LAND TENURE AND PROPERTY RIGHTS MATRIX

TREES AND FORESTS OVERLAY

SEPTEMBER 2013

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DISCLAIMER

CONTENTS

ACRONYMS

ADR   Alternative Dispute Resolution
EIA   Environmental Impact Assessment
EMMP   Environmental Mitigation and Management Plan
FAO   Food and Agriculture Organization of the United Nations
GIS   Geographic Information System
IQC   Indefinite Quantity Contract
LTD   Land Tenure and Property Rights Division
LTPR   Land Tenure and Property Rights
NRM   Natural Resources Management
NTFP   Non-Timber Forest Product
PLACE   Prosperity, Livelihoods and Critical Ecosystems
PRRGP   Property Rights and Resource Governance Program
REDD   Reducing Emissions from Deforestation and Degradation
USAID   United States Agency for International Development
USG   United States Government

PREFACE

Resource tenure and property rights challenges are present in almost every country where the United States Agency for International Development (USAID) works. In many countries, tenure and property rights problems are so grave that they create political instability, violence, population displacement, famine, and environmental destruction, which significantly undermine or prevent successful implementation of many USAID programs. Over the last decade the demand to address property rights issues has increased from both USAID field missions and host country governments. The increase in demand is due, in part, to a growing awareness among development practitioners of the role played by property rights (and natural resource access and use) in economic growth, governance, and conflict and resource management.

USAID and its partners have learned a great deal over the last three decades about the relationship between property rights and economic growth, productivity, and to a lesser extent, natural resource management and conflict. There are several important lessons learned from the last decade of research and policy work on property rights with a particular emphasis on land and resource tenure.

1. **Land tenure and property rights (LTPR) systems are fundamental to a wide variety of development outcomes.** Secure land tenure improves food security, economic growth, and natural resource management and reduces the impacts of conflict and climate change. Securing the rights of women, youth and vulnerable populations and broadening their access to resources complements and deepens the impact of interventions aimed at improving these outcomes. This is the case for people across the economic spectrum from smallholder farmers to urban manufacturers. An effective land governance and property rights system is fundamental to the broad process of economic and political development.

2. **Weak land governance systems limit economic growth; threaten good natural resource management; often promote conflict; and pose special problems for vulnerable groups, including minorities, indigenous people, the poor, and women.** Recognition of customary rights to land resources and the devolution of management authority improves land and resource governance and is crucial to sustainable natural resource management. Although many countries have effective and secure land governance and property rights systems, in numerous places, systems and rights are weak. The results of these weaknesses include conflict over land and resources, corruption associated with poorly functioning land governance systems, resource degradation, and limited economic growth.

3. **In development programming, property rights are most frequently dealt with in the context of land tenure reform, but they are increasingly being addressed through more integrated projects.** Programming decisions made in a variety of sectors that consider land tenure can have profound impacts on land use and natural resource management, agricultural systems, and infrastructure development.

4. **Too often, LTPR reforms are measured in terms of *outputs* rather than *impacts*** (e.g., measuring the number of land titles that have been issued as opposed to focusing on market performance and investment increases, reduced conflict, or improved use of sustainable management practices). This focus

on outputs prevents USAID from fully understanding the efficacy and potential cross-sectoral benefits of its property rights reforms and programs. A greater emphasis on impact evaluation is needed.

5. **The ultimate objective is to secure property rights that will promote economic growth, food security, natural resource management, and stability**. Security of tenure can be achieved through a variety of approaches and should result in greater confidence that property rights will not be indiscriminately taken or unjustifiably restricted. Securing land and resource rights can be achieved through a variety of legal, administrative, and judicial means. It may require legal reform in one context and dispute resolution in another. USAID promotes the implementation of "secure enough" tenure rights and does not consider land titling or land formalization as the ultimate objective.

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BOX A: ILLUSTRATIVE USAID LAND TENURE PROJECTS

- Afghanistan Land Titling and Economic Restructuring
- Biodiversity Conservation of Public Lands in the Brazilian Amazon
- Egypt Financial Services Project
- Ethiopia Land Administration Program
- Ghana Commercial Agriculture
- Indonesia Marine and Climate Support
- Liberia Property Rights and Artisanal Diamond Development
- Property Rights and Resource Governance (Global)
- Rwanda Land Project
- Tajikistan Land Reform
- Timor Leste Strengthening Property Rights
- Ukraine Land Titling Initiative
- Uganda Supporting Access to Justice, Fostering Peace and Equity

See USAID Land Tenure and Property Rights Portal (http://www.usaidlandtenure.net)

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Issues and constraints regarding property rights vary from region to region, and they will continue to evolve over time. The most volatile of USAID-presence countries—and those that are often in the greatest need of property rights reform—are fragile states. Since property rights are so closely linked to development agendas across the globe, there is a need to understand how these rights shift as economies move through the stages of economic growth and democratization (and, in some cases, from war to peace) and how these shifts require different property rights interventions.

In light of these common concerns and issues, a whole-of-government approach to addressing land tenure and property rights has been developed through USAID and the Millennium Challenge Corporation (MCC). USAID's LTPR Division (LTD) coordinates issues of LTPR programming with other USAID bureaus, US government (USG) entities, and multilateral organizations. USAID currently works in close to 30 countries around the world to promote land governance systems (both formal and informal) that enable broad-based economic growth, human rights protection, and effective natural resource management. Because weak land governance systems compound vulnerability, our efforts are particularly beneficial for vulnerable groups. These efforts are investing over $800 million to strengthen the land tenure and resource rights of men, women, and children in the developing world.

INTRODUCTION

A FRAMEWORK FOR LAND TENURE AND PROPERTY RIGHTS

USAID has developed a suite of tools and methodologies designed to enhance the understanding and programming of LTPR challenges and activities to advance USG Development Objectives in a number of areas, including food security, global climate change, conflict mitigation and women's economic empowerment. This body of work has been highly experimental, consultative, and developmental and has grown commensurate with growth of US investments in this sector.[1]
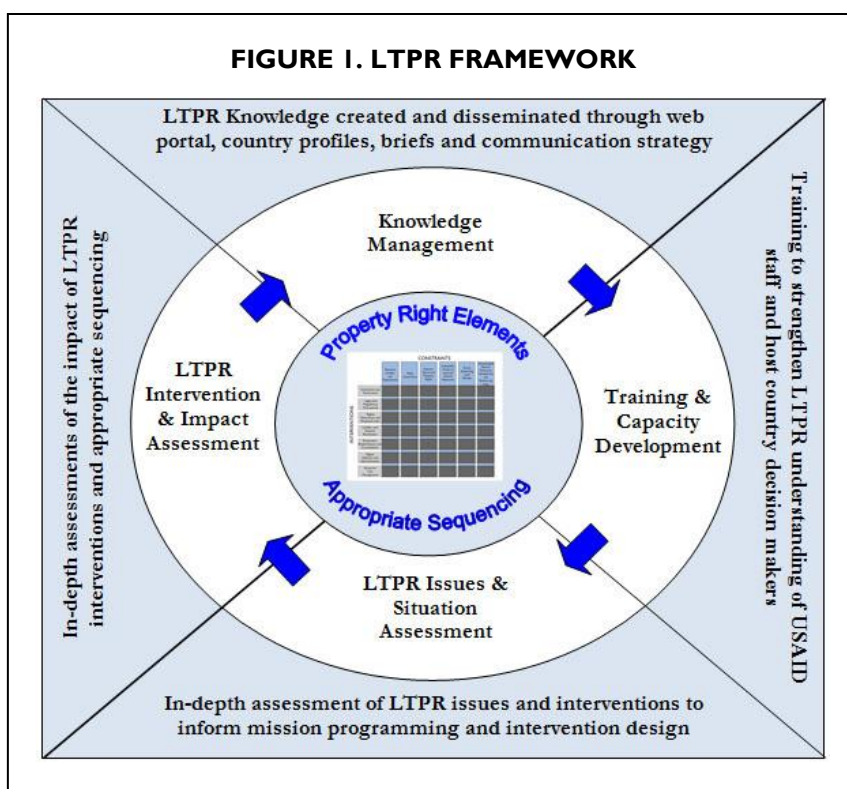
This work includes four components as summarized below, and are meant to be mutually reinforcing as illustrated in Figure 1: LTPR Framework.

1. **The LTPR Framework** serves as the overarching conceptual methodology tying together overarching themes, definitions, tools, assessments, designs, and training programs that USAID uses to improve LTPR programming and capacity building. The Framework also includes:

   LTPR Matrixes—A Methodology for determining USAID-recommended interventions for different asset and social classes (e.g., men and women); and a methodology for identifying constraints and opportunities.

   LTPR Intervention Sequencing of land tenure and land reforms tailored to each country, region, or project context that leads to stronger and more efficient property rights systems. Beyond identifying interventions to address LTPR constraints, sequencing in addition requires assessment of appropriate scale, timing, and ordering.

FIGURE 1. LTPR FRAMEWORK

LTPR Knowledge created and disseminated through web portal, country profiles, briefs and communication strategy

Knowledge Management

Property Right Elements

Appropriate Sequencing

Training & Capacity Development

LTPR Intervention & Impact Assessment

LTPR Issues & Situation Assessment

In-depth assessments of the impact of LTPR interventions and appropriate sequencing

Training to strengthen LTPR understanding of USAID staff and host country decision makers

In-depth assessment of LTPR issues and interventions to inform mission programming and intervention design

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[1] This body of work updates tools that were originally produced under the *Lessons Learned: Property Rights and Natural Resource Management* contract

The LTPR Glossary is a guide to key LTPR terms and concepts, gathered from frequently cited international references.

2. **LTPR Assessment Tools—A Methodology for Assessing LTPR Constraints and Interventions**—includes two tools to guide USAID mission programming:

    LTPR Situation Assessment and Intervention Planning (SAIP) Tool, which is a diagnostic and programming tool to help USAID missions understand and assess LTPR issues and determine how these contribute to or impede realization of Development Objectives; and

    LTPR Impact Evaluation Tool, which provides a methodology for designing evaluations to determine the outcomes and impacts of land and natural resource tenure and property rights programming, whether as a project's main focus or a component of a broader set of goals.

In addition to these Framework and assessments tools, USAID has developed:

3. **LTPR training materials,** which include short courses and other trainings to transfer knowledge and best practices about land tenure and property rights and strengthen LTPR knowledge, capacity, and understanding of USG program staff and implementing partners. Curriculum may be found on the LTPR web portal at www.USAIDlandtenure.net; and,

4. **LTPR Knowledge Management,** which consists of USAID Program Briefs on land tenure projects, LTPR Country Profiles, Issues Briefs, films, and LTPR research. This can be found at the *USAID Land Tenure and Property Rights Portal* (www.usaidlandtenure.net), which serve as the foundation for LTPR knowledge management within the Agency.
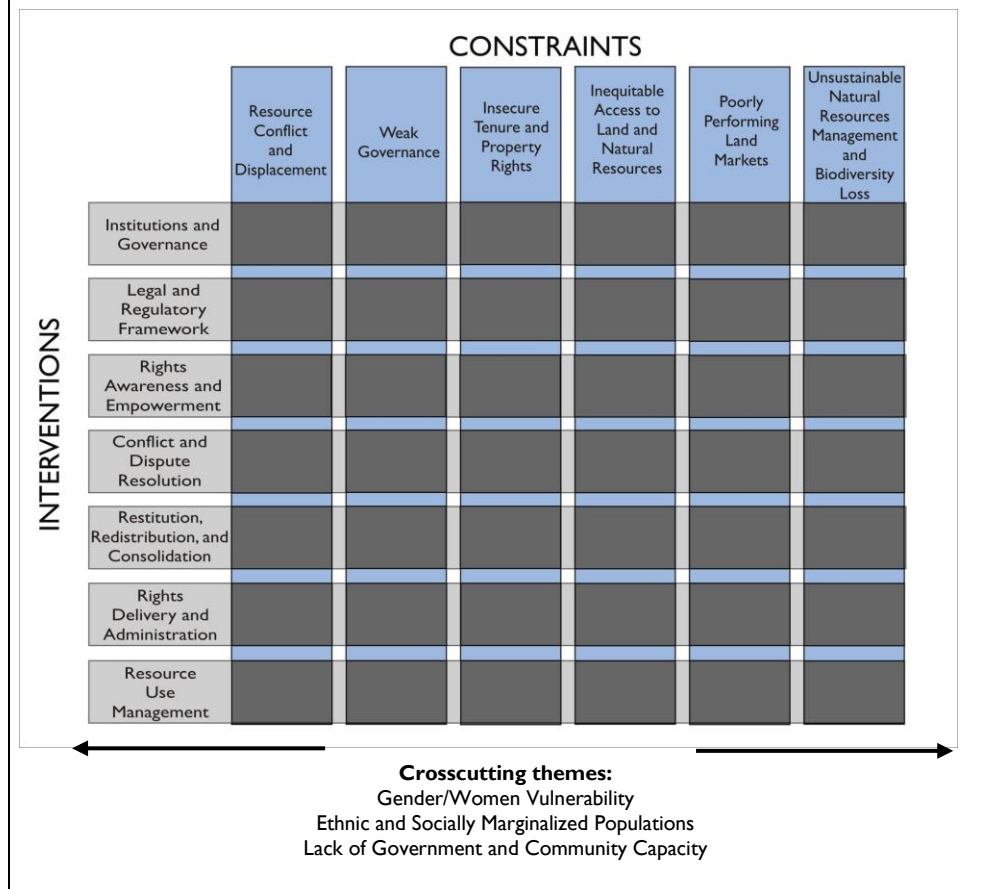
The **intended audiences** for all of these tools are USAID missions, USAID Washington Bureau staff, and other USG personnel who seek to understand how property rights issues may be affecting program outcomes, how to design interventions that can help address those issues, and how to evaluate the impacts of those programs to inform new program development. The tools may likewise prove useful to a range of development practitioners outside the USAID sphere who encounter property rights challenges in their work and seek to understand and address them more effectively.

This report presents the **Matrix Overlay for Trees and Forests**, one of the sub-tools comprising the Land Tenure and Property Rights (LTPR) Matrix and LTPR Framework, which are elaborated in the document *Land Tenure and Property Rights Framework* (USAID, September 2013). Both the LTPR Matrix and LTPR Framework are briefly presented here to contextualize development of a base Matrix that is used to harmonize the population of five Matrix overlays—Land Tenure and Property Rights; Freshwater Lakes, Rivers, and Groundwater; Minerals; Trees and Forests; and Women, Land, and Resources—that serve the conceptual foundation for USAID LTPR programming. This document presents the matrix *Trees and Forests Overlay constraints and interventions*. The population of other overlays is contained in companion documents.

LTPR MATRIX: A TOOL FOR VISUALIZING THE LTPR UNIVERSE

As early as 2004, USAID felt the need for a conceptual framework that would simply and eloquently help USAID and contractors identify and assess LTPR issues (constraints) and "toolboxes" of interventions to address those constraints. Land tenure and property rights is concerned with questions of access to land and natural resources, the distribution of rights to those resources within society, the security of tenure held by various individuals and groups over these resources, and the sustainability of their use.

FIGURE 2. LTPR CONSTRAINT ANALYSIS AND INTERVENTIONS MATRIX

CONSTRAINTS

	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Land Markets	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance						
Legal and Regulatory Framework						
Rights Awareness and Empowerment						
Conflict and Dispute Resolution						
Restitution, Redistribution, and Consolidation						
Rights Delivery and Administration						
Resource Use Management						

INTERVENTIONS

Crosscutting themes:
Gender/Women Vulnerability
Ethnic and Socially Marginalized Populations
Lack of Government and Community Capacity

The current generation base LTPR Matrix described in this section is aimed at addressing these questions and is the conceptual backbone of all interventions that follow. The Matrix illustrates a fairly complex but finite set of LTPR themes, constraints, and interventions. It is not meant to be read sequentially from left to right, nor from top to bottom; rather, it provides a menu of constraints and interventions to be considered within the realm of LTPR programming. The base Matrix consists of six categories of LTPR issues and potential constraints, three crosscutting constraints, and seven categories of policy and program interventions.

CATEGORIES OF LTPR CONSTRAINTS

1. **Resource Conflict and Displacement (Column 1)** – Conflict over access and use of land and natural resources often resulting in landlessness, squatting or population displacement due to macro causes of genocide and war, social and ethnic conflict, climate change, and resource scarcity.

2. **Weak Governance (Column 2)** – Deficiencies in capacity to manage and/or disparities in power, influence, and wealth that lead to mismanagement, lack of accountability, and inability of individuals, communities, legal entities and groups to act upon and defend their rights in land, resources and property.

3. **Insecure Tenure and Property Rights (Column 3)** – The consequence of inadequate rights awareness or the perception of having too few rights, inadequate duration of rights, or inability to protect rights from encroachment by others due to problems of open access, weak governance, rights inequality, weak statutory and customary tenures, and expropriation without fair compensation.

4. **Inequitable Access to Land and Natural Resources (Column 4)** – Disparities in access and control over resources between classes and gender that are often affiliated with poverty and social strife and result in problems of landlessness, uneconomical and fragmented holdings, squatting, informal settlements, and weak and unsustainable livelihoods.

5. **Poorly Performing Land Markets (Column 5)** – Absent/weak sales, rentals, sharecropping, and exchanges that restrict the transfer of resources between willing sellers, buyers, lessors, and renters thereby constraining economic growth, or that fail to serve the poor and disadvantaged due to imperfect information, lack of capital, unequal bargaining power, or risk of distressed sales.

6. **Unsustainable Natural Resources Management and Biodiversity Loss (Column 6)** – Overharvesting or degradation of land, water, forests, pasture, and wildlife resulting in unsustainable use and biodiversity loss, or in the context of minerals, environmental degradation and practices that abuse or usurp the rights of communities/miners due to weak property rights and governance systems.

Crosscutting Constraints:

7. **Gender/ Women Vulnerability (Crosscutting)** – This constraint category further nuances other constraint columns in the matrix by asking the question of LTPR constraints for whom, and addresses discrimination in property rights, land access, land markets, and ability to sustain natural resource management by women and men.

8. **Ethnic and Socially Marginalized Populations (Crosscutting)** – The constraint categories to the left in the matrix are further nuanced in this constraints column by the questions of LTPR constraints to marginalized and disenfranchised populations including among others HIV/AIDS affected households, pastoralist societies, indigenous populations, and post-conflict and climatically vulnerable populations discriminated against or left behind by political and economic change, or needing LTPR support or protection in face of political, economic and climatic shocks.

9. **Lack of Government and Community Capacity (Crosscutting)** – This constraints category relates to the identification and development of human capital in service to land property rights reforms.

CATEGORIES OF LTPR INTERVENTIONS

1. **Institutions and Governance (Row 1)** – Institutional arrangements that improve the governance of property rights from central to local levels by establishing rule of law, devolving authority, decentralizing decision making, ensuring impartiality of the judiciary, providing for citizen participation, and ensuring accountable and democratic governance.

2. **Legal and Regulatory Framework (Row 2)** – Interventions that provide individuals, groups, communities, or legal entities with important legal rights of ownership, usufruct, exclusion, and transferability, and typically focus on legal and regulatory reforms that increase clarity of rights, strengthen rights ownership, and provide for legal recourse and due process.

3. **Rights Awareness and Empowerment (Row 3)** – Interventions aimed at raising citizen awareness and understanding of their property rights as well as the procedures and facilities available to claim, defend and enforce those rights. Illustrative interventions include mass media, human capacity training, communication strategies and informational meetings targeting beneficiaries.

4. **Conflict and Dispute Resolution (Row 4)** – Formal and informal conflict mediation and dispute resolution strategies and mechanisms aimed at mediating conflict, resolving disputes, dispelling or averting violence, providing effective legal recourse and enabling compensation in the event of resettlement and public takings.

5. **Restitution, Redistribution, and Consolidation (Row 5)** – Land reform and resettlement to redress land concentration, privatize ownership, restitute rights, resettle displaced populations, or consolidate small, fragmented units into larger ones with the aim of redressing historical injustices and achieving a more fair, equitable, and productive land and agrarian structure.

6. **Rights Delivery and Administration (Row 6)** – Effective and low-cost land administration interventions that connecting rights to land, resources and property in law with the exercise of those rights in practice and focus on improving the effectiveness and reach of government in support of rights registration, land demarcation, surveying, mapping, and cadastral development.

7. **Resource Use Management (Row 7)** – Strengthened property rights and governance to improve land and natural resources management, conservation and bio-diversity protection, or land use planning for municipal/urban development, and include such interventions as participatory decision-making, zoning, trusts, conservancies, protected areas and co-management models.

The Base Matrix in Figure 2 serves as the template for regularizing and developing empirical overlays for five natural and human resource domains in Figure 3:

- Land Tenure and Property Rights;
- Freshwater Lakes, Rivers, and Groundwater;
- Minerals;
- Trees and Forests; and
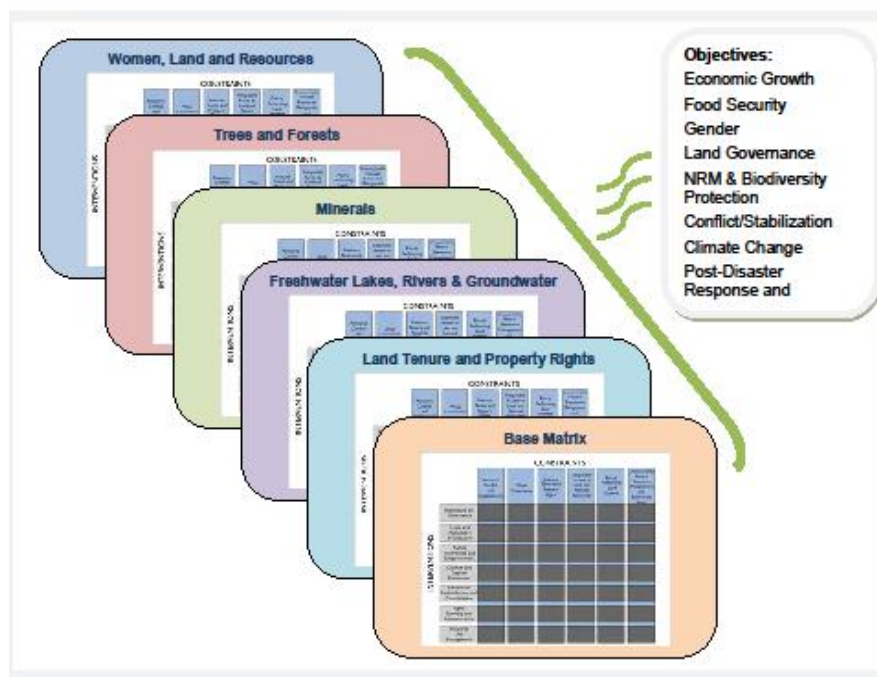- Women, Land, and Resources.

Each of these overlays is a standalone Matrix. Other domains are possible: pastures, wildlife, fisheries, and coastal areas. The overlay approach allows expandability by adding additional overlays in the future (e.g., coastal areas) as demand warrants.

MATRIX OVERLAYS

Sections 1.0 to 6.0 populate the *Trees and Forests Matrix Overlay* with salient issues and key interventions, and link these to information sources for easy reference. Annex A provides summary tables on issues and interventions extracted from the overlay which serve as useful tools for training exercises or as "quick sheets" when undertaking assessments. Overlays and quick sheets for resource domains can be found in the following overlays, all developed under the USAID Property Rights and Resource Governance Task Order:

- Overlay 1: Land Tenure and Property Rights Matrix;
- Overlay 2: Freshwater Lakes, Rivers, and Groundwater Matrix;

FIGURE 3. LTPR CONSTRAINT ANALYSIS AND INTERVENTIONS MATRIX

- Overlay 3: Minerals Matrix;
- Overlay 4: Trees and Forests Matrix; and
- Overlay 5: Women, Land, and Resources Matrix.

Each overlay is organized into chapters (see Sections 1.0 to 6.0) centered around constraint categories which:

- Provide an overview of issues and sub-issues related to respective constraints;
- Describe various policy and program interventions bundled according to intervention categories;
- Explain how the Food and Agriculture Organization of the United Nations (FAO)'s *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* addresses the constraint*;* and
- Include a list of related reading for each topic.

Whether for trainings, assessments, or project designs, there is a programmatic need to order the "universe" of possible LTPR issues and interventions. The LTPR Matrix and overlays address this need. The process of using the Matrix and overlays to examine LTPR issues and constraints generally comprises the following steps:

1. Use the Matrix and overlays to clarify or identify key issues; for example, land conflict created by disagreements over tribal/clan boundaries.

2. Identify categories of policy and programmatic interventions suited to addressing the constraints under the appropriate toolbox of interventions.

3. Within the toolbox of interventions, identify specific policy and programmatic interventions (i.e., the tools). For example, within the toolbox entitled Legal and Regulatory Framework, one might consider

granting legal recognition of customary institutions in land law or policy to address land conflict created by clan disagreements. Within the toolbox of Rights Delivery and Administration, one might recommend community land demarcation as an appropriate intervention to connect rights in law to specific boundaries of community land.

4. Each of the five overlays can be used individually or in combination, as in a landscape, watershed, or ecosystem assessment.

The specific interventions mentioned in the Matrix and overlays, while illustrative, nonetheless serve to accelerate or expand thinking when needing to conduct "how to" courses and transfer knowledge in training programs, help to target or focus questions or lines of enquiry when conducting LTPR assessments, or recommend appropriate intervention strategies whether by way of making recommendations or formulating project designs. The Matrix is thus the conceptual framework for ordering and clarifying thinking on LTPR constraints and interventions, and the causal linkages between them.

1.0 RESOURCE CONFLICT AND DISPLACEMENT

CONSTRAINTS

INTERVENTIONS	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Markets in Forest Resources	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance						
Legal and Regulatory Framework						
Rights Awareness and Empowerment						
Conflict and Dispute Resolution						
Restitution, Redistribution, and Consolidation						
Rights Delivery and Administration						
Resource Use Management						

1.1 LTPR ISSUE

Contesting claims of control and exploitation over forest resources and trees can cause or exacerbate conflicts. The presence of high-value resources such as timber may intensify conflict; and to the degree that control over timber allows combatants to generate revenue for arms, it may prolong a conflict. In countries such as the Democratic Republic of Congo (DRC), Liberia, Cambodia, and Burma, warring armies and militias have fought one another for control of timber. Conflicting claims to forest resources may spur conflicts between the state on the one hand and local or indigenous communities on the other, as has happened in Peru, Brazil, and Uganda. In Uganda, farmers contesting state claims to land as forest reserves

have uprooted boundary trees, burned plantations, and attacked forest officers while forest authorities have allegedly burned or destroyed houses and beaten villagers. Forests have long been used for their cover and resources by irregular armed groups such as the FARC in Colombia, the Naxalite movement in India, and the Moro Liberation Army in the Philippines. In response, governments have used deforestation as a means to deny use of forests by armed groups. During the Idi Amin regime in Uganda, the government encouraged clearance and settlement of forested areas where guerillas were active. During the Vietnam War, Agent Orange was used to defoliate vast forested and agricultural areas with the intent of destroying forest cover used by the Viet Cong and displace rural populations to urban areas as productivity declined to deny guerilla forces their wide base of rural support.

SUB-ISSUES

Conflict over high-value forest resources. The revenues earned from selling timber, minerals, and high-value wildlife species have been used by combatants to purchase arms or build the personal fortunes of those who control armed factions. In addition to whatever grievances originally spark a particular conflict, control over the resulting income derived from the sale of timber and other forest commodities becomes a driver of continued conflict. In 1999, during the regime of Charles Taylor, revenue from timber comprised 50 percent of Liberia's export earnings.

Conflicting claims between the state and local or indigenous communities. Throughout the world, states claim control over forest or woodlands, despite historical or existing claims to underlying land by communities or individuals. About 75 percent of the forested area of the developing world is held under public ownership but varies regionally from 36 percent in Latin America, 68 percent in Asia, and 98 percent in Africa. Non-state claimants dispute the status of land designated as forest reserves or parks most frequently where governments have failed to adequately demarcate and maintain forest boundaries or where government institutions have actively encouraged settlement of lands. Though conflicts over forest tenure may not readily escalate into armed conflict, they do account for a high percentage of violent and non-violent disputes against governments. In many countries, including Uganda, India, Indonesia, Malaysia, and Peru, forest-dwelling and forest-adjacent communities have contested state demarcation of forest reserves or national parks and sought to assert their historical claims to land as "indigenous" people whose rights precede and preempt claims by the state. However, in some regions (Latin America), forests are moving into the hands of private communities and other private actors, away from centralized state control, helping to devolve forest rights and forest management.

Deforestation and degradation as a consequence of conflict. For forest-dependent communities, deforestation or degradation associated with conflict may be an additional cause of displacement. Combatants and displaced people driven to the forest may "live off the land", engaging in widespread poaching and fuel wood collection. Governments and armed factions may construct roads into and through forested areas as part of an overall military strategy for mobilizing forces, defending remote frontier areas, or combating insurgents. The new roads then increase the exploitation and degradation of forest ecosystems.

Conversion of natural forest and woodlands to commercial wood and biomass production or agricultural uses. Conversion of land to agricultural use is a significant cause of deforestation, leading to conflict with existing forest-dwelling and forest-dependent communities. An estimated 13 million hectares of natural forest were converted to other uses annually during the period from 1990 to 2005. In Indonesia and Malaysia, clearance of natural forests and conversion of the underlying land to commercial palm oil plantations have resulted in conflict with nearby communities or indigenous communities dependent upon intact natural forests.

1.2 ILLUSTRATIVE INTERVENTIONS

The range of possible interventions relevant or applicable to this particular issue constraint can be quite broad depending on circumstances, and the need in any policy context to carefully adapt, target, sequence and nuance interventions according to institutional context and need. The interventions cited below are thus generalized and illustrative. The reader is further encouraged to review interventions for other constraint categories as well as a single intervention can be relevant to multiple constraints, particularly in contexts when multiple constraints across columns of the matrix are present or when of bundle of interventions across rows is required. Issues and interventions should thus be addressed holistically rather than concentrating on a single column or row.

	Resource Conflict and Displacement
Institutions and Governance	• **Strengthen capacity of forest authorities.** Conflicts in the forest sector arise in part due to corruption or cronyism in authorities responsible for forest governance or weak capacity to exercise control sufficiently to manage and resolve conflicts. Donor support and efforts that focus on increased accountability, transparency, and law enforcement in the forest sector can help address some conflicts. • **Promote coordination among government forest agencies.** Forest-related conflicts may arise due to conflicting, contradictory mandates between government institutions (e.g., a Ministry of Agriculture promoting settlement and clearance to make productive use of land while a Ministry of Forestry is seeking to protect forest areas from being cut). Ministries need to coordinate their policies and actions and amend conflicting directives and actions that may confuse the public and result in conflicting aims in areas where their jurisdictions may overlap. • **Promote access to justice.** Provide fair and impartial judiciary to hear claims, settle grievances, and provide fair recompense and legal recourse. Forest authorities responsible for managing forest resources should not be the final arbiter in disputes over forest access and use, given their likely vested interest in forest management. • **Strengthen civil society.** Expand capacity and role of civil society in advocacy, protection of human rights, and assistance to displaced and other affected populations with service delivery. • **Support local communities with participatory governance.** Work with local communities to establish systems to monitor forests, encourage compliance, enforce laws, and protect people who engage in such efforts. • **Decentralize or devolve forest governance.** Revise the legal framework to transfer control of forests to local governments and communities to improve forest monitoring and management.
Legal and Regulatory Framework	• **Reduce legal pluralism.** Clarify and formalize the relationship between customary regimes and statutory law, particularly in situations of establishing and managing protected areas, buffer zones, and public and private forest land. • **Harmonize forest and land laws.** Review forest and land laws to reconcile conflicting provisions and reduce unintended consequences (e.g., revise land development laws that promote forest clearance). • **Promulgate or revise forest regulations.** Forest regulations that detail forest access and use rights may be unclear or insufficiently detailed to provide guidance to forest managers or users. In many cases, existing forest regulations may need revision to formally recognize access and use rights of communities and individuals.
Rights Awareness and Empowerment	• **Raise public awareness.** Use media and consultation to inform affected peoples about proposed demarcation of protected areas; resettlement programs; and their rights, benefits, and recourse. • **Improve forest rights advocacy.** Raise awareness and capacity of civil society and

	Resource Conflict and Displacement
	less powerful interest groups to articulate their interests, and negotiate access and use rights, particularly for forest-dwelling, dependent groups. Advocacy by both communities of affected people, local, national, or international human rights organizations can play an important role in preventing attempts by government to displace forest-dependent people without due process. • **Foster public education and engagement.** Invest in public education and consultation to engender widespread public debate and engagement. Fostering such engagement can be a key component of creating vibrant civil engagement in forest policy and use planning.
Conflict and Dispute Resolution	• **Increase access to legal assistance.** Provide legal assistance to those who are displaced due to arbitrary actions by forest authorities or whose legally recognized rights of access and use have been denied. • **Promote alternative dispute resolution (ADR).** Strengthen local dispute resolution institutions to enable engagement in local forest-related disputes. Where appropriate, use independent third parties to help mediate disputes between forest authorities and local communities and individuals. • **Conduct stakeholder forums.** Involve representatives from government, timber companies, forest-dependent populations, non-timber forest product (NTFP) chains, and civil society in open dialogues to negotiate use rights, plan forest management, and resolve conflicts.
Restitution, Redistribution, and Consolidation	• **Develop fair and equitable restitution and compensation programs.** Develop equitable and reliable restitution and compensation programs to settle grievances and resolve conflict. • **Resettle displaced populations.** Resettle people displaced from forest areas claimed by the state or other actors. • **Develop resettlement plans.** Consult with affected populations and potential host communities prior to relocation to determine relocation options and financial and material support necessary for successful relocation to mitigate risk of conflict. Such plans should be targeted, comprehensive, relevant, and legitimate to enable sustainability. • **Compensate for state takings.** Establish systems for prompt, adequate, and effective compensation of assets and livelihoods lost by forest land takings either in cash or in-kind. • **Consolidate forest management areas.** Employ parcel trades, purchases, or easements on public, private, and community forest land to reduce management costs and resolve site-specific conflicts.
Rights Delivery and Administration	• **Formalize forest rights.** Forest dwellers and indigenous communities with customary but legally unrecognized rights may face challenges from parties seeking to control access and use, and exclude those without statutorily protected rights. Those claiming customary rights may seek to assert and defend their rights to forest resources against outsiders, resulting in conflict. Government recognition of customary claims/rights provides a basis for legal protection of rights and may help forestall violent conflict between contesting parties. • **Shift from exclusion to managed use.** Replace policies that engender conflict by excluding all access to forest resources with policies that allow for managed, monitored harvesting. • **Demarcate forest concession boundaries.** Address disputes between local communities and formal concession-holders through a transparent and inclusive process that physically indicates concession boundaries. • **Monitor and enforce agreements.** Establish systems for effective monitoring and enforcement of laws and agreements regarding settlement in forests, and timber and forest product extraction.

Resource Conflict and Displacement
Resource Use Management

- **Consider NTFP users.** Forest authorities may focus primarily on timber production, biodiversity, or tourism as the primary uses of forest resources and manage accordingly. Failure to acknowledge the concerns of other user groups in management planning and practice may lead to conflict among user groups and between relevant authorities and users (e.g., forest management that encourages mature, closed-canopy forests may lessen sub-canopy growth of shrubs and grasses that may be an important source of fodder or other materials collected by women). Management policies and decisions should consider the impact upon all users in order to minimize potential conflicts.
- **Support forest certification programs.** Establish or strengthen publicly funded forest certification programs and land and natural resource inventories to help identify and protect forest assets and improve community and government awareness of forest assets under their respective jurisdiction.
- **Establish and strengthen co-management institutions.** Carefully design and strengthen co-management institutions to improve governance of public and community forests and encourage participatory management among government and private sector groups to increase ownership and reduce conflict.
- **Introduce technologies to improve management of forest and non-timber products.** Introduce technologies to increase managed production of firewood, and promote efficiency of charcoal production and fuel use. More efficient fuel wood and charcoal production and reduction of demand help to lessen geographic extent of pressure on forest resources and thereby reduce conflict with other forest users.
- **Control unbridled forest exploitation.** Promulgate regulations and enforcement mechanisms targeting logging companies, mining companies, and other private sector interests and elites whose actions degrade forest resources and contribute to conflict.
- **Use forest assessments and strategic planning.** Conduct ex-ante social and environmental analysis to determine the likely impacts of the creation of protected areas and associated economic and social costs of these impacts, including the potential for unleashing conflict.

1.3 READINGS

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2.0 WEAK GOVERNANCE

CONSTRAINTS

INTERVENTIONS	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Markets in Forest Resources	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance		☐				
Legal and Regulatory Framework		☐				
Rights Awareness and Empowerment		☐				
Conflict and Dispute Resolution		☐				
Restitution, Redistribution, and Consolidation		☐				
Rights Delivery and Administration		☐				
Resource Use Management		☐				

2.1 LTPR ISSUE

Growing pressure on the world's forests intensifies the need for effective governance of forest resources. The pressure comes from new industrial concessions, demand for land to grow biofuels, oil and mineral exploration, creation of forest protection zones, and increasing competition for land and resources for habitation and livelihoods. According to the Food and Agriculture Organization of the United Nations (FAO), over 80 percent of the world's forests are publicly owned. This proportion rises to over 90 percent in South and Southeast Asia and Africa, with the vast majority of forest in each case under national government control. Forest protection, many governments say, cannot be entrusted to local communities and rather is best done by state authorities with perhaps help from environmental nongovernmental organizations. However, according to Property and Environment Research Center, deforestation rates are substantially

higher on lands protected by the state than in community-managed forests. Many public forests therefore suffer from extensive large-scale illegal logging and other extractive activities. In some instances, people empowered by governments actively facilitate illegal activities and engage in rent seeking. Inconsistencies between economic growth and conservation policies also sometimes allow for large-scale extraction and facilitate forest clearing in prime forest areas. When countries decentralize governance and devolve responsibilities to local governments, governance does not always improve.

Communities own a much smaller proportion of the world's forests. Local villages and municipalities own less than 10 percent of forests in Southeast Asia, and close to 1 percent in Africa. The FAO estimates that an additional 3 percent of forests in Africa are managed through joint agreements with governments. Important exceptions are Papua New Guinea and Mexico, where local communities and indigenous groups own the vast majority of forests. While devolution of responsibility and authority over forests to user groups has resulted in reduced illegal activities, improved forest conditions, and biodiversity conservation in many African and Asian countries, numerous challenges remain, particularly involving governance of these resources. Finally, privately held forests are few but increasing. Allocating forest land to individual smallholders can promote forest protection and tree planting, though many governments lack appropriate laws to regulate these forests. Indeed, governance underlies many forest management challenges whether the state, communities, or private interests own forests.

SUB-ISSUES

Centralized forest management. Poor governance plagues the management of all state forests, from protected areas to commercially exploited forests. Forest management falls short because central governments dedicate insufficient financial and human resources and do not possess the technical capacity to clearly delimit forest areas, develop and implement management plans, transparently compete and grant concessions, and monitor forests and enforce laws. The result is uncontrolled open access to forest products and unsustainable levels of extraction in the form of illegal logging, unlicensed small-scale logging, poor management of concessions in remote areas, approval of timber volumes with no field inspection, under-reporting of log/sawn timber production, evasion of taxes, and poaching of wildlife. To address such weaknesses, some countries have decentralized governance to subnational levels. In these cases, forest management has been transferred along with other responsibilities. Yet, as with decentralization efforts more generally, national governments often do not provide local and regional authorities with the resources and technical skills necessary to implement new forest management responsibilities. In some cases, decentralization has simply resulted in the transfer of illegal activities and corruption from central to local levels. Management weaknesses at all levels have a profound, self-reinforcing impact on governments. Indonesia, Gabon, Ghana, and Cameroon all lose substantial potential revenue as over half of the wood harvested in these countries is done so illegally.

Limits to devolution. In the belief that bringing control over resources closer to the people who depend upon them will improve forest stewardship, many countries are in the process of devolving the authority to govern subsistence forests to local communities. Devolution may take the form of community forestry, in which villages are granted ownership rights; leasehold forestry in which the state retains ownership but devolves management and use to local communities; or community forest management and timber concessions, such as the Multiple Use Zones of the Mayan Biosphere Reserve in Guatemala. In practice, even where resident communities have the necessary forest management knowledge and institutions, these efforts have yielded mixed results. One challenge is that governments often incompletely devolve authority through laws that transfer responsibilities but not rights or the benefits therefrom. For example, a government may

require a community to limit harvesting of a commercial forest resource, yet not increase its authority to draw revenue from the use of that resource. Many devolution programs have also burdened local forest management institutions with overly bureaucratic processes, such as extensive management plans and other responsibilities beyond their capacity. Forest devolution efforts have also been known to result in elite dominance and gender inequities in decision making and inadequate participation by the poor.

Challenges of co-management. Co-management arrangements are gaining momentum as they have successfully contributed to the protection of forests and increased access rights of the rural poor to public forest resources. Co-management may involve some form of joint management between communities and government entities on state or community forests, and may involve recognition of local tenurial rights, benefit sharing, power sharing allowing communities to determine and regulate access, and/or decision making and enforcement powers. These co-management arrangements have produced mixed results, and many have fallen well short of their potential. Some studies suggest that co-management projects maintain and even extend central government control to forest resources. Indeed, co-management arrangements are rarely truly collaborative, and governments tend to control decision making and management. In some cases, joint forest management agreements may require communities that once controlled forests independently to share their income with the state forest department. Co-management has faced challenges in dividing roles, rights, and responsibilities, especially where the groups involved have highly divergent interests. Participation of women, pastoralist groups, and other marginalized groups tends to be low. Nevertheless, carefully designed and implemented co-management initiatives hold high promise in building upon knowledge, skills, and abilities of local communities, as well as local and regional governments.

Poorly managed concessions. Forest concessions are the dominant form of forest tenure in almost all of the forest countries in West and Central Africa, much of Southeast Asia, and parts of Latin America. Forest concessions cover 76 percent of the forest area in Cameroon, 44 percent in Cambodia, and 32 percent in Suriname. While the practice of granting concessions has successfully stimulated commercial timber harvesting and encouraged forest-based industrial development, more often than not they have yielded smaller than expected economic and financial benefits. Often, influential individuals use bribery and other forms of corruption to divert timber concession revenues and undermine effective monitoring and forest management. The underfunded forestry departments of many countries lack adequate trained field staff and equipment to monitor logging activities and ensure proper forest management. In some cases, governments, private companies, and the elite control logging operations and forest concessions to the exclusion of other stakeholders.

Contradictions between national macroeconomic and forest conservation policies. Macroeconomic policies promoting large-scale industry threaten high-value forested areas worldwide. The near-term national economic benefit to be drawn by governments of developing countries from protecting forests is frequently overshadowed by the revenue potential of oil exploitation, mining, logging, and commercial agriculture or cattle raising for export markets. The demand for biofuels such as corn, sugarcane, soy, and palm oil, is rapidly increasing private sector claims on forests. In Indonesia, demand for pulpwood is leading to the conversion of forests into eucalyptus plantations. There is a need to ensure that macroeconomic policies take into consideration ecological benefits of forested areas. Governments should delineate sustainable use versus full protection forests, and make strict provisions for conservation of critical forest areas by supporting watchdog organizations or through co-management arrangements with local communities.

Unbalanced incentives in private forest management. Countries are increasingly privatizing forests, generally to the benefit of large corporations. Most countries scarcely regulate transnational corporations, and

do nothing to counteract the market incentives that favor planting fast-growing tropical forest plantations. Forest privatization rarely increases a country's slow growing natural forest, despite its non-market benefits and ecosystem services to the public.

2.2 VOLUNTARY GUIDELINES WITH RESPECT TO PUBLIC LAND FISHERIES AND FORESTS

To address the above issues, Section 8 of the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* includes the following :

1. "Where States own or control land, fisheries and forests, they should determine the use and control of these resources in light of broader social, economic and environmental objectives…

2. Where States own or control land, fisheries and forests, the legitimate tenure rights of individuals and communities…should be recognized, respected and protected, consistent with existing obligations under national and international law, and…to voluntary commitments….

3. Noting that there are publicly-owned land, fisheries and forests that are collectively used and managed…States should, where applicable, recognize and protect such publicly owned [resources]…and their related systems of collective use and management…

4. States should strive to establish up-to-date tenure information on land, fisheries and forests…by creating and maintaining accessible inventories [that]…record the agencies responsible for administration as well as any legitimate tenure rights held by indigenous peoples and other communities with customary tenure systems and the private sector…

5. States should determine which of the land, fisheries and forests they own or control will be retained…by the public sector, and which…will be allocated [to]…others and under what conditions.

6. States should develop and publicize policies covering…tenure rights…Local communities that have traditionally used the land, fisheries and forests should receive due consideration in the reallocation of tenure rights…Such policies should ensure that the allocation…does not threaten the livelihoods of people by depriving them of their legitimate access to…resources.

7. States have the power to allocate tenure rights in various forms, from limited use to full ownership. Policies should recognize the range of tenure rights and right holders. Policies should specify the means of allocation of rights, such as allocation based on historical use…

8. States should allocate tenure rights and delegate tenure governance in transparent, participatory ways, using simple procedures that are clear, accessible and understandable to all, especially to indigenous peoples and other communities with customary tenure systems…

9. States should monitor the outcome of allocation programs, including the gender-differentiated impacts on food security and poverty eradication as well as their impacts on social, economic and environmental objectives, and introduce corrective measures as required."

2.3 ILLUSTRATIVE INTERVENTIONS

The range of possible interventions relevant or applicable to this particular issue constraint can be quite broad depending on circumstances, and the need in any policy context to carefully adapt, target, sequence and nuance interventions according to institutional context and need. The interventions cited below are thus generalized and illustrative. The reader is further encouraged to review interventions for other constraint categories as well as a single intervention can be relevant to multiple constraints, particularly in contexts when multiple constraints across columns of the matrix are present or when of bundle of interventions across rows is required. Issues and interventions should thus be addressed holistically rather than concentrating on a single column or row.

	Governance
Institutions and Governance	• **Decentralize governance.** Transfer authority for forest management to elected regional and local governments. Include powers to enforce laws, and levy and manage fees. Delimit responsibilities clearly, and focus on critical requirements. • **Streamline and strengthen institutions.** Integrate and streamline overlapping institutional mandates to improve operating efficiency and governance and to prepare for decentralization of allocation and protection of forest rights. Build technical and institutional capacity. • **Allocate and manage concessions transparently.** Allocate forest concessions through transparent, competitive, and well-publicized auctions regulated by multi-stakeholder independent commissions. Reduce contract size to encourage competition by smaller enterprises. Introduce system of public disclosure and independent auditing of revenue generated through concessions and other forestry activities. • **Improve fiscal management of concessions.** Allocate a sufficient proportion of forest revenues toward unbiased, transparent, and independent auditing, inspection, and monitoring of the forest condition and for the supervision of logging concessions. Establish monitoring bodies that include representatives from decentralized governments, communities, civil society, and the private sector. • **Strengthen civil society.** Expand capacity and role of civil society in advocacy and in promoting good governance of public forests, including forest concessions and protected areas. Where feasible, use funds generated by concessions to strengthen local community capacity to manage forests in which they have rights. • **Establish and strengthen co-management institutions.** Carefully design and strengthen co-management institutions to improve governance of public forests and open access forest resources; ensure meaningful participation from women, pastoralists, and other vulnerable groups.
Legal and Regulatory Framework	• **Harmonize forest policy with national priorities.** Harmonize forest policies with other national priorities, such as economic development and poverty alleviation to reduce competing demands on forest lands, and to reserve forest areas that are of particularly high ecological significance. • **Safeguard procedural rights.** To improve transparency in government functions, recognize in statutory law the right for public entities to participate in political decision making, the right to information, and the right to access justice. • **Craft clear and enforceable forest contracts.** Support transparent, unequivocal language in forest concession contracts to facilitate monitoring and enforcement. • **Promote forest certification schemes.** Encourage certification of forest practices to exempt holders from government forest audit, increase profits, and liberate scarce state monitoring and enforcement resources.

Governance
• **Devolve ownership and management.** Legally recognize customary rights to forest lands and resources; and devolve forest management to legally established, accountable, representative local institutions such as community forestry user groups. Transfer autonomous powers over the management of forest resources.

	Governance
Rights Awareness and Empowerment	• **Raise awareness of forest management responsibilities.** Train government and local groups to raise awareness of rights of citizens (e.g., laws and regulations supporting devolution and co-management schemes), and empower them to participate in resource governance. • **Formalize and promote customary forest rights.** Build on socially legitimate local principles, rules, institutions, and practices for formalizing customary forest rights allocation and management to ensure equity. Provide technical and institutional capacity as needed. • **Ensure participation of marginalized forest groups.** Ensure traditionally marginalized groups are empowered to participate in decision making and management of forest and tree resources. This may involve strengthening women's community forestry and indigenous groups, and engaging pastoralists and other migrant groups. • **Support watchdog organizations to stamp out corruption.** Build nongovernmental organization and civil society capacity to inform governmental efforts to stamp out corrupt forestry practices by identifying and making public illegal activities, their causes, and approaches to combat them. • **Promote partnership on community lands.** Facilitate creation of corporate-community management schemes where logging or other forest uses are conducted on community-owned land to mutually benefit both communities and private companies.
Conflict and Dispute Resolution	• **Improve formal and alternative dispute resolution.** Develop systematic, accessible, transparent, efficient, and locally accepted approaches to resolve disputes between forest officers and communities, and between companies and communities. • **Empower communities to resolve disputes.** Support nongovernmental organizations and other civil society groups to help local communities resolve disputes, pursue legal recourse, and defend their rights in forested land. Engage women and other marginalized groups in dispute resolution processes.
Restitution, Redistribution, and Consolidation	• **Institutionalize restitution of forest rights.** Where local rights have been eliminated and rights have been granted to concessionaires, develop and implement fair and transparent procedures for restitution of rights to forest land and resources to landholders and secondary rights holders, including women and/or other forest dependent marginalized groups. This will require adopting appropriate laws, and establishing the necessary government and civil society institutions to facilitate implementation. • **Review concessions and support restitution.** Review legality and fairness of forest concessions and other contracts. Nullify and relocate illegal or unjust concessions through transparent procedures. • **Implement transparent compensation processes.** Where restitution is not possible, establish a process for compensating those losing land or other forest use rights; engage all stakeholders to ensure a transparent system for compensation.
Rights Delivery and Administration	• **Improve and streamline administrative processes.** Develop and implement standardized transparent processes for application and approval of concessions, demarcation of concession areas, record keeping, and inspection of concession areas. • **Support community boundary demarcation.** Support state and civil society institutions to demarcate and adjudicate boundaries of resident community lands and resource use, protected areas, and concessions to improve governance. Define clear

Governance
rights associated with each.

- **Create transparency in transactions.** Strengthen institutions, protocol, and information management at central and local levels to ensure transparency in awarding and renewing concessions, contracts, and licenses.
- **Introduce co-management agreements.** Develop and implement joint agreements (e.g., co-management agreements) between state and local communities in the management of public forests. Employ open, transparent communication and neutral brokers to delimit roles, rights, and responsibilities clearly between national authorities and communities, and among community members.
- **Support rights registration and broadly disseminate information.** Take advantage of data systems to register and update data on concessions and unregistered logging and NTFP harvesting activities; make data accessible to national and local-level stakeholders such as small-scale forest users. Digitize preexisting titles, contracts, and other documents to bring them into the digital database.
- **Strengthen cadaster systems.** Establish and institutionalize procedures to create and maintain accurate and publicly available forest resource cadaster.

Resource Use Management

- **Support multi-stakeholder management bodies.** Establish multi-stakeholder environmental management bodies to reinforce and guide governmental actions to promote sustainable forests.
- **Promote participatory integrated land use planning.** Engage multi-stakeholder groups including women in developing integrated land use management plans for improved governance. Plans should protect ecosystem services and wildlife corridors; identify and help regulate forest uses,; and manage competing local, regional, and national interests.
- **Promote public forests' management planning.** Clarify use rights and reduce forest crimes through adoption of management plans in protected areas and government forests; this helps in monitoring forest use and identifying illegal activities.
- **Undertake environmental impact assessments.** Ensure that all commercial logging and NTFP firms implement independent EIAs and develop Environmental Mitigation and Management Plans (EMMPs) prior to logging. Make these EIAs and EMMPs available to the public for monitoring purposes.
- **Develop community forest management plans.** Assist communities in developing simple management plans for community forests, to enable state monitoring. The relevant government agency can provide templates, while nongovernmental organizations can be supported to assist communities.
- **Promote conservation easements.** Establish mechanisms by which private forest landowners protect sensitive areas and species by imposing restrictions on use in exchange for payments, tax breaks, or enhanced tenure security.

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3.0 INSECURE TENURE AND PROPERTY RIGHTS

CONSTRAINTS

INTERVENTIONS	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Markets in Forest Resources	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance						
Legal and Regulatory Framework						
Rights Awareness and Empowerment						
Conflict and Dispute Resolution						
Restitution, Redistribution, and Consolidation						
Rights Delivery and Administration						
Resource Use Management						

3.1   LTPR ISSUE

Strengthening forest tenure can improve forest management and conservation. Members of communities given greater and more stable control over forest land and resources participate more actively in forest management. Yet, despite the positive benefits associated with increased security at the community level, governments regularly take actions that weaken the forest rights of communities. Dissonance or contradictions between customary tenure and statutory law destabilizes forest land and resource tenure, as do provisions in statutory law regarding rights in land that conflict with those regarding forest resources. While

this lack of clarity undermines the security of tenure for all, it also provides opportunities for the more powerful to take advantage of the ambiguity. Security of tenure is critical for capital-intensive companies; however, their efforts to ensure stable rights to harvest timber and other forest resources often undermine the tenure security of forest communities and small-scale industries. The elimination of hunting, mining, and logging is critical to the management of protected areas and timber concessions, yet governments rarely consult populations residing in and around forest areas when they grant forest concessions, set aside forests for protected areas, or open them up for tourism. More often than not, resident communities are evicted or lose access to land and other resources, sometimes with no compensation. Research shows that conservation projects alone have displaced tens of millions of people from forests since the 1990s. Governments that do not adequately negotiate conditions for takings of forest and land, and poorly manage relationships with forest-dependent communities undermine not only the tenure security for local actors, but for protected areas and concessions as well.

Finally, field trees are an important form of livelihood security for rural households. Research shows that insecure land tenure influences investment in trees and tree crops; the more secure the tenure, the more likely farmers will plant trees. Where tenure is insecure, farmers will sometimes plant trees, and use the tenure security of that investment to secure their rights to the underlying land resource, particularly in contexts of arable land use where competition is high.

SUB-ISSUES

Legal pluralism. In many countries, statutory and customary land tenure systems evolve independently and differ greatly. Local leaders may exercise customary authority to allocate rights independently of any state laws, and national governments may explicitly outlaw local tenure regimes, or simply ignore claims based on custom. Members of local communities nevertheless continue to stake claims on forest land and resources, as do governments and large companies. This lack of clarity destabilizes tenure for all parties.

Unclear and limited rights to forest resources. Even where land rights of resident communities may be clear, specific resource rights to forest resources often remain ambiguous. This includes rights to harvest commercial use timber, NTFPs, and minerals. More recently, rights to forest carbon have presented legal challenges. Even where laws on carbon rights may be present, they may not distinguish between rights of local communities to sequestered carbon (actually stored carbon); carbon sinks (natural entities that retain the carbon, including land (above and below ground); subsurface carbon; tree ownership when separate from land ownership; carbon sequestration potential; carbon credits (the right to pollute an amount equivalent to the carbon sequestered in, or emissions avoided from, a natural sink)*;* and use rights (e.g., easements, leases, profits).

Contested state land takings and dispossession of indigenous groups. Governments grant concessions or designate protected areas, in many cases encroaching on customary rights of indigenous peoples that reside in these forests. Takings may be backed by statutory law, or enforced in ignorance or violation of the law. Regardless of their relationship to statutory law, they are often executed with little or no recognition of customary law and territorial rights. State expropriations of forest land often undermine local and indigenous peoples' sovereignty, livelihoods, and cultural and political capital which are impossible to compensate or relocate. While increasing recognition is being given to rights of indigenous populations and the need to inform and consult with communities, some governments continue to expropriate forest lands by force, with little discussion, negotiation, or compensation, and without the perception of legitimacy ,by local populations.

Loss of, or diminished use rights to, forest resources. Communities in and around forest concessions and protected areas often risk losing access to common resources including timber, NTFPs, firewood, medicinal plants, water, fisheries, and grazing land from which they derive resources for subsistence or commercial use. Where communities are provided compensation, the primary landowners may benefit, while secondary rights holders may receive little or nothing.

Insecurity driven by commoditization of carbon. Efforts in recent decades to create markets in forest carbon have increased tenure insecurity in countries with forests. National governments are in the process of passing the laws and regulations necessary to determine and allocate rights to forest carbon and the credits generated through the reduced emissions from forest deforestation and degradation. Few countries have yet conducted fundamental studies and established the institutions to implement forest carbon programs. Further legislation and implementation experience will be necessary before rights are consistently and commonly recognized and accepted among national, community, and private claimants. Although still largely unrealized potential, this new approach to deriving value from forests has already increased governmental claims to forest and contributed to the destabilization of tenure.

Farmland inequality and landlessness negatively impact forests. Land tenure-related inequities elsewhere can increase pressure on forests and disrupt the tenure of local communities. In much of Latin America, where landlessness remains high, there is an influx of large numbers of farmers into forests, affecting some of the most diverse forest areas in the world. In countries such as Brazil and Ecuador, governments have responded to the problem of landlessness by sponsoring migration and smallholder agricultural expansion into forests. In Ecuadorian Amazon for example, farmers from the Andes and coastal regions faced with landlessness, unemployment, and land degradation have been encouraged by the government to migrate to forest areas where they are provided land titles for 45- to 50-hectare plots. To secure these rights, farmers clear the forest for agriculture and other uses.

Duration of rights and incentive problems. Depending upon the type of ecosystem and species of trees being harvested, the duration of rights, both excessively short and excessively long, can lead to unsustainable harvest. For instance, community forestry leases and co-management arrangements sometimes prescribe short-term agreements of five to ten years, without adequately taking into consideration growing cycles of indigenous species of trees. This can undermine the sense of ownership and fail to provide the right incentives for long-term investments in forest lands. On the other hand, studies show that long-term concessions (50 or more years) may encourage illegal or unsustainable practices by logging companies or speculation, leaving large areas of forest locked up and public forest resources idle. Therefore, appropriate duration of rights needs to be determined in each context to promote long-term investments in forest lands.

Tenure insecurity's impact on tree planting. Research shows that where land tenure is insecure, farmers are less likely to plant trees and tree crops. Where farmers hold multiple farm plots, they will choose to plant trees on land held in more secure tenure, and annual crops in less secure holdings. Where governments legislate state ownership of trees growing on private farms, and restrict cutting, landholders have less interest in planting trees. Likewise, within the household, women lacking land rights outside of what is provided by male relations may want to plant trees on farms to ease the burden of collecting firewood and fodder for livestock, but may not be allowed to plant by men. Contrary to expectation, research in sub-Saharan Africa has also found high levels of investment by insecure tenure landholders or tenants who make the investment to strengthen their claim of land ownership. Agroforestry projects should thus take into consideration customary land and tree tenure systems and the (dis)incentives that they provide to local populations.

3.2 VOLUNTARY GUIDELINES WITH RESPECT TO CLIMATE CHANGE

To address the above issues, Part 6 of the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* includes:

1. "States should ensure that the legitimate tenure rights to land, fisheries and forests of all individuals, communities or peoples likely to be affected, with an emphasis on farmers, small-scale food producers, and vulnerable and marginalized people, are respected and protected by laws, policies, strategies and actions with the aim to prevent and respond to the effects of climate change consistent with their respective obligations….

2. Where appropriate, States should strive to prepare and implement strategies and actions in consultation and with the participation of all people, women and men, who may be displaced due to climate change. Any provision of alternative land, fisheries, forests and livelihoods for displaced persons should not jeopardize the livelihoods of others…

3. States should facilitate the participation, consistent with the principles of consultation and participation of these Guidelines, of all individuals, communities or peoples, with an emphasis on farmers, small-scale food producers, and vulnerable and marginalized people, who hold legitimate tenure rights, in the negotiations and implementation of mitigation and adaptation programmes."

3.3 ILLUSTRATIVE INTERVENTIONS

The range of possible interventions relevant or applicable to this particular issue constraint can be quite broad depending on circumstances, and the need in any policy context to carefully adapt, target, sequence and nuance interventions according to institutional context and need. The interventions cited below are thus generalized and illustrative. The reader is further encouraged to review interventions for other constraint categories as well as a single intervention can be relevant to multiple constraints, particularly in contexts when multiple constraints across columns of the matrix are present or when of bundle of interventions across rows is required. Issues and interventions should thus be addressed holistically rather than concentrating on a single column or row.

	Insecure Tenure and Property Rights
Institutions and Governance	• **Decentralize governance.** Transfer authority for forest management to elected regional and local governments; strengthen their capabilities in transparent governance. Include the powers to enforce laws and levy and manage fees in concession areas, protect and conserve protected areas, and monitor and protect rights of local forest users. Consider collaborative arrangements of governance involving local communities. • **Devolve governance and strengthen civil society.** Transfer forest governance to local communities. Expand capacity and role of civil society in rights advocacy, protection of land and forest resource rights of local communities, and provision for citizen participation in decision making. Involve women's advocacy groups. • **Support networks of civil society organizations.** Support creation of federations, associations, and cooperatives of small-scale forest entrepreneurs and holders of private forests to strengthen their negotiating, communication, and

	Insecure Tenure and Property Rights
	technical capacity. • **Enable enforcement of logging contracts.** Responsible government agencies should ensure that a system of monitoring and enforcement is in place before issuing logging contracts. Government agencies should ensure these enforcement systems are implementable and implemented. • **Support corporate social responsibility.** Instill ideas for corporate responsibility within the forest sector and reporting protocols for new forest associations, potentially with assistance from an independent observer.
Legal and Regulatory Framework	• **Harmonize forest policy with national priorities.** Harmonize forest policies with other national priorities, such as economic development and poverty alleviation to reduce competing demands on forest lands, and to reserve forest areas that are of particularly high ecological significance. Ensure various institutions responsible for supporting these diverse interest/policies coordinate their activities through national working groups. • **Strengthen rights in forest codes.** Clarify and strengthen rights of ownership, usufruct, exclusion, and transferability of forest rights and trees, and ensure their fair and equitable allocation. Recognize customary norms and practices. Clarify and strengthen rights of local communities to timber, NTFPs, and other forest resources. • **Reduce legal pluralism.** Clarify and formalize the relationship between customary regimes and statutory law in relation to land and forest rights. Stipulate when decisions under customary regimes should be backed by the state, and when customary options must be exhausted before filing with the formal system. • **Strengthen rights to forests and ecosystems.** Recognize, in law, customary ownership and management of forest ecosystems that provide services (e.g., carbon sequestration, provision of clean water, biodiversity, and ecotourism. • **Clarify policy on rights to forest carbon.** Clarify and establish clear rights to forest carbon and benefit sharing from carbon markets. • **Protect forest rights of indigenous populations.** For indigenous populations that reside within forest areas, there is a specific need to ensure their land rights are protected. Ensure legal framework provides the necessary provisions to protect the ancestral domains of indigenous peoples. • **Codify free, prior, and informed consultation.** Organize and systemize, in law and regulation, the principles and procedures of free, prior, and informed consultation to enable communities to demand compensation for damages or a continuing share of profits from resource extraction. Institutionalize their implementation and enforcement. • **Modify incentive structures to conserve forests.** Revise laws regarding "unproductive" use of land that promote forest clearing as proof of productive land use. Revise laws restricting farmers and others from planting and managing certain species of trees on farms and in forests. Ensure terms of land and forest rights provide incentives for long-term investments (e.g., planting indigenous tree species). • **Secure tenure for concessions.** Clarify land and forest laws to ensure duration and ease of renewal is attractive for investors in the sustainable timber and forest carbon industries.
Rights Awareness and Empowerment	• **Raise legal awareness or forest rights.** Conduct public awareness campaigns to spread accurate and reliable information on forest law and opportunities to formalize rights, obtain legal assistance, or seek legal recourse. Ensure groups advocating for women and other vulnerable communities receive and disseminate information to these segments of the population. • **Conduct stakeholder forums.** Hold multi-stakeholder forums to negotiate and clarify forest rights. • **Strengthen rights awareness of marginalized groups.** Actively create

	avenues for participation of women and other vulnerable groups in tree planting and forest protection activities by securing their rights to tree resources; obtain support from customary institutions. • **Enhance participation of local forest organizations.** Strengthen rights of forest user groups to collect revenues and make investments in and around forest lands. Where appropriate, forest user groups may be provided small land concessions for agroforestry activities in buffer zones in exchange for increased participation in protection from illegal activities. • **Support advocacy for community/gender-based forestry management.** Strengthen capacity of civil society organizations to facilitate advocacy by communities for law and policy reforms to make forest tenure less vulnerable. Place special attention on strengthening female leaders and leaders from other vulnerable groups to effectively communicate, negotiate, mediate, and advocate for their rights.
Conflict and Dispute Resolution	• **Monitor disputes between loggers and communities.** Establish mechanisms to monitor disputes between logging operations and resident communities, with emphasis on vulnerable populations (e.g., indigenous groups, women, and migrants). • **Support alternative dispute resolution (ADR).** Promote neutral third party mediation or arbitration as a tool to manage forest conflict. Train members of judiciary, administration, and local leaders in transparent, informal methods of resolving disputes. • **Strengthen legal recourse.** Strengthen capacity of judiciary, courts, and magisterial systems to clarify and protect property rights of all citizens for trees and forests. • **Make legal aid accessible.** Provide legal assistance to aid communities that face expropriation or loss of access rights. Employ women in legal aid programs as well as in dispute resolution systems.
Restitution, Redistribution, and Consolidation	• **Institutionalize restitution of forest rights.** Establish and implement procedures to restitute rights to aboriginal lands. Ensure restitution is followed by demarcation and registration of these rights. • **Mainstream gender and vulnerable groups.** Mainstream awareness of gender, indigenous populations, and other vulnerable groups into all aspects of restitution, redistribution, and consolidation programs. • **Adhere to international standards on enforcing indigenous rights.** Ensure protection and restitution of forest rights to indigenous communities according to international norms. • **Establish equitable benefits sharing.** Employ a transparent negotiated process to share with local rights holders benefits derived from such activities as logging, payment for ecosystem service schemes, ecotourism, and community-company partnerships. Engage neutral third parties to overcome asymmetries in power and ensure all parties comply with agreements. • **Promote fair and transparent resettlement.** Where resettlement or compensation is necessary from commercial forests, resettle communities to equivalent lands, or otherwise compensate for lost rights to land and resources in a fair, systematic, and transparent manner. Provide necessary security conditions and complementary infrastructure, such as roads, access to water, and agricultural extension services to make new holdings safe and viable.

	Insecure Tenure and Property Rights
Rights Delivery and Administration	• **Prevent illegal displacement of forest communities.** Demarcate and document community forest claims. Prevent displacement by forest concessions or protected areas. • **Establish clear property rights to private and community forests.** Support state and civil society institutions to demarcate and adjudicate boundaries of resident community lands and resource use, protected areas, and concession. Define clear rights associated with each. Publicly negotiate rights of different stakeholders, including overlapping rights. • **Ensure transparent concessions, contracts, and licenses.** Strengthen institutions, protocol, and information management at central and local levels to ensure transparency in awarding and renewing concessions, contracts, and licenses. • **Register customary forest rights.** Engage communities in demarcation and registration of customary rights under the oversight or decision-making authority of an elected body to ward off evictions and establish a basis for benefit claims and other compensation. Register rights of secondary resource users, including indigenous groups, women, and pastoralists. • **Introduce co-management and community forestry concessions.** Introduce co-management and community forestry concessions to formally recognize and secure rights of local communities to both subsistence and commercial resources. • **Strengthen forest data record management.** Take advantage of data systems to register, and update data on concessions and unregistered logging and NTFP harvesting activities and make accessible to national and local-level stakeholders such as small-scale forest users. Digitize preexisting titles, contracts, and other documents to bring them into the digital database. • **Strengthen forest cadaster.** Establish and institutionalize procedures to create and maintain accurate forest resource cadasters publically, with provisions for citizens who are illiterate or lack technical knowledge.
Resource Use Management	• **Support integrated forest land use planning.** Through participatory processes, support development of publically accessible land use plans at national and regional levels that integrate both national and local community interests in forest resources. Engage a broad spectrum of stakeholders, especially women and vulnerable populations, to ensure that rights are protected of all groups. • **Strengthen monitoring of forest use.** Establish multi-stakeholder institutions to monitor forest land and resource use, and ensure compliance with laws and regulations, as well as land use plans. Use GIS and remote sensing technologies where appropriate. • **Promote agroforestry initiatives.** Promote agroforestry initiatives in buffer zones of highly biodiversity, protected areas, and in the process secure customary land and tenure systems. Ensure that the duration of these programs are adequate to promote long-term investments, such as planting of indigenous rather than exotic tree species. • **Institute conservancies, co-management, and sustainable resource-sharing models.** Institute community forestry user groups, conservancies, co-management and other models to strengthen sustainable resource use and management, participatory decision making, negotiate resource sharing agreements, and enforce property rights through contracts and other mechanisms. • **Promote participatory land use planning and gender/minority inclusivity.** Promote participatory land use planning, resource use management, and monitoring activities by actively seeking participation from women's groups, indigenous leaders, pastoralists groups, and others. • **Establish community forest trusts.** Establish community forest trusts to balance economic pressures with conservation and recreation needs of local

	Insecure Tenure and Property Rights
	communities. With funding from state or private foundations, community forest trusts can acquire lands for conservation or manage lands for multiple interests with revenues generated from forestry operations.
	• **Promote conservation easements.** Establish mechanisms by which governments, communities, and user groups protect sensitive areas and species by imposing restrictions on use or harvest in exchange for payments, tax breaks, or increased tenure.

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4.0 INEQUITABLE ACCESS TO LAND AND NATURAL RESOURCES

CONSTRAINTS

INTERVENTIONS	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Markets in Forest Resources	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance				☐		
Legal and Regulatory Framework				☐		
Rights Awareness and Empowerment				☐		
Conflict and Dispute Resolution				☐		
Restitution, Redistribution, and Consolidation				☐		
Rights Delivery and Administration				☐		
Resource Use Management				☐		

4.1 LTPR ISSUE

The overwhelming state ownership of forested land in developing countries conveys on government the prime responsibility for the distribution of rights in forest land and resources. In this role, governments consistently grant precedence to large-scale companies vying for concessions over small-scale industries (such

as local logging, hunting, and charcoal production) and the livelihood practices of forest-dependent communities. Despite the rising trend in devolution in developing countries (according to Forest Trends, forest area under devolved management doubled between 1985 and 2000, reaching 22 percent), the area of public forest allocated to industry greatly exceeds the area of forest land designated for or owned by communities and indigenous peoples. On the limited area of forests devolved to local communities, the rights granted are often more limited and less secure than those granted to large concessionaires. Forests devolved to local communities may be degraded or of low commercial value, and may not include the right to harvest high-value tree species, or to extract forest products for commercial purposes. The devolution of certain forest rights to communities may itself increase local inequities of control and access. Members of neighboring communities may lose access to forests, while the rights of a forest community are confirmed through project support. Within communities, resources and decision-making authority accompanying devolution may be captured by elites, in the process marginalizing poor households, the landless, women, pastoralists and others. Given that forests and trees provide an important safety net for subsistence needs (construction materials, fuel, fiber, animal fodder, foods during emergency periods, crop nutrients, and medicines) and a source of cash income (from sale of fuel wood, timber, and NTFPs), equitable and secure rights to forest lands has enormous potential for poverty reduction for hundreds of millions of the rural poor.

SUB-ISSUES

Disparities between rights allocated to logging companies and local forest users. Logging companies receive rights to forest land and resources often to the detriment of forest dependent communities. When states grant concessions to logging companies, they regularly fail to adequately consult and inform local stakeholders. Nor do they provide significant incentives to concessionaires to manage forests to the benefit of local communities. When logging companies open operations, resident communities and local forest users lose rights of control and access to land and forest resources, generally with little or no compensation. Benefit-sharing agreements are rarely more than cosmetic and even employment with companies is not guaranteed. In Peru, nearly all titled indigenous lands are affected in some way by concessions, and in Colombia, paramilitary groups are forcibly evicting forest peoples and selling their lands to speculators and palm oil plantations.

Disparities between rights allocated to concessions and community forest land. On the very limited portion of forests over which governments have devolved forest management to local communities, the rights granted to communities are often more limited than those granted to large concessionaires. Forest land designated for community control may be degraded or of low commercial value, with the investments required to make them profitable beyond the community's means. States sometimes retain rights to harvest valuable species of trees, or they simply outlaw the extraction of forest resources for all commercial uses. In some cases, states even assign rights to additional users outside of the community, such as allocating community forest land to mining operations.

Intra-village and inter-village inequities. While community forestry has significant potential to improve livelihoods and reduce poverty, it has also demonstrated a tendency to reinforce existing inequities in rights to forest land and resources. Executive committees of community forestry initiatives in Nepal, for example, are much less likely to include people who are poor or of low caste. Many community forestry initiatives rely on men's participation, despite the important economic and livelihood benefits contributed by women in the collection of firewood and NTFPs. Community forestry initiatives have regularly displaced pastoralists on the grounds that grazing prevents forest regeneration, despite studies that have shown that properly managed forest grazing does not affect seedling establishment or growth in regenerating forests. Finally, the rights of a

forest community may be reaffirmed and materialized through project support, while non-targeted neighboring villages lose long-standing rights to forest resources.

4.2 ILLUSTRATIVE INTERVENTIONS

The range of possible interventions relevant or applicable to this particular issue constraint can be quite broad depending on circumstances, and the need in any policy context to carefully adapt, target, sequence and nuance interventions according to institutional context and need. The interventions cited below are thus generalized and illustrative. The reader is further encouraged to review interventions for other constraint categories as well as a single intervention can be relevant to multiple constraints, particularly in contexts when multiple constraints across columns of the matrix are present or when of bundle of interventions across rows is required. Issues and interventions should thus be addressed holistically rather than concentrating on a single column or row.

	Inequitable Access to Land and Natural Resources
Institutions and Governance	• **Devolve forests to local communities.** Increase proportion of forest to which local community members have secure access through widespread creation of community forests, community concessions, co-management, and other joint management schemes. • **Promote equity in devolved forests.** Promote practices that reinforce equitable distribution of rights to forest land and resources between and within local communities, and provide equitable representation by women and vulnerable or marginalized groups. • **Encourage corporate social responsibility.** Instill ideas for corporate responsibility within the forest sector and reporting protocols for new forest associations, potentially with assistance from an independent observer.
Legal and Regulatory Framework	• **Reform laws to ensure equity.** Explicitly recognize community access to forests and its contribution to poverty reduction. Review and revise all laws and regulations related to land and forest resource allocation to ensure that they grant local communities, indigenous groups, women, and other vulnerable groups equal access to forest land and resources. Base reforms on public input, and an understanding of customary practices. • **Safeguard procedural rights of indigenous local populations.** Recognize, in statutory law, the right to participate in decision making about forest land governance and use, the right to information, and the right to access justice. Strengthen rights of indigenous populations and local communities, particularly women and vulnerable populations to prevent unregulated displacement from forest areas or elimination of access to forest resources. • **Abide by international standards governing indigenous rights.** Reform legislative framework to meet international standards regarding protection and restitution of the rights of indigenous populations to forest lands and resources. • **Codify free, prior, and informed consultation.** Recognize, in law, the principle of a local community's right to free, prior, and informed consultation prior to development of concessions. Introduce regulations for timely and sufficient compensation for those displaced legally. • **Control illegal occupation and enable rights restitution.** Put in place appropriate laws and regulations to address the issue of landlessness broadly to prevent illegal occupation of forests. Stipulate in law that ancestral and customary rights take precedence over forest concession holders in cases of overlap. • **Promote legal and policy frameworks in support of benefit sharing.**

	Review and develop legal and policy frameworks for benefit sharing of forest resource revenues with local communities. **Formally recognize secure, transferable, and long-term rights of small enterprises.** Revise law and regulations to allow for formal recognition of secure, transferable, long-term rights to forest resources for small-scale commercial timber and NTFP enterprises operated by local communities.
Rights Awareness and Empowerment	**Raise public awareness of forest rights and legal recourse.** Devise and implement legal awareness campaigns that inform citizens of their rights regarding forests and procedures for defending those rights. Inform community leaders of rights of all forest users, including women, pastoralists, and others. **Spread legal literacy of customary and statutory laws.** Improve understanding of customary and statutory laws regarding access to and governance of local communities among local and national government officials, including members of the judiciary. **Foster collective action for access and control of forest resources.** Mobilize marginalized sub-populations, including women, to exert collective demands for access and control over forest resources and thereby increase their political potency. **Advocate for forest resource access.** Build capacity of local communities to participate in decision making and advocate for access to forest resources in their areas. Provide accessible forums for dialogue and negotiation.
Conflict and Dispute Resolution	**Engage civil society in dispute early warning.** Build civil society capacity to identify and resolve at early stages disputes between companies, local communities, and vulnerable populations regarding forest land and resource access. Ensure disputes about women's access to livelihood resources are acknowledged and addressed. **Support ADR.** Create and strengthen institutions for ADR to detect and manage potential conflicts, especially inter- and intra-village disputes over access to forest resources. **Increase capacity and reach of judiciary to mediate forest rights.** Strengthen capacity and reach of judiciary to mediate forest rights allocation and to uphold principles of equity and efficiency concerning forest resource access and use. **Provide legal aid.** Facilitate broad access to formal and informal bodies that preside over forest rights disputes through support for community paralegals and subsidized legal assistance. Build awareness of and support women's groups to help facilitate their access to the courts. **Promote inclusion of women in adjudication.** Promote inclusion of women in the judiciary and ADR bodies through education, training, and other measures to tackle gender bias in forest resource access and use, for both subsistence and commercial needs.
Restitution, Redistribution, and Consolidation	**Review concessions and protected areas for spatial accuracy and compliance.** Review titles, forest concessions, and protected areas to verify spatial accuracy and compliance. Nullify illegal concessions or those not in compliance and redefine boundaries through transparent procedures. Restitute rights or provide equitable compensation for lost land and resource rights. **Ensure resettlement stemming from commercial forests is equitable.** Where resettlement or compensation is necessary from commercial forests, resettle communities to equivalent lands, or otherwise compensate for lost rights to land and resources in a fair, systematic, and transparent manner. **Provide transparent benefit-sharing agreements with forest communities.** Develop and implement transparent procedures for negotiating compensation and benefit-sharing agreements with forest-dependent communities; ensure they are equitable, reach intended beneficiaries, and not captured by elites.

	Inequitable Access to Land and Natural Resources
	• **Mainstream gender and vulnerable groups.** Mainstream awareness of gender, indigenous populations, and other vulnerable groups into all aspects of restitution, redistribution, and consolidation programs. • **Explore options for reducing illegal occupation of forest land.** Explore politically acceptable options for reducing illegal occupation of forest land by landless farmers.
Rights Delivery and Administration	• **Support forest rights mapping.** Demarcate and adjudicate boundaries of resident community lands, in addition to all public forest land. Define clear rights associated with each category of forests. • **Formalize customary forest claims.** Clarify, validate, document, adjudicate, and formalize customary rights of forest-dependent communities and other secondary resource users, including indigenous groups, women, pastoralists, and others through participatory processes; establish basis for equitable benefit claims. • **Streamline forest formalization procedures.** Simplify administrative procedures and conditions for applying for and receiving rights to forest resources by communities, smallholders, women's groups, and others. • **Strengthen forest cadaster.** Establish and institutionalize procedures to create and maintain accurate forest resource cadasters publically, with provisions for citizens who are illiterate or lack technical knowledge. • **Protect common property forests.** Protect common property forests that provide critical survival resources, especially for the poor. Retain rights to resources collected for subsistence and commercial purposes. • **Lease public forests to minority and vulnerable groups.** Governments should consider leasing public forests to communities, poor households, women's groups, and others in exchange for stewardship services. • **Promote transparency in forest concessions.** Strengthen institutions, protocols, and information management at both central and local levels to ensure equity in the awarding and renewing of forest concessions, contracts, and licenses.
Resource Use Management	• **Develop integrated forestry land use plans.** Develop, implement, and monitor land use plans that balance and accommodate access for all stakeholders and sectors. Partially support plans through taxes and fees on forestry concessions. Designate forest areas for subsistence, small-scale commercial exploitation, and other non-industrial level uses. Engage a broad spectrum of stakeholders, especially women and vulnerable populations, to ensure rights are protected of all groups. • **Incentivize stewardship of degraded forest lands.** Establish conditions for investment of labor in restoring degraded forest by poor and vulnerable populations through improved and secure access, benefit sharing, and capacity building. • **Strengthen forest land and resource use monitoring.** Engage local communities to monitor forest land and resource use, and ensure compliance with laws and regulations, and land use plans. • **Promote forestry and agroforestry initiatives.** Promote agroforestry initiatives in buffer zones of highly biodiverse, protected areas, and in the process secure customary land and tenure systems. Ensure the duration of these programs are adequate to promote long-term investments, such as planting of indigenous rather than exotic tree species. • **Institute conservancies, co-management, and sustainable resource sharing models.** Institute co-management models to promote equity in forest resource use, promote participatory decision making, and negotiate resource sharing agreements. • **Support participatory land use planning.** Promote participatory land use planning, resource use management, and monitoring activities by actively seeking participation from women's groups, indigenous leaders, pastoralists groups, and others.

	Inequitable Access to Land and Natural Resources
	• **Strengthen strategies for coping with climate change.** Increase government and community capacity to adapt to and cope with climate change impacts.

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5.0 POORLY PERFORMING MARKETS IN FOREST RESOURCES

CONSTRAINTS

INTERVENTIONS	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Markets in Forest Resources	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance						
Legal and Regulatory Framework						
Rights Awareness and Empowerment						
Conflict and Dispute Resolution						
Restitution, Redistribution, and Consolidation						
Rights Delivery and Administration						
Resource Use Management						

5.1 LTPR ISSUE

Economic theories assert that distorted or nonexistent markets for land and other natural resources restrict the transfer of resources between willing sellers, buyers, lessors, and renters, resulting in their misallocation

and inefficient use, thereby constraining economic growth. They also fail to serve the poor and disadvantaged due to imperfect information, lack of capital, unequal bargaining power, or risk of distressed sales.

When considering forest resources, the dynamics of land markets, including the valuation of land and its potential uses, can significantly affect forests and the manner in which forests are managed and maintained in the mosaic of land use. In areas where agriculture and forestry are competing land uses, policies that favor agriculture and undervalue long-term forest production potential encourage deforestation and conversion of land to agricultural uses. Increasing demand for land will increase its value, and reflect higher expectations of buyers and sellers to derive greater revenue. When the expected value derived from establishing or maintaining forest is less than alternate uses, the result all too often is deforestation and conversion to other uses.

Economic modeling has suggested that land markets may reduce the effectiveness of some policies intended to preserve or establish forest cover, such as afforestation efforts for climate change mitigation. Alig et al., in their modeling of forest policies designed to retain forests, found that accounting for the possibility of land transfers and intersectoral conversion from forestry to agriculture decreased the amount of land retained as forests after one rotation, lessening the positive impacts of such policies.

At the interface between forests and agricultural land, a landowner calculates relative costs and rents for forest and agricultural uses, and when able to do so, chooses the use that optimizes their return on investment of time, energy, and other inputs. Government policies such as subsidies, restrictions, and other tools may distort the results of that analysis. For instance, the provision of training and inputs for agricultural development and limited rights to trees or high taxes on harvested timber can lower the cost and increase the return from agricultural land use while lowering the potential revenue from maintaining forest cover. Roads and other improvements for timber harvesting may further increase the economic return of converting forest lands into other uses.

Forest concessions are one means by which governments have sought to derive revenue from forested public land. However, the manner in which concessions are awarded and managed may undermine incentives for long-term management of forest lands. Where long-term concessions to slow-growing tree species (and longer realization of revenues) are provided and harvesting is not adequately monitored, operators may harvest timber at an unsustainable rate and reallocate the revenues to investments offering higher returns, resulting in forest degradation and deforestation. Where concession operations introduce roads and other infrastructure useful for nearby private lands, the demand and consequent value of these lands increase, and encourage conversion to alternative land use.

Away from forest margins, where the development of land markets results in consolidation of holdings or the displacement of people without sufficient assets or credit to purchase rights to land, newly landless people migrate to other areas where land can be occupied—often forest lands under nominal control of state authorities unable to control for informal settlement. Modeling by Takasaki suggests the need to enact policy reforms that eliminate subsidies and other interventions in the agricultural sector that distort land markets and boost land prices, thereby encouraging forest clearance.

SUB-ISSUES

National policies and laws promoting forest land conversion. Governments may institute policies designed to spur the acquisition of land for settlement or agriculture, and thereby inadvertently spur forest clearance. In Cambodia, the Interior Ministry sought to allocate forest lands for social concessions for

settlement and agricultural land. National policies that subsidize agricultural production combined with failure to comprehensively consider the full economic value of forest lands distorts relative costs and benefits, stimulates transactions in land for agricultural use, and promotes conversion of forests to agriculture and other uses. This, in conjunction with the development of a robust land market, can lead to further deforestation and the likelihood that land will not be dedicated to forest uses.

Forest conservation measures increasing land speculation. Laws and policies designed to promote conservation of forest resources help increase the potential return to landholders from maintaining forest cover as a primary land use objective. Emerging and increasingly sophisticated methods for valuing ecosystem services are increasing the value of forest lands relative to other uses and these potential revenues can be incorporated in the price of land transactions. The development of REDD projects and implementation of payment schemes that promote afforestation and reforestation as land uses may increase the value of unforested lands, thereby increasing demand and speculative investment in lands in anticipation of such opportunities.

Development of roads stimulating land market development and speculation. Commercial extraction of timber usually requires a network of access roads. Commercial logging contributes to conversion of forest land to agriculture and other uses due to the construction of roads required for accessing harvest areas. Creation of road networks increases the accessibility of these areas, and thereby increases the potential return of agricultural production relative to forest production. Where this occurs, the increased demand of land for agricultural production contributes to problems of land speculation, squatting, land grabbing, and depletion of forest flora and fauna unless adequately controlled.

Uncontrolled occupation of forested land and illegal land sales. Where rural land markets are robust, but the rural poor lack the means to buy or rent land, illegal settlements and uncontrolled clearance of forest margins (the "forest frontier") can be serious problems. Forest colonists may occupy forest lands, essentially regarded as "free land", utilize their labor to clear it, and sell their newly acquired to land to larger, wealthier landholders. In such cases, participation of "forest clearers" in land markets can become a driving force of deforestation.

Conflict between government and indigenous peoples over territorial development. Increasingly, indigenous peoples are seeking to assert and exercise their rights to develop their territories, defined by historical and cultural claims. Where indigenous people negotiate with governments for their right of territorial self-determination, governments may seek to retain control over resources seen as essential for national interests, including large expanses of forest. When it is anticipated that the transfer of rights, including development rights, over such lands from national governments to indigenous authorities will result in greater restrictions on access and use, this may increase demand and pressure upon similar lands outside the defined "territory", driving speculative investments. Conversely, indigenous authorities may continue or liberalize existing tenure regimes, granting licensing access and use rights (such as concessions) to "outsiders". Where there is perception of preferential treatment or improper allocations, land and forest conflicts frequently ensue.

Lack of tenure security for long-term forest investment. In many countries, forest clearance is evidence of occupation and ownership for the purpose of validating one's rights to the land while maintaining it as forest is regarded as a non-use with rights insufficiently exercised. Further, the state may claim ownership of trees and forests, even on privately held land, limiting landholders' returns on investment for forest production. Forest establishment and management are often long-term and multi-rotational over many years,

sometimes decades. Thus, secure tenure establishing rights to the land, the trees, and the non-consumptive and consumptive benefits derived from their use is essential.

5.2   VOLUNTARY GUIDELINES WITH RESPECT TO MARKETS

To address the above issues, Part 4 of the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* includes:

1. "Where appropriate, States should recognize and facilitate fair and transparent sale and lease markets as a means of transfer of rights of use and ownership of land, fisheries and forests…and ensure that all actions are consistent with their existing obligations under national and international law, and…voluntary commitments…

2. States should facilitate the operations of efficient and transparent markets to promote participation under equal conditions and opportunities for mutually beneficial transfers of tenure rights which lessen conflict and instability; promote the sustainable use of land, fisheries and forests and conservation of the environment; promote the fair and equitable use of genetic resources associated with land, fisheries and forests in accordance with applicable treaties; expand economic opportunities; and increase participation by the poor. States should take measures to prevent undesirable impacts on local communities, indigenous peoples and vulnerable groups that may arise from, inter alia, land speculation, land concentration and abuse of customary forms of tenure…

3. States should establish policies, laws and regulatory systems and agencies to ensure transparent and efficient market operations, to provide non-discriminatory access, and to prevent uncompetitive practices. States should simplify administrative procedures in order to avoid discouragement of market participation by the poor and the most vulnerable.

4. States and other parties should ensure that information on market transactions and information on market values are transparent and widely publicized…

5. States should establish appropriate and reliable recording systems….that provide accessible information on tenure rights and duties in order to increase tenure security and to reduce the costs and risks of transactions. States should establish safeguards to protect legitimate tenure rights of spouses, family members and others who are not shown as holders of tenure rights in recording systems…

6. Given the importance of small-scale producers for national food security and social stability, States should ensure that when facilitating market operations of tenure transactions, they protect the tenure rights of small-scale producers."

5.3   ILLUSTRATIVE INTERVENTIONS

The range of possible interventions relevant or applicable to this particular issue constraint can be quite broad depending on circumstances, and the need in any policy context to carefully adapt, target, sequence and nuance interventions according to institutional context and need. The interventions cited below are thus generalized and illustrative. The reader is further encouraged to review interventions for other constraint categories as well as a single intervention can be relevant to multiple constraints, particularly in contexts when multiple constraints across columns of the matrix are present or when of bundle of interventions across rows is required. Issues and interventions should thus be addressed holistically rather than concentrating on a single column or row.

	Poorly Performing Markets in Forest Resources
Institutions and Governance	• **Control corruption in forest land and lease transactions.** Monitor and prosecute corruption in government institutions responsible for administering land transactions to eliminate practices that favor wealthier, politically connected individuals, both in the acquisition of land and forest areas. • **Support institutions responsible for local forest governance.** Support institutions responsible for local forest governance to enable protection of forest areas from encroachment or clearance as people attempt to incorporate forested lands under state or community control in land markets fraudulently.
Legal and Regulatory Framework	• **Review land market distortions created by land and forest policy.** Review agricultural policies and laws for their impact on land prices and resulting effects at the forest margin. Agricultural policies that stimulate demand for arable land and increase the potential value of agricultural uses of forested areas at the forest margin encourage forest clearance. Assess potential, unanticipated effects of policies on forest land and cover. Review policies that undervalue forest resource, distorting the value of forest management and use relative to other uses. • **Create investment incentives that increase land value.** Recognize rights of landholders to derive benefits from trees and forests; often, landowners may not have rights to harvest and sell timber from trees on their land. Where trees and crops coincide, farmers have a greater incentive to retain trees if confident of the long-term retention and management of those trees in their farming system. • **Recognize the rights of vulnerable groups to secondary forest resources.** Land market transactions that encourage conversion of forests to other uses may affect those with secondary rights to forest resources on privately held lands. Legal measures can be developed to recognize these rights and provide compensation for their loss in the event of ownership changes.
Rights Awareness and Empowerment	**Raise awareness about benefits of forest retention and market opportunities.** Develop public awareness campaigns that highlight how rights holders can derive benefits from forest retention on transacted lands including tax incentives and market opportunities for both timber and NTFPs, or payment for environmental service schemes. Provide buyers and sellers information regarding land use requirements and restrictions on transacted land.
Conflict and Dispute Resolution	**Support mediation to resolve conflict over forest concessions or illegal timber sales.** Speculation and development of lands at forest margins may result in conflicts, particularly where land is transacted and acquired illegally by individuals or groups using political connections or intimidation. Local people and communities may not trust government institutions to intervene fairly or the state may not have the resources to respond effectively. In such instances, communities may be able to deliberate and adjudicate effectively and enforce rules preventing conversion of forest cover.
Restitution, Redistribution, and Consolidation	• **Prevent distressed sales or consolidation resulting in unsustainable forest land clearance.** Ensure availability of credit and other interventions that diminish consolidation or distress sales that displace smallholder to forest margins resulting in clearance of forested land. • **Promote consultation in forest land acquisition.** When acquisition of tenure rights to forested lands by government or nongovernmental organizations will restrict the access and use rights of forest-dependent communities and individuals, meaningful consultation with those affected is imperative. Signatories to the *United Nations Declaration on Rights of Indigenous Peoples* are further obligated to honor the process of free, prior, and informed consent to enable indigenous communities to negotiate the continuation of specific rights, compensation for damages, or a continuing share of any revenue.
Rights Delivery and	• **Support group or community title establishing rights to forest resources and benefits.** Grant community title to common property that explicitly

	Poorly Performing Markets in Forest Resources
Administration	recognizes rights and responsibilities related to forest management and benefits. • **Grant concessions/licenses to third party users.** Concessions or certificates can allay fears that land will be taken away, thereby encouraging long-term investments in land, such as forestry. • **Strengthen customary rights to acquire, manage, and use forest land and resources.** Recognize customary rights to acquire, manage, and use forest land and resources, based on assumption that recognition and protection of such tenure arrangements will promote investment in sustainable management and use.
Resource Use Management	• **Encourage environmental and economic valuations of forest resources.** Encourage environmental and economic valuations that accurately account for benefits derived from consumptive and non-consumptive uses of forests. • **Support environmental zoning.** Establish and enforce zoning that recognizes forestry as a legitimate land use by legal landholders. • **Support tax incentives encouraging long-term investments.** Develop taxation/tax incentives that encourage long-term investments in forest management and discourage forest conversion and sale of underlying land, such as waiving taxes for those keeping trees on the landscape. • **Enable and implement green areas/easements.** Encourage green areas/easements that provide payments or tax relief for landowners who maintain forest cover on their holdings. Where land is bought and sold, continuation of the easement can be a condition of the transaction.

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6.0 UNSUSTAINABLE NATURAL RESOURCES MANAGEMENT/ BIODIVERSITY LOSS

CONSTRAINTS

INTERVENTIONS	Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Markets in Forest Resources	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance						
Legal and Regulatory Framework						
Rights Awareness and Empowerment						
Conflict and Dispute Resolution						
Restitution, Redistribution, and Consolidation						
Rights Delivery and Administration						
Resource Use Management						

6.1 LTPR ISSUE

According to the FAO, an estimated 13 million hectares of forest were lost annually during the last decade (2000-2010) due to conversion to other uses, fires, disease, or drought. While the rate of annual net loss of

forest cover has declined in recent years, this has been due in part to large-scale afforestation and reforestation, which do not sustain biodiversity as well as natural ecosystems. Since 1990, countries have designated an additional 95 million hectares of forests as protected areas, which now accounts for 12 percent of all forest area. Unfortunately, governments often lack the material and human resources to adequately establish and manage their protected areas. State control, the common model for management and ownership of forest resources, has put the responsibility for this unsustainable natural resource management and the biodiversity loss largely in the hands of governments. Central authorities claim exclusive authority and rights over forest and wildlife, in many cases relegating historical, customary claimants and users to the status of illegal occupiers, encroachers, or poachers. Central governments also claim exclusive rents derived from these resources, with the result that many people or communities in immediate proximity to and dependent upon these resources have no long-term interest in their conservation. Where governments claim control over areas of rich biodiversity but are unable to enforce their authority and exclude other unsanctioned users, an open-access situation may arise in which other non-state claimants seek to maximize their benefits from extraction and use in the short-term with little or no regard for conserving biodiversity. A government's claim to resource ownership may contribute to the deterioration of existing local forms of resource management based on custom. Lacking recognized rights to future use and benefits, people are unwilling to forgo immediate consumption or invest the time and resources necessary for long-term stewardship. Advocates of decentralization and devolution of control over resources and maintenance of biodiversity argue that increasing control by individuals and communities, or reinforcing existing local customary systems of resource management may be more effective for conservation than central authority. Advocates contend that recognizing the rights of individuals and communities to manage and use the forests upon which they depend for livelihoods provides them an incentive to conserve and use sustainably. In some cases, the sustainable resource use and biodiversity protection exceed the capacity of individual governments due to dispersal, distribution, and existence of habitats without regard for national boundaries.

SUB-ISSUES

Lack of recognition and protection of local rights. Locally defined territorial rights arise by virtue of historical occupation, rather than from grants, recognition, or registration by the state. Many traditional, indigenous, and communal claimants continue to face challenges from their governments over rights to manage and derive benefits from traditionally managed habitats, plant, and animal resources. Even where governments have conferred these the rights, local communities face challenges from competing nongovernmental stakeholders, such as recent migrants into an area, organized groups of poachers, or private companies who may circumvent customary law intended to manage resources sustainably, such as seasonal restrictions, and harvesting requirements.

Stewardship limits of local institutions. The territorial delimitation of customary holdings and legal recognition of sovereign rights for indigenous peoples has increased the incidence of licensing of resource rights by such groups to third parties. Formerly the purview of governments, indigenous administrations are now responsible for vetting and approving concessions to third parties, often private sector actors, for resource extraction. As with joint management arrangements, devolution to indigenous peoples does not alone guarantee adequate biodiversity conservation, as traditional institutions do not always uphold monitoring and safeguards. In the US, mining and forestry rights granted by the Navajo and other native tribes to mining and forestry companies have been criticized for being too lax in environmental safeguards.

Weakening of customary institutions. Local tenure regimes embody principles intended to enforce the sustainable exploitation of forest resources. Communities living in areas of significant or sensitive biodiversity

may possess important information about trends, species occurrence, migration, seasonality of plant and animal reproduction, growing seasons, climate, and other information essential for conservation practitioners. Among the factors that encourage the deterioration of customary resource management regimes are provisions of statutory law, civil unrest, population growth and land scarcity, and natural resource deterioration including the impact of climate change.

Poorly managed protected areas. Governments have used the protected area designation and varying levels of human exclusion as a common tool for biodiversity conservation, yet often lack the capacity to establish, manage, and protect such areas. Some governments are even unable to demarcate designated areas, thus raising the probability of conflict and abuse.

Corrupt governance. Forest ecosystems fall prey to the poor enforcement of resource and property rights in the form of illegal logging and poaching, concessions in critical ecosystems, and exploitation by government officials and local traditional authorities for personal ends or to finance violent conflicts.

Unplanned development. Increasing rural-urban migration and peri-urban sprawl is a phenomenon occurring widely in both developed and developing countries. Zoning and land use regulations do not exist or are widely ignored, due to lack of adequate human and material resources or corruption. Undeveloped areas containing remnant habitat, such as wetlands and forests, may be subject to overharvesting, drainage, or clearance.

Unregulated access and use of trees and forests. Where laws are nonexistent, do not cover specific aspects of environmental protection, or lack enforcement, open access exploitation of resources may occur, affecting the persistence of both plants and animals. Uncontrolled mining may strip trees or worsen water quality, and damage habitat. Unsustainable forestry may remove important aspects of forest structure or key tree species, and uncontrolled hunting or harvesting may decimate important animal or plant species, leading to long-term degradation of environmental quality and decline in biodiversity indicators such as species richness and abundance.

National policies promoting forest land degradation. In many countries, forest clearance is evidence of occupation and ownership for registering one's rights to the land, while maintaining it as forest is regarded as non-use, with rights insufficiently exercised. Governments may also promote deforestation through policies designed to spur the acquisition of land for settlement or agriculture. In Cambodia, the Interior Ministry has sought to allocate forest lands for settlement and agricultural land. National policies that subsidize agricultural production may also prompt conversion of forests to agricultural use.

Property damage from wildlife depredation or catastrophic events. Communities, groups, and individuals living in or adjacent to forest lands may bear costs. Though they may have no direct right over these forests and associated wildlife, they may be impacted. Wildlife may damage crops or kill livestock or people, or pests and fires from protected natural forests may affect adjacent property owners.

6.2   ILLUSTRATIVE INTERVENTIONS

The range of possible interventions relevant or applicable to this particular issue constraint can be quite broad depending on circumstances, and the need in any policy context to carefully adapt, target, sequence and nuance interventions according to institutional context and need. The interventions cited below are thus generalized and illustrative. The reader is further encouraged to review interventions for other constraint categories as well as a single intervention can be relevant to multiple constraints, particularly in contexts when

multiple constraints across columns of the matrix are present or when of bundle of interventions across rows is required. Issues and interventions should thus be addressed holistically rather than concentrating on a single column or row.

	Unsustainable Natural Resources Management and Biodiversity Loss
Institutions and Governance	• **Decentralize forest management to local governments.** Decentralize forest management to democratically elected and accountable regional and local governments. Ensure clear roles and transfer all necessary authorities, including collection and use of forest revenues. • **Support interagency coordination.** Biodiversity and natural resource management issues often encompass landscapes that extend beyond the mandates and boundaries of individual institutions such as ministries of forestry, agriculture, or water resources. Effective governance of forests and associated resources requires communication and coordination of policies and activities among all responsible institutions, both at national and local levels. • **Conduct national planning to improve resource allocation.** Develop national environmental action plans and biodiversity conservation strategies to identify national priorities related to biodiversity and its conservation and allocate resources accordingly. • **Introduce conservation easements.** Establish mechanisms by which governments, communities, and user groups protect sensitive areas and species by imposing restrictions on use or harvest in exchange for payments, tax breaks, or increased tenure. • **Encourage corporate social responsibility.** Engage companies in a participatory and public process to develop biodiversity policy statements in compliance with environmental laws. Encourage regional and bilateral dialogue on the sustainable development of the timber industry.
Legal and Regulatory Framework	• **Clarify community rights on forest land.** Provide for legal recognition of local rights to manage habitats and wildlife, provided customary practices conserve desired ecosystems, ecosystem services, and flora and fauna. • **Facilitate stakeholder consultations and negotiation.** Pass legislation requiring meaningful consultation and negotiation of compensation or benefits with affected stakeholders in the creation of protected areas. • **Eliminate incentives that encourage forest clearance.** Rescind government policies that grant land to those who clear it by removing forest cover. Regard maintenance of forest cover and associated resources as a legitimate land use. Governments should remove incentives that encourage deforestation by granting title for clearing lands. • **Regulate hunting methods.** In many countries, individuals may have access rights as well as regulated hunting rights. Controlling access is often difficult; yet regulation of hunting methods may reduce number of animals killed. Regulation may prohibit methods that are indiscriminate in their impact, such as poisons or traps. • **Update forestry regulations.** Revise regulations to reflect best current technical knowledge for sustained yield harvesting requirements, post-harvest reforestation, selective cutting, rotational grazing, seasonal and stocking limits. • **Privatize ownership of trees and forests.** Associate rights to trees with land ownership, so that landholders derive benefits, including revenues, from trees and forests on their land. • **Harmonize legal codes governing natural resources.** Identify and eliminate contradictions between forestry laws and policies, and those related to other areas, such as conservation, mining, water, and land tenure. • **Enforce environmental regulations.** Establish and enforce legal and regulatory frameworks that minimize the environmental impact of timber operations.

	Unsustainable Natural Resources Management and Biodiversity Loss
Rights Awareness and Empowerment	• **Inform users and managers of rights and responsibilities.** Communities and individuals may have co-management and use rights and responsibilities but be unaware of their rights, and how to exercise them. Governments and donors, if committed to co-management and other forms of community and individual rights to manage and use forest resources, need to foster awareness of those rights and responsibilities to foster sound management and sustainable utilization. • **Conduct stakeholder forums.** Facilitate stakeholder forums for rights negotiation and clarification. • **Provide training in exercising management rights.** Inform indigenous and local communities of their rights and responsibilities, both under custom and statutory law, with regard to management of their own forests, and protections against abuse by logging operations. Train communities to successfully exercise management and use rights, in such aspects as forest mensuration, wildlife survey techniques, water sampling, etc. • **Strengthen civil society monitoring and advocacy of rights and biodiversity issues.** Build civil society capacity to monitor environmental conditions, detect illegal and destructive practices, and educate stakeholders about environmental stewardship.
Conflict and Dispute Resolution	• **Support stakeholder dialogue.** Ongoing conflicts over access and use of natural resources may undermine long-term objectives to conserve biodiversity by diverting material resources from management efforts to respond to and manage conflicts. Establish forums for stakeholders in forest management to discuss contentious issues. Include park staff, large and small-scale operators, community leaders, and representatives from vulnerable forest-dependent populations. Focus stakeholder communications on how affected communities and people can be engaged in conservation efforts and derive benefits from their engagement. • **Provide education on environmental sustainability.** Educate stakeholders on considerations of environmental sustainability in context of rights negotiation. • **Enable payments from conservationists to forest users suffering damage.** Establish mechanisms to transmit payments from governments and other stakeholders who benefit from conservation to stakeholders who bear a direct cost or consequence from forest fire, crop destruction by wild animals, etc. • **Provide legal aid.** Indigenous and remote, poorer communities may lack resources to seek legal recourse to defend their rights. Provide legal assistance to help communities and indigenous groups navigate complex legal systems and processes to uphold their right to manage resources, particularly where other parties seek to violate their rights and existing environmental protections. • **Build capacity to enforce environmental laws.** Many governments have promulgated laws intended for environmental protection and forest conservation. In some cases, these laws may protect the interests of forest-dependent communities and people. Parties seeking to circumvent such laws may seek to capture the benefits of unsustainable use of forest resources, negatively affecting local communities and people. Those with political connections may seek to use government connections and authority to undermine laws.
Restitution, Redistribution, and Consolidation	• **Recognize secondary rights in statutory and customary regimes.** Consider primary and secondary rights in both statutory and customary regimes in the development of plans for restitution and compensation due to environmental or natural resource degradation. • **Assess tenure impact of consolidation in conservation planning.** Governments may seek to acquire and consolidate parcels of land to create dispersal corridors for wildlife, establish refuges, and achieve conservation objectives outside protected area boundaries. Conservation planners seeking to consolidate or restrict land uses at a landscape scale need to assess and address the impacts of such efforts upon affected communities.

	Unsustainable Natural Resources Management and Biodiversity Loss
Rights Delivery and Administration	• **Strengthen common property rights.** Engage resident communities in the identification and registration of primary and secondary rights to commonly held community resources, such as water, forest, and pasture. • **Enforce environmental regulations.** Create, implement, and enforce the legislative and regulatory framework for natural resources management in areas around logging concessions and protected lands. • **Develop effective systems for allocation, permitting, monitoring, and enforcement.** Government, community, or private institutions responsible for managing forested lands and associated resources need effectives systems for allocating and monitoring the exercise of access and use rights. • **Promote forest and natural resource certification.** Ensure compliance with national laws and international treaties, formalize customary tenure, and enhance social and economic well-being through forest certification.
Resource Use Management	• **Facilitate co-management between the state and local communities.** Increase local incentives to manage forest resources sustainably by developing and implementing joint agreements between the state and local communities in the management forests. • **Integrate land use planning.** Develop integrated land use management plans that protect ecosystem services and wildlife corridors and recognize competing local, regional, and national interests. • **Develop forest management plans.** Involve all stakeholders in development of natural resource and biodiversity plans of managed forests. Develop baseline data and conduct regular, scientifically rigorous, environmental monitoring against the plan. Engage local community members and the staff of NGOs and government in data collection using simple and reliable equipment. • **Promote agricultural intensification to reduce forest encroachment.** Reduce pressure on forests through introduction of methods and conditions to support intensive rather than extensive agricultural production, thereby slowing the demand for arable land and slowing forest clearance. • **Provide conservation incentives.** Utilize incentives for the conservation of biodiversity. Reward land use and development that protects forest resources. • **Reduce fuel wood consumption.** Promote measures to reduce fuel wood use or make consumption more efficient to avoid forest degradation and loss. • **Zone land use for NRM protection.** Demarcate logging areas. Exclude highly sensitive ecosystems and watersheds from logging, and specify and enforce sustainable levels of extraction elsewhere. • **Support environmental plans.** Establish and enforce policy requiring logging operations to develop environmental mitigation monitoring plans to minimize impacts on biodiversity and natural resources and rehabilitate or compensate for unavoidable impacts. • **Establish and maintain fund for natural resource rehabilitation.** Rehabilitate degraded forests using forest sector revenues.

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ANNEX A: TREES AND FORESTS MATRIX OVERLAY, SUMMARY TABLES

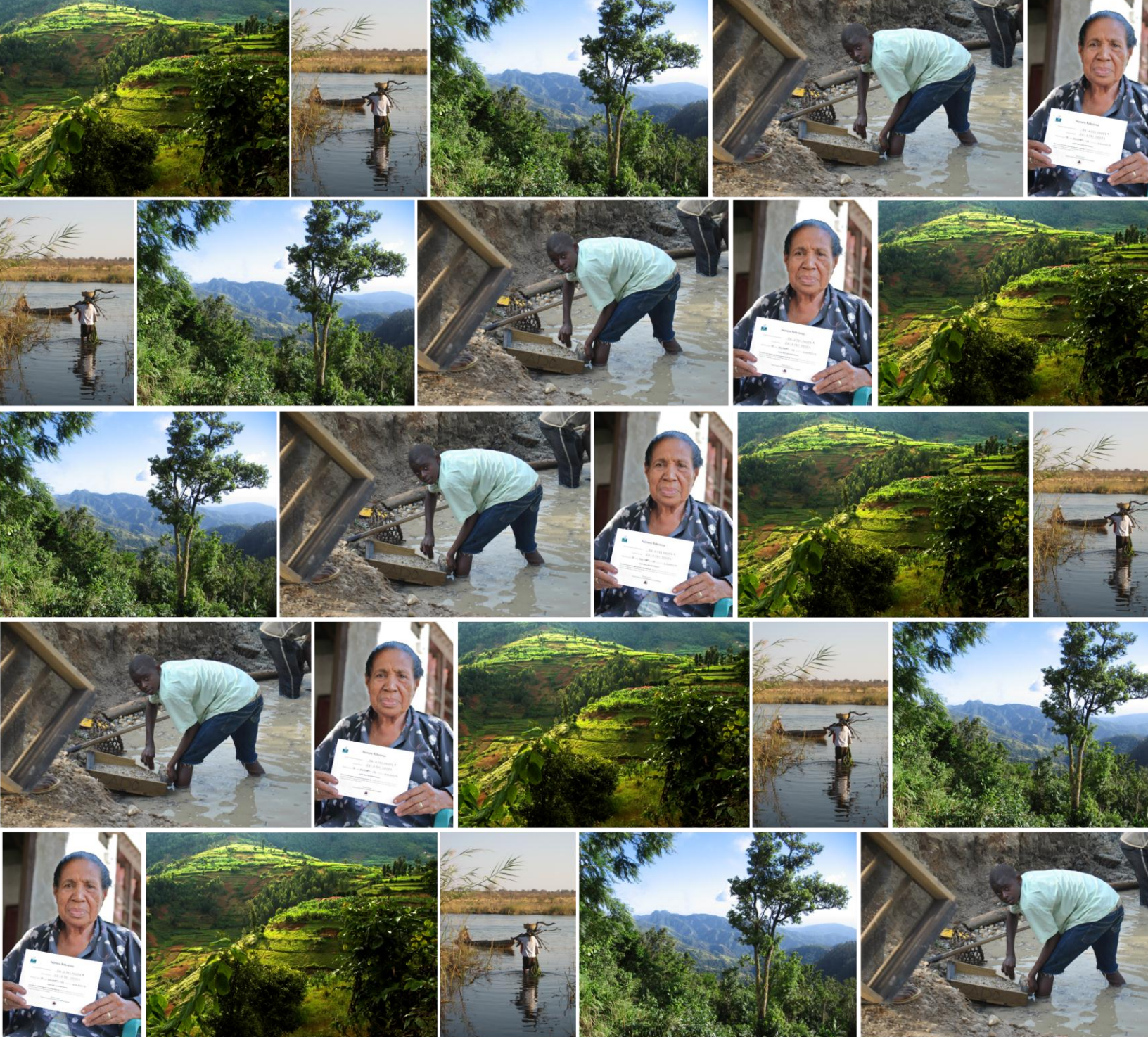## TABLE A.1 TREES AND FORESTS OVERLAY: CONSTRAINTS, AND COMMON SUB-ISSUES

Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Land Markets	Unsustainable Natural resources management and Biodiversity Loss
Conflict over high-value forest resources Conflicting claims between the state and local or indigenous communities Deforestation and degradation as a consequence of conflict Conversion of natural forest and woodlands to commercial wood and biomass production or agricultural uses	Centralized forest management Limits to devolution Challenges of co-management Poorly managed concessions Contradictions between national macroeconomic and forest conservation policies Unbalanced incentives in private forest management	Legal pluralism Unclear and limited rights to forest resources Contested state land takings and dispossession of indigenous groups Loss of, or diminished rights to, forest resources Insecurity driven by commoditization of carbon Farmland inequality and landlessness negatively impact forests Duration of rights and incentive problems Tenure insecurity's impact on tree planting	Disparities between rights allocated to logging companies and local forest users Disparities between rights allocated to concessions and community forest land Intra-village and inter-village inequities	National policies and laws promoting forest land conversion Forest conservation measures increasing land speculation Development of roads stimulating land market development and speculation Uncontrolled occupation of forested land and illegal land sales Conflict between government and indigenous peoples over territorial development Lack of tenure security for long-term forest investment	Lack of recognition and protection of local rights Stewardship limits of local institutions Weakening of local institutions Poorly managed protected areas Corrupt governance Unplanned development Unregulated access and use of trees and forests National policies promoting forest land degradation Property damage from wildlife depredation or catastrophic events

Crosscutting Constraints

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Gender / Women Vulnerability

Ethnic and Socially Marginalized Populations

Lack of Government and Community Capacity

TABLE A.2. TREES AND FORESTS OVERLAY: INTERSECTION OF LAND TENURE CONSTRAINTS AND INTERVENTIONS

		LAND TENURE AND PROPERTY RIGHTS THEMES AND CONSTRAINT CATEGORIES					
		Resource Conflict and Displacement	Weak Governance	Insecure Tenure and Property Rights	Inequitable Access to Land and Natural Resources	Poorly Performing Land Markets	Unsustainable Natural resources management and Biodiversity Loss
LAND TENURE AND PROPERTY RIGHTS INTERVENTIONS	**Institutions and Governance**	Strengthen capacity of forest authorities Promote coordination among government forest agencies Promote access to justice Strengthen civil society Support local communities with participatory governance Decentralize or devolve forest governance	Decentralize governance Streamline and strengthen institutions Allocate and manage concessions transparently Improve fiscal management of concessions Strengthen civil society Establish and strengthen co-management institutions	Decentralize governance Devolve governance and strengthen civil society Support networks of civil society organizations Enable enforcement of logging contracts Support corporate social responsibility	Devolve forests to local communities Promote equity in devolved forests Encourage corporate social responsibility	Control corruption in forest land and lease transactions Support institutions responsible for local forest governance	Decentralize forest management to local governments Support interagency coordination Conduct national planning to improve resource allocation Introduce conservation easements Encourage corporate social responsibility
	Legal and Regulatory Framework	Reduce legal pluralism Harmonize forest and land laws Promulgate or revise forest regulations	Harmonize forest policy with national priorities Safeguard procedural rights Create clear and enforceable contracts Promote forest certification schemes Devolve ownership and management	Harmonize forest policy with national priorities Strengthen rights in forest codes Reduce legal pluralism Strengthen rights to forests and ecosystems Clarify policy on rights to forest carbon Protect forest rights of indigenous populations Codify free, prior, and informed consultation Modify incentive structures to conserve forests Secure tenure for concessions	Reform laws to ensure equity Safeguard procedural rights of indigenous local populations Abide by international standards governing indigenous rights Codify free, prior, and informed consultation Control illegal occupation and enable rights restitution Promote legal and policy frameworks in support of benefit sharing Formally recognize secure, transferable and long-term rights of small enterprises	Review land market distortions created by land and forest policy Create investment incentives that increase land value Recognize the rights of vulnerable groups to secondary forest resources	Clarify community rights on forest land Facilitate stakeholder consultations and negotiation Eliminate incentives that encourage forest clearance Regulate hunting methods Update forestry regulations Privatize ownership of trees and forests Harmonize legal codes governing natural resources Enforce environmental regulations

Rights Awareness and Empowerment	Raise public awareness Improve forest rights advocacy Foster public education and engagement	Raise awareness of forest management responsibilities Formalize and promote customary forest rights Ensure participation of marginalized forest groups Support watchdog organizations to stamp out corruption Promote partnership on community lands	Raise legal awareness of forest rights Conduct stakeholder forums Strengthen rights awareness of marginalized groups Enhance participation of local forest organizations Strengthen advocacy for community/gender-based forestry management	Raise public awareness of forest rights and legal recourse Spread legal literacy of customary and statutory laws Foster collective action for access and control of forest resources Advocate for forest resource access	Raise awareness about benefits of forest retention and market opportunities	Inform users and managers of rights and responsibilities Conduct stakeholder forums Provide training in exercising management rights Strengthen civil society monitoring and advocacy of forest rights and biodiversity issues
Conflict and Dispute Resolution	Increase access to legal assistance Promote alternative dispute resolution Conduct stakeholder forums	Improve formal and alternative dispute resolution Empower communities to resolve disputes	Monitor disputes between loggers and communities Support alternative dispute resolution Strengthen legal recourse Make legal aid accessible	Engage civil society in dispute early warning Support alternative dispute resolution Increase capacity and reach of judiciary to mediate forest rights Provide legal aid Promote inclusion of women in adjudication	Support mediation to resolve conflict over forest concessions or illegal timber sales	Support stakeholder dialogue Provide education on environmental sustainability Enable payments from conservationists to forest users suffering damage Provide legal aid Build capacity to enforce environmental laws
Restitution, Redistribution and Consolidation	Develop fair and equitable restitution and compensation programs Resettle displaced populations Develop resettlement plans Compensate for state takings Consolidate forest management areas	Institutionalize restitution of forest rights Review concessions and support restitution Implement transparent compensation processes	Institutionalize restitution of forest rights Mainstream gender and vulnerable groups Adhere to international standards on enforcing indigenous rights Establish equitable benefits sharing Promote fair and transparent resettlement	Review concessions and protected areas for spatial accuracy and compliance Ensure that resettlement stemming from commercial forests is equitable Provide transparent benefit-sharing agreements with forest communities Mainstream gender and vulnerable groups Explore options for reducing illegal occupation of forest land	Prevent distressed sales or consolidation resulting in unsustainable forest land clearance Promote consultation in forest land acquisition	Recognize secondary rights in statutory and customary regimes Assess tenure impact of consolidation in conservation planning

Rights Delivery and Administration	Formalize forest rights Shift from exclusion to managed use Demarcate forest concession boundaries Monitor and enforce agreements	Improve and streamline administrative processes Support community boundary demarcation Create transparency in transactions Introduce co-management agreements Support rights registration and broadly disseminate information Strengthen forest cadaster systems	Prevent illegal displacement of forest communities Establish clear property rights to private and community forests Ensure transparent concessions, contracts, and licenses Register customary forest rights Introduce co-management and community forestry concessions Strengthen forest data record management Strengthen forest cadaster	Support forest rights mapping Formalize customary forest claims Streamline forest formalization procedures Strengthen forest cadaster Protect common property forests Lease public forests to minority and vulnerable groups Promote transparency in forest concessions	Support group or community title establishing rights to forest resources and benefits Grant concessions\licenses to third party users Strengthen customary rights to acquire, manage, and use forest land and resources	Strengthen common property rights Enforce environmental regulations Develop effective systems for allocation, permitting, monitoring, and enforcement Promote forest and natural resource certification
Resource Use Management	Consider non-timber forest product users Support forest certification programs Establish and strengthen co-management institutions Introduce technologies to improve management of forest and non-timber products Control unbridled forest exploitation Use forest assessments and strategic planning	Support multi-stakeholder management bodies Promote participatory integrated land use planning Promote public forests' management planning Undertake environmental impact assessments Develop community forest management plans Promote conservation easements	Support integrated forest land use planning Strengthen monitoring of forest use Promote agroforestry initiatives Institute collaborative management models Institute conservancies, co-management, and sustainable resource-sharing models Promote participatory land use planning and gender/minority inclusivity Establish community forest trusts Promote conservation easements	Develop integrated forestry land use plans Incentivize stewardship of degraded forest lands Strengthen forest land and resource use monitoring Promote forestry and agroforestry initiatives Institute conservancies, co-management, and sustainable resource-sharing models Support participatory land use planning Strengthen strategies for coping with climate change	Encourage environmental and economic valuations of forest resources Support environmental zoning Support tax incentives encouraging long-term investments Enable and implement green areas/easements	Facilitate co-management between the state and local communities Integrate land use planning Develop forest management plans Promote agricultural intensification to reduce forest encroachment Provide conservation incentives Reduce fuelwood consumption Zone land use for NRM protection Support environmental plans Establish and maintain fund for natural resource rehabilitation

◄───── Crosscutting Constraints ─────►

Gender / Women Vulnerability

Ethnic and Socially Marginalized Populations

Lack of Government and Community Capacity

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