. Their limited capacity to invest in adaptation measures makes them less resilient. They are also least able to take advantage of changes in tenure regimes that may result from stresses brought on by climate change. As climate change impacts join with other factors to destabilize tenure regimes and open opportunities for their renegotiation and restructuring, the disequilibrium may increase, rendering marginalized persons even more vulnerable to future climate shocks.

The case of gender, while distinct in its own right, may illustrate how climate change impacts aggravate the marginalization of a particular sub-population and suggest an approach to limit these impacts. In the developing world, women farmers are heavily engaged in food production and are involved in natural resource-dependent activities to a greater extent than men. Despite this critical role in production, across great variations in tenure arrangements, women are disadvantaged relative to men in both customary and statutory systems. Under many customary regimes, women's access to land is based on status within the family and consists of simple usufruct, not a robust set of property rights. As a result, they are susceptible to the loss of even these rights at the dissolution of the household in separation, divorce, or widowhood. Population, economic, and environmental pressures that disrupt traditional tenure systems further attenuate these rights. This vulnerability can be particularly pronounced in cases of extreme social dislocation, such as weather-related disasters. Migration fractures social support networks and family ties, the means upon which women rely for access to resources. Nor have women’s rights in land and property fared any better in transitions to formal or statutory tenure, especially when new systems assign rights based on the concept of the household unified under a (male) household head.

Efforts to formalize or even simply record existing customary rights in land and resources often further weaken women's claims if deliberate attention is not given to gender issues. Approaches that may limit the disenfranchisement of women in reforms that seek to formalize customary regimes include: noting usufruct in the registration of property rights in land and natural resources; offering women, especially, household option to hold individual or conjugal title in land; joint tenure arrangements as members of associations; and the simplification of procedures. Engaging women's associations in the process of clarifying and securing property rights may also mitigate the common tendency towards exclusion. The importance of implementing these approaches through an open and transparent process has been repeatedly demonstrated in the countries affected by the 2004 Indian Ocean tsunami.

Transformation of Resource Management. International efforts to reduce atmospheric greenhouse gasses promise to bring to bear considerable funding on the management of land-based resources. Without a clear focus on resource governance and tenure, capital flows for increasing carbon sequestration and reducing emissions may easily outpace the capacity of institutions to develop stable, equitable, and efficient regimes for allocating rights in land and natural resources.

The legal landscape to be prepared is complex. The alignment of multiple layers of law will be necessary to establish an efficient value chain for carbon credits. The laws of participating countries will need to align with the international treaties establishing the trading mechanisms, and dovetail with standards related to CDM and Voluntary markets. They may also need to recognize the differences between projects that focus on emission reduction and those that increase carbon sinks (Takacs 2009).

Internally, states will need to clarify the relationship between existing forestry laws and new carbon-related legislation. They will also need to consider the treatment of sequestered carbon, potential carbon, and carbon credits (Takacs 2009). The relationship between national laws and the local laws and norms of the region managing carbon will need to be clarified. Often this definition of rights and responsibilities will need to take into account a plurality of approaches to property rights. In Africa, for example, the implementation of carbon sequestration projects has been complicated by tenure regimes in which multiple users have rights in the same piece of land, rendering the most equitable system for the allocation of credits unclear. Further, the potential for conflicts between overlapping customary and statutory rights raises the risk of investment in the activity. The lack of clarity in these contexts and the resulting opportunities for elites to assert their power also raises the chances of vulnerable people not receiving carbon benefits (Jindal 2006).

The rights and responsibilities nations assign themselves in this process will be of principal importance. On paper, if not in effective management practice, the state owns 98% of forested land in Africa, 94% in Asia, and 76% in South America (Biggs 2009). There are a number of reasons why states may attempt to make these de jure claims de facto. National management of mitigation activities may offer efficiencies of scale. It is also the most obvious means of addressing the problem of "leakage"—the substitution of compensatory carbon-emitting activities outside of a project zone. Governments may also simply decide to follow precedents in natural resource management and capture the benefits of carbon markets for the state through direct management or granting concessions to the private sector.

The second option is for the state to devolve land, natural resources, and carbon rights to the local level and those who currently hold informal rights. Transfer of ownership to carbon rights to local communities has precedents, though few are complete successes. Strengthening locally held property rights may nevertheless be fundamental to the sustainable implementation of mitigation efforts. Unfortunately, the establishment of complex new contractual rules and the allocation of property rights risk limiting engagement of local and indigenous communities in forest carbon projects (Gong et al. 2009). On a more positive note, a number of observers argue the stream of resources from carbon financing may serve as a means to improve the capacity to equitably enforce the necessary new carbon laws and as a force for effective tenure reform (Poffenberger 2009; Biggs 2009; Cotula and Mayers 2009; ICRAF 2009). While a thicket of tenure and property rights issues face the implementation of carbon projects, mechanisms such as REDD and afforestation/reforestation (AR) may also be used to create incentives to revise laws and norms to enable local resource management and enforcement.

Equity of the Distribution of Carbon Benefits. When designed and implemented correctly, carbon projects may be leveraged to strengthen and clarify tenure regimes and help secure local resource rights. The U.N. Declaration on Rights of Indigenous People sets the standard for the process in asserting three core principles of international law: Free Prior and Informed Consent; the right to self determination; and equitable benefit sharing. Yet this standard is not always lived up to. There is a great risk that investment will aggravate existing weaknesses in

tenure regimes. Defenders of indigenous people's rights fear the "carbon boom" will invariably lead to land grabbing and uncompensated expropriation of natural resource assets from indigenous peoples and the rural poor (Seymour 2008).

Developing and extending legal tools for assuring land tenure and property rights to local populations will be critical to their empowerment and negotiation for benefits stemming from participation in the carbon market. To sufficiently strengthen the tenure of local communities and indigenous peoples to enable effective negotiation for carbon benefits, efforts to strengthen resource tenure may need to go beyond community-based natural resource management to the provision of ownership of land and the associated forest resources. "Experience with payments for environmental services schemes suggests that land rights may emerge as a key discriminating factor for access to REDD revenues" (Cotula 2009). Explicit safeguards against appropriation of resources by external elites may also need to be established.

Whether on farmed lands, pastures, or forests, carbon rights may be necessary to clarify claims to carbon-benefit streams. However, the process to assign these rights locally will not be simple. It will require open, informed negotiation and may be very contentious. Formal legal concepts will need to be adapted in contexts where property rights are determined through traditional relationships; tenure norms at the local level have not been developed with carbon as a property in mind. For example, in developing countries, the claims of "interested parties" may be very difficult to sort out, as rights to land and natural resources are often overlapping and shared among multiple parties. Current access may also reflect unequal power relations: pastoralists may have seasonal use claims to pastures that shift with the distribution of rains; women in a community may use, and therefore claim, limited land due to illness or divorce.

Limiting transaction costs may require that small-holder farmers pool their efforts and manage and account for their impact on carbon at the landscape level, a process that will perhaps build on experience with landscape-scale institutions organized around watershed management and wildlife management. Methods to ensure partitioning of the carbon benefits without further marginalizing vulnerable or low-status populations within communities or landscapes have not been developed, and they may be difficult to determine and enforce in countries without enforceable contracts. Further questions of equity and fairness may also arise regarding the potential exclusion of landless farm workers and tenants.

At the project level, the involvement of members of local communities in design and management will be necessary to address questions of equity and also to avoid tenure conflicts. Local participation in the organization and monitoring of activities, as well as with the design of schemes to distribute benefits, will likely be critical to the equitable distribution of benefits based on resource control.

CONCLUSIONS AND RECOMMENDATIONS FOR STRATEGIC INTERVENTIONS

The interface between climate change and tenure is still poorly understood by policy makers and program planners alike. As this issues paper has shown, the analytical frameworks for dissecting the complexities of the issues are still in their infancy. Few policy and programming approaches have been developed to strengthening tenure in ways that increase incentives to invest in adaptation measures, decrease the impact of migration, limit climate marginalization, and facilitate carbon mitigation efforts. However, there is a growing body of experience in the field of property rights and tenure that suggests the following approaches may be applicable in addressing myriad tenure challenges:

- **Clarifying and Strengthening Property Rights Regimes:** Tenure security will be a critical element of future policy discussions on adaptation to the impacts of climate change. It will also underpin efforts to mitigate atmospheric carbon emissions. Progress will consist of the reconciliation of diverse and conflicting claims; the clarification of latent or overlapping rights in resources; and reconciling statutory and customary regimes. Efforts to strengthen property rights will also include the documentation of current informal claims and the registration of transactions. These are challenging yet vital steps towards creating tenure security and building climate resilience. As countries prepare for and respond to the impacts of climate change, and programs and projects to limit atmospheric greenhouse gases come online, strong resource governance will provide incentives to invest in adaptation and mitigation measures. Effective resource governance will also decrease pressures to migrate and facilitate the integration of in-migrants. If effective, they will also stay the further marginalization of vulnerable peoples.

- **Public Participation:** As climatic changes alter the availability of arable and habitable lands and forests gain importance due to their capacity to sequester carbon, current customary and legal tenure regimes will be challenged to adapt appropriately to new realities without further legitimizing or accentuating the

marginal status of vulnerable populations. Nations and communities alike will create new laws, rules, and regulations to govern the use of resources. Extensive public participation will be required for these changes to occur in a transparent and equitable manner and for the resulting institutions to be effective and perceived as legitimate. Climate change will challenge institutions responsible for the governance of natural resources, at all levels, to establish inclusive processes to negotiate claims, regulate disputes, and establish new tenure systems in a manner respectful of the rights of women, indigenous people, and marginalized people.

- **Capacity Building and Climate Change:** An important element of efforts to "climate proof" countries, and prepare them for carbon markets will be building the capacity of local governments and civil society partners. Whether preparing partners to implement programs to increase climate resilience or establishing a policy and institutional environment welcoming to carbon investment, training and support in the technical and administrative tools of land and resource property rights management and the broader field of resource governance will be fundamental to the effectiveness of these efforts. They will need support in designing and implementing the process to design the laws and regulations creating the enabling environment for progress in climate change and determining the process through which new laws will be enforced.

- **Support for Mainstreaming Property Rights and Tenure Considerations into Program Design:** Climate change will bring a host of new challenges, and through experience, those challenges generate an evolving body of lessons learned concerning the nexus of climate and tenure. New insights on mainstreaming property rights and resource governance into the global effort to address climate change will surface as countries and partners develop and implement National Adaptation Plans of Action, define their roles in supporting carbon marketing programs, and refine protocols and methods for Monitoring, Reporting, and Verification. Tracking, analyzing, and identifying effective practices drawn from this rapidly evolving land tenure situation will be critical to the successful implementation of development support to these efforts.

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