



# **Land Tenure and Global Climate Change**

**Presenter: Mark Freudenberger**

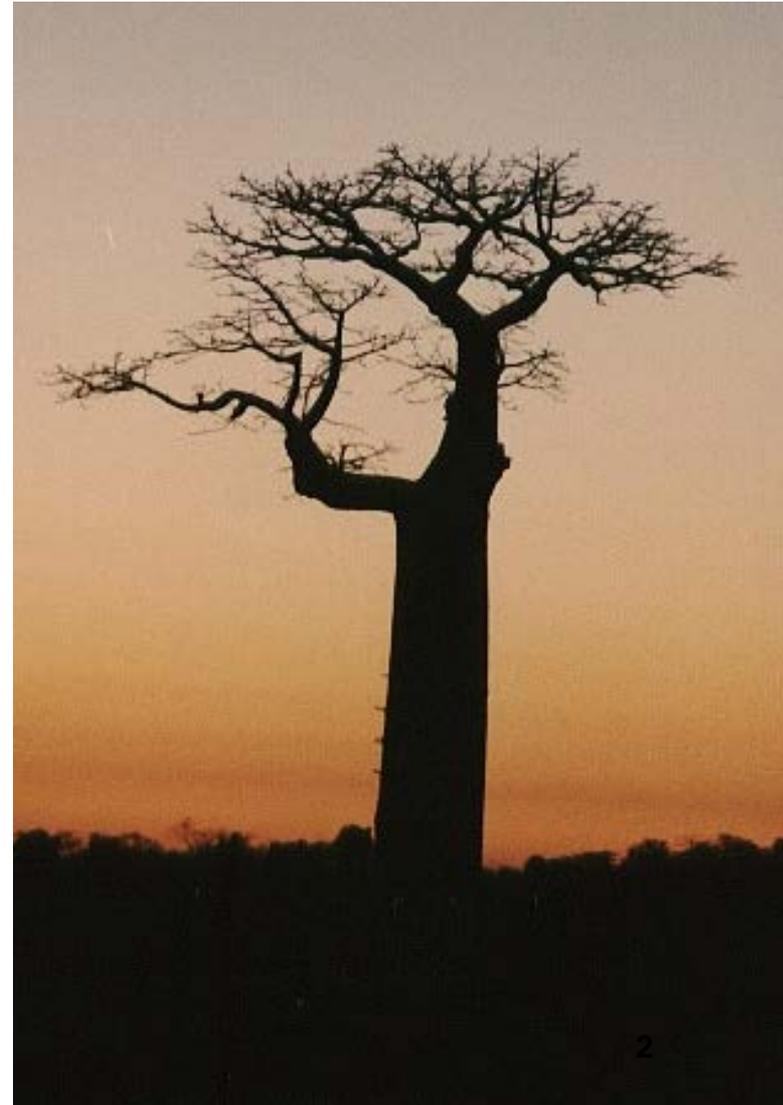
**Best Practices for Land Tenure and  
Natural Resource Governance in Africa**

**Monrovia, Liberia**

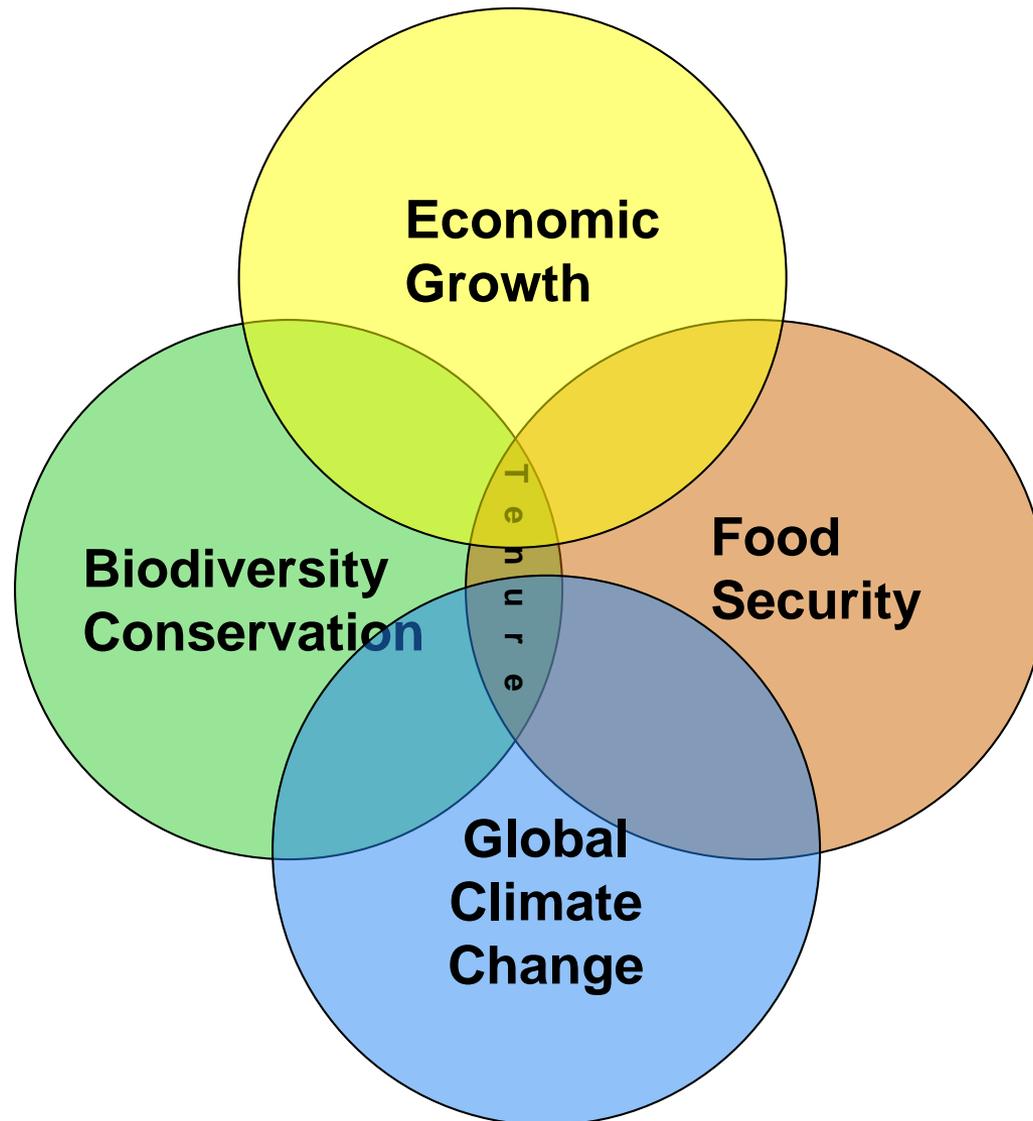
**October 2012**

# Overview, Issues and Implications

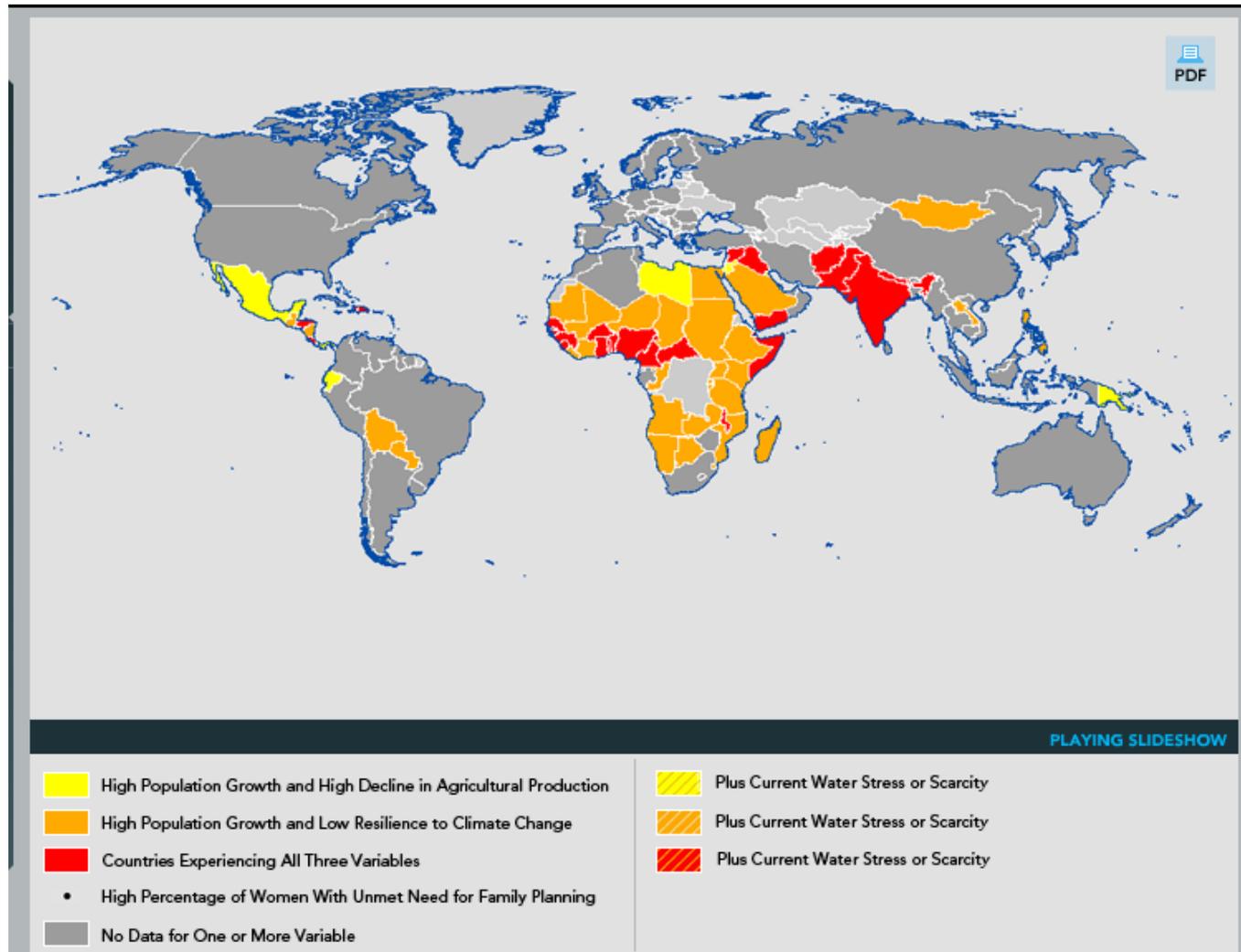
- **Overview:** Linkage between climate change, tenure, and natural resource management
- **Issues and Innovations:**
  - 1) Climate Change and Adaptation
  - 2) Climate Change and Mitigation
- **Implications:** Program planning for governments, donors, and civil society



# Policy Imperatives and Climate Change – Addressing the Resource Tenure and Property Rights Interface



# Locating Climate Change and Tenure Vulnerabilities

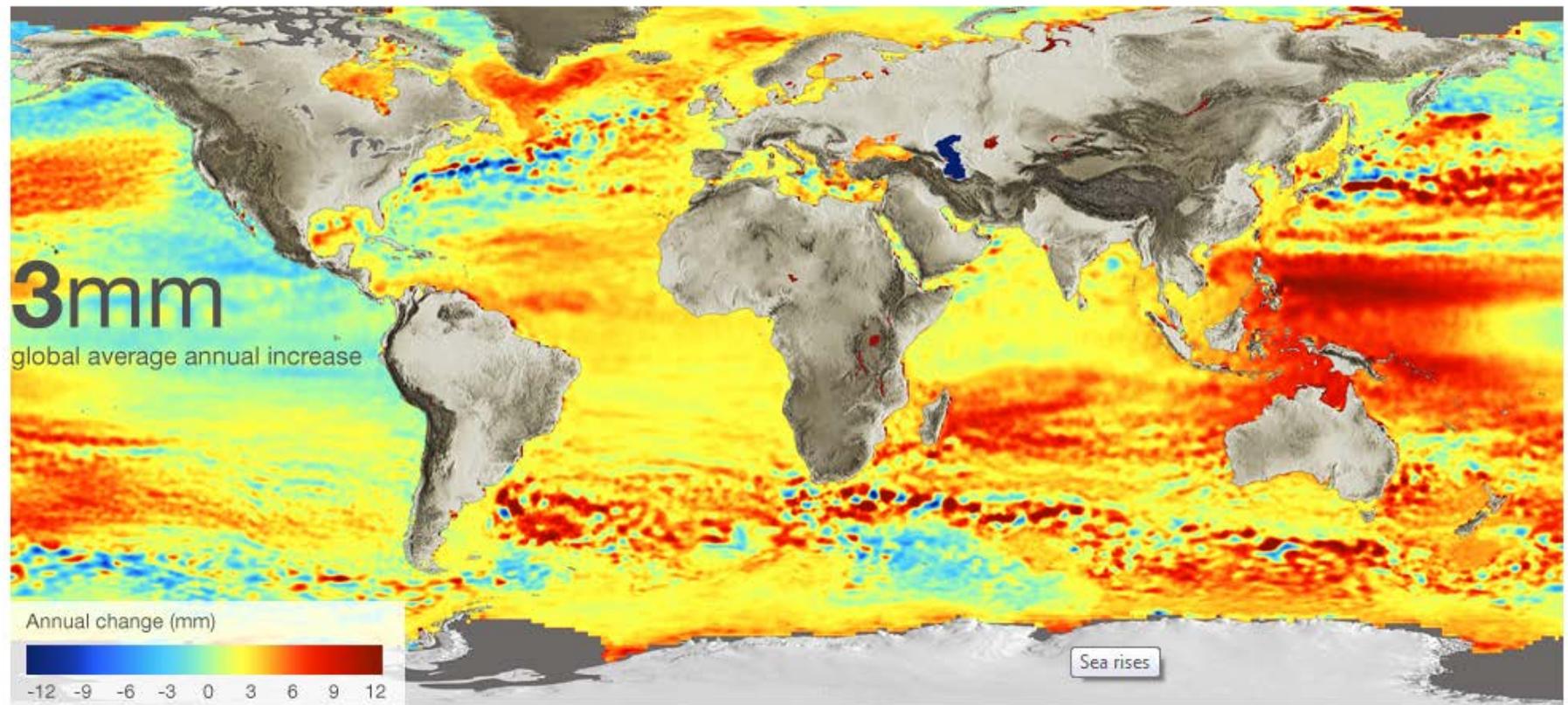


Population Action International:

[www.populationaction.org/Publications/Data\\_and\\_Maps/Mapping\\_Population\\_and\\_Climate\\_Change/Summary.php](http://www.populationaction.org/Publications/Data_and_Maps/Mapping_Population_and_Climate_Change/Summary.php)

# Rising Sea Level and Tenure Implications?

Annual average sea-level rise, 1993-2010



<http://www.bbc.co.uk/news/science-environment-19702450>

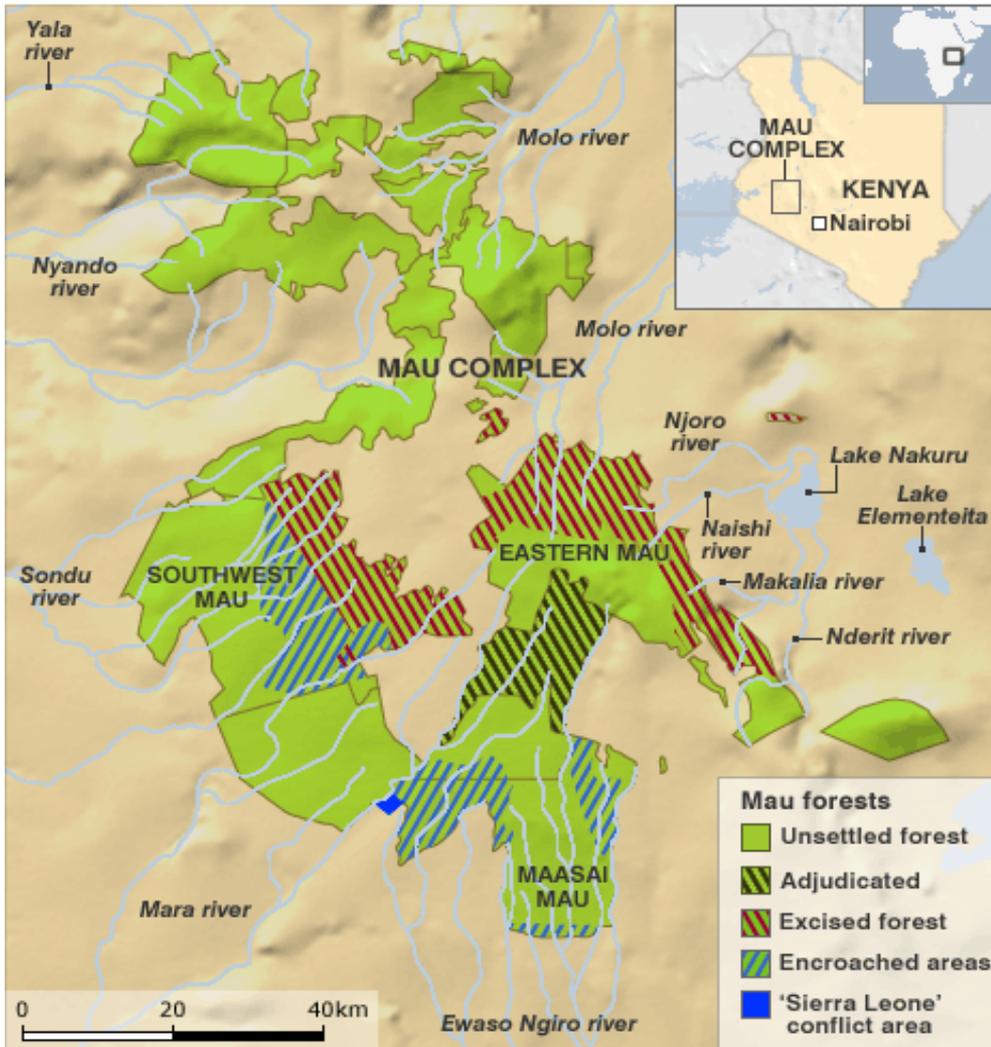
# Implications of Climate Change on Biodiversity ?



**Fianarantsoa forest corridor in Madagascar**

# Case Study: Mau Forest Kenya

Kenya's Mau forest complex



- Largest remaining block of montane forest in Eastern Africa—an area > 400,000 ha.
- 21 Forests, 1 of which (Maasai Mau) is managed by local government (Narok County Council)
- One of 5 'water towers' of Kenya; covers upper catchments of the Nzoia, Yala, Nyando, Sondu, Mara and Ewaso Ng'iro rivers → E. Africa lakes and wetlands; *i.e.*, Victoria, Baringo, Natron, Turkana, Nakuru and Naivasha

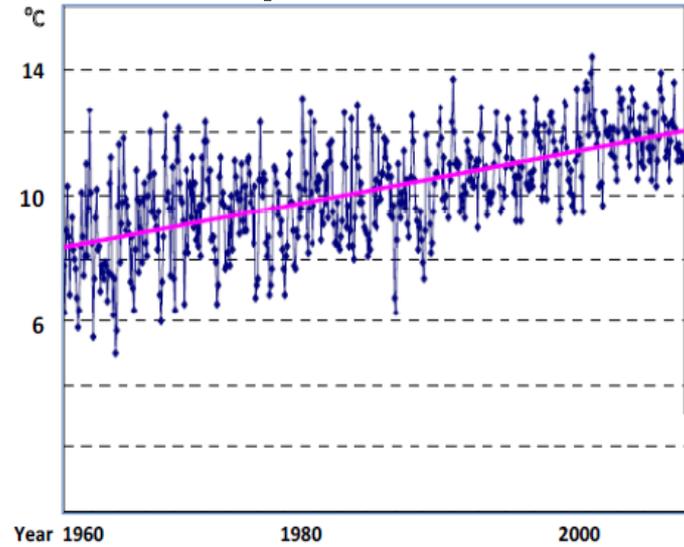
# Implications of Climate Change on Water Rights

## Mau Forest Complex Kenya



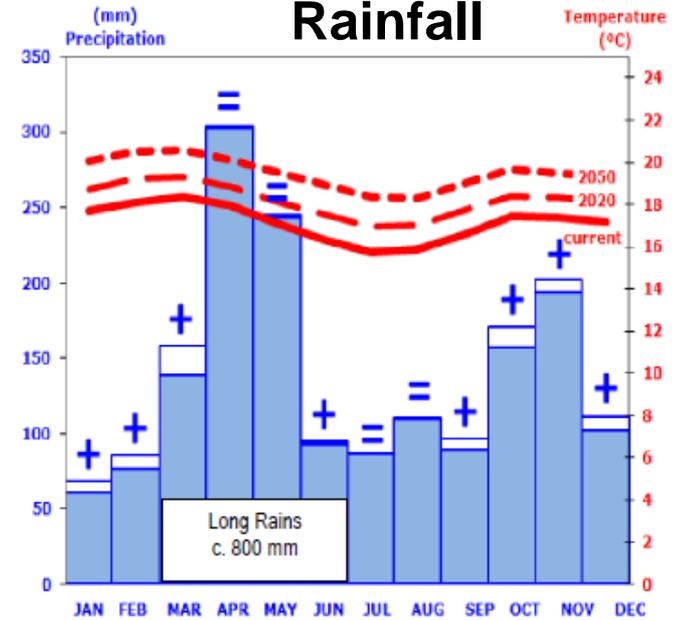


# Temperature



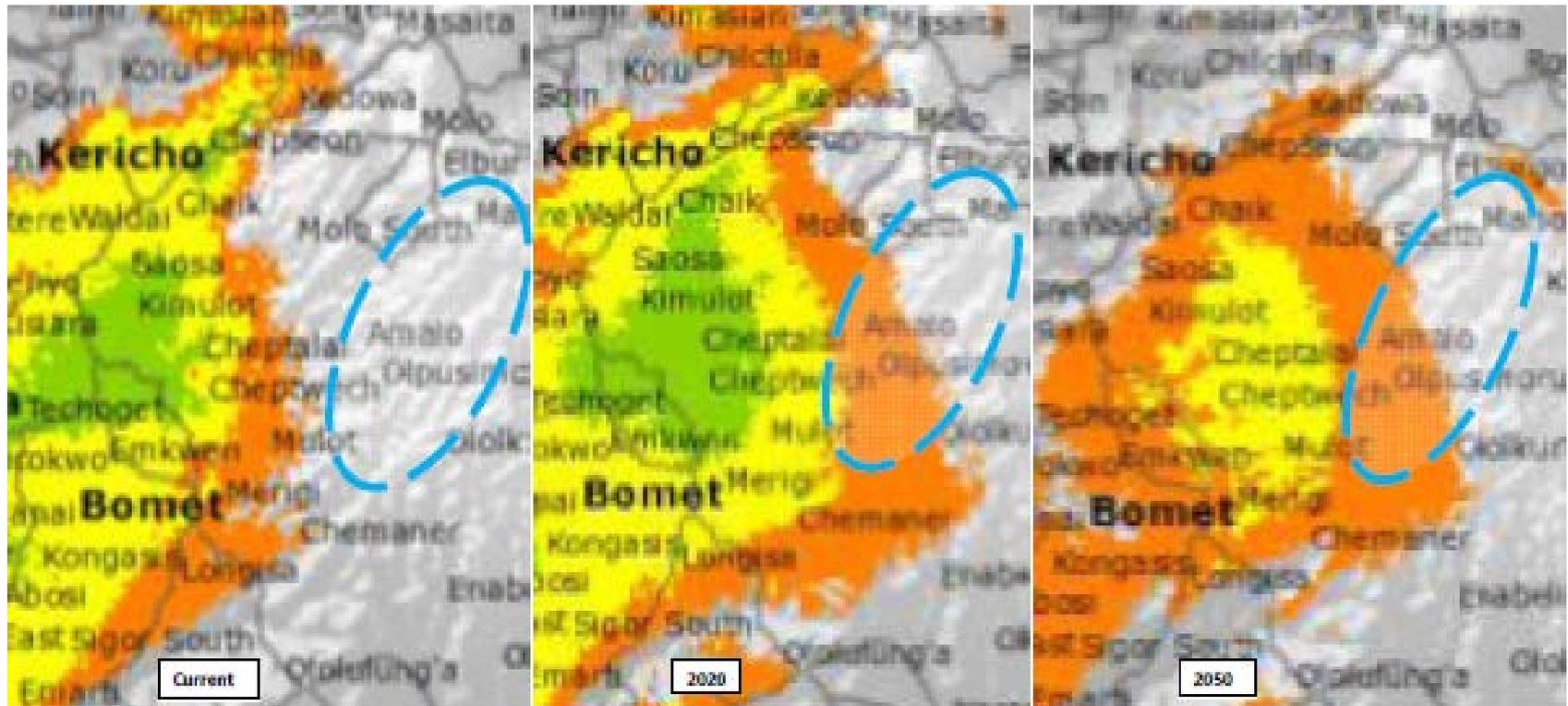
Monthly Mean Minimum Temperatures at Kericho (from IGAD 2007)

# Rainfall



Climate models predict change in Kenya's tea growing areas: temperature rises by more than 2°C by 2050; rainfall is equal or higher year round (CIAT 2011, using IPCC models)

# Land Use Implications for Kenya Mau Forest Complex



## Suitability



 Mara-Mau

Predicted Changes from current to 2050 in Suitability for Tea based on IPCC models. Suitability of areas moves north and east in the Mau with few "good" areas predicted by 2050, but with southern sections of Mara-Mau becoming more suitable including some forest areas and the heavily settled area around Olengurone. (After CIAT 2011).

# The Litany of Climate Change Woes....

Erratic Rainfall

Rising sea levels

Shifting rainfall patterns

Receding Glaciers

Coastal Flooding

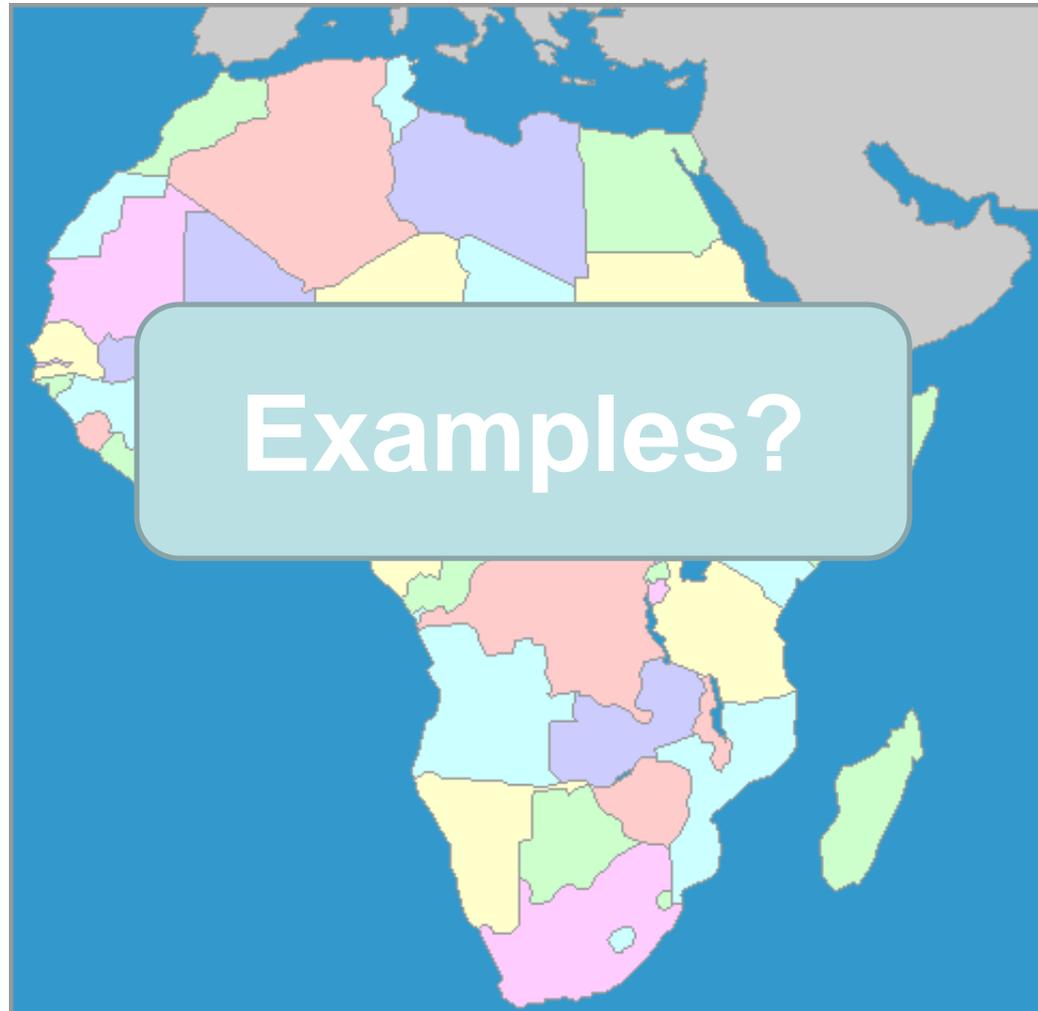
Melting Icecaps

Water shortages

Biodiversity losses

**Impacts on Resource Tenure  
and Property Rights?**

# Impacts of climate Change and tenure in your country?



# Societal Responses ...

- Adaptation

- Changing livelihoods
- Migration
- Displacement
- Struggle, Conflict and Violence

**Building resiliency**

- Mitigation

- Reducing carbon emissions
- “Low carbon” economic growth
- Storing and Absorbing carbon
- Sustainable Landscapes
- Climate sensitive agriculture

***Implications on land tenure and property rights?***

# Climate Change Impacts on Tenure Regimes

**Implication # 1:** Dramatic changes in land and natural resource-based asset values

**Implication # 2:** Displacement and Migration

**Implication # 3:** Further marginalization of the disenfranchised

**Implication # 4:** Transformation of resource management institutions

**Implication # 5:** Equity and the distribution of carbon payment benefits

# Climate Change Impacts on...

## Adaptation

### Ecological Change and Evolution of Land Use Practices

- How are biophysical changes, such as evolving availability of water and forest resources, impacting **international, national, and** local land use decisions?
- What degree of adaptation of tenure regimes (**use, access and transfer of rights**) is expected of local communities in the face of new pressures? ie: “environmental refugees”, “land grabbing” in face of carbon payments or biofuel production...?
- Is there a need to assist customary and statutory tenure regimes to adapt to new environmental conditions and social pressures?

# Climate Change Impacts on...

## Mitigation

### Carbon Payments (REDD Plus, Ecosystem Services...)

- Who can participate in carbon payment schemes (only those with formal rights or also customary rights holders)?
- What is the decision-making process for the distribution of rights and benefits?
- What dispute resolution mechanisms are present at different scales?
- What institutions at the local and national level are available to facilitate the clarification or determination of rights and benefits?
- What are the subsequent impacts of mitigation (ie: latent or pre-existing tenure rights) on other local and regional actors?

# REDD + and Resource Tenure

## REDD +: Reducing Emissions from Deforestation and Degradation

### *Who owns carbon rights?*

**Mechanism:** International Convention (UNFCCC) for developing countries to be financially rewarded for reducing forest-related emissions or increasing forest carbon sequestration.

**Social Dimensions of REDD +:** How to promote “no-harm” and promote “co-benefits” ? Who captures benefit streams from direct cash payments, direct provision of goods and services, indirect benefits (greater tenure security, better governance...). How should carbon rights be attributed and clarified?

**Tenure Issues:** “Carbon Rights” at center of debate

*Scenario 1:* Devolution of full ownership rights to local communities

*Scenario 2:* Co-management or limited devolution to local communities

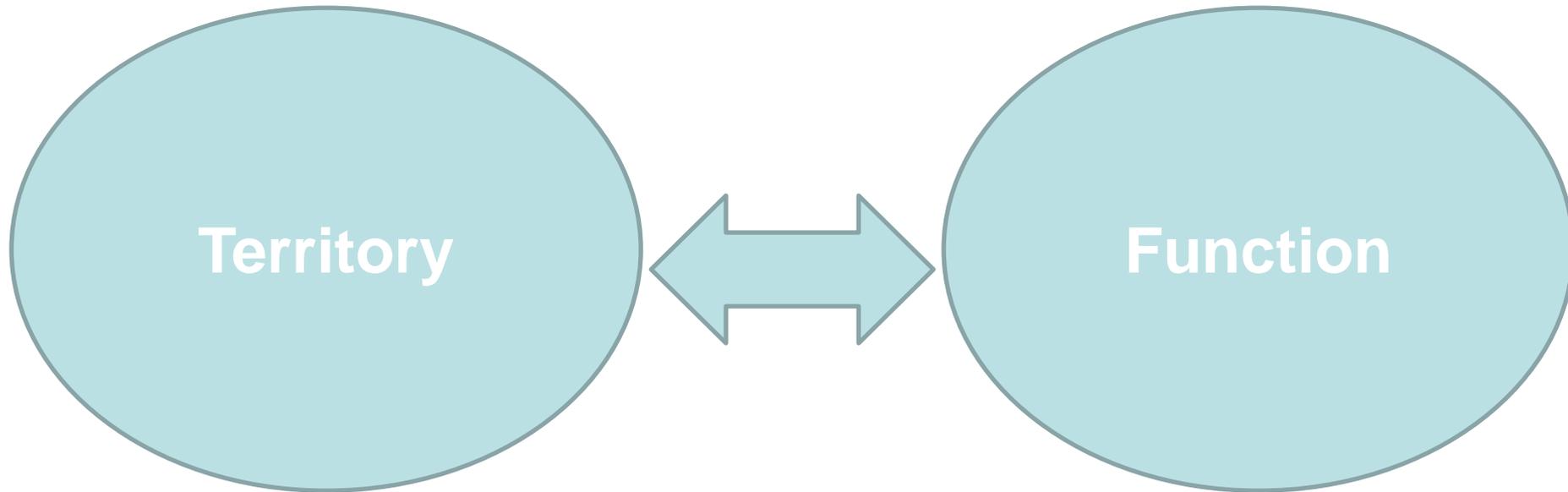
*Scenario 3:* No legal recognition of community forest rights

# Climate Change and Tenure: Contested Spaces, Contested Resources



***What type of land administration systems for an emerging era of climate change?***

# Innovations in Land Administration in an Era of Climate Change?

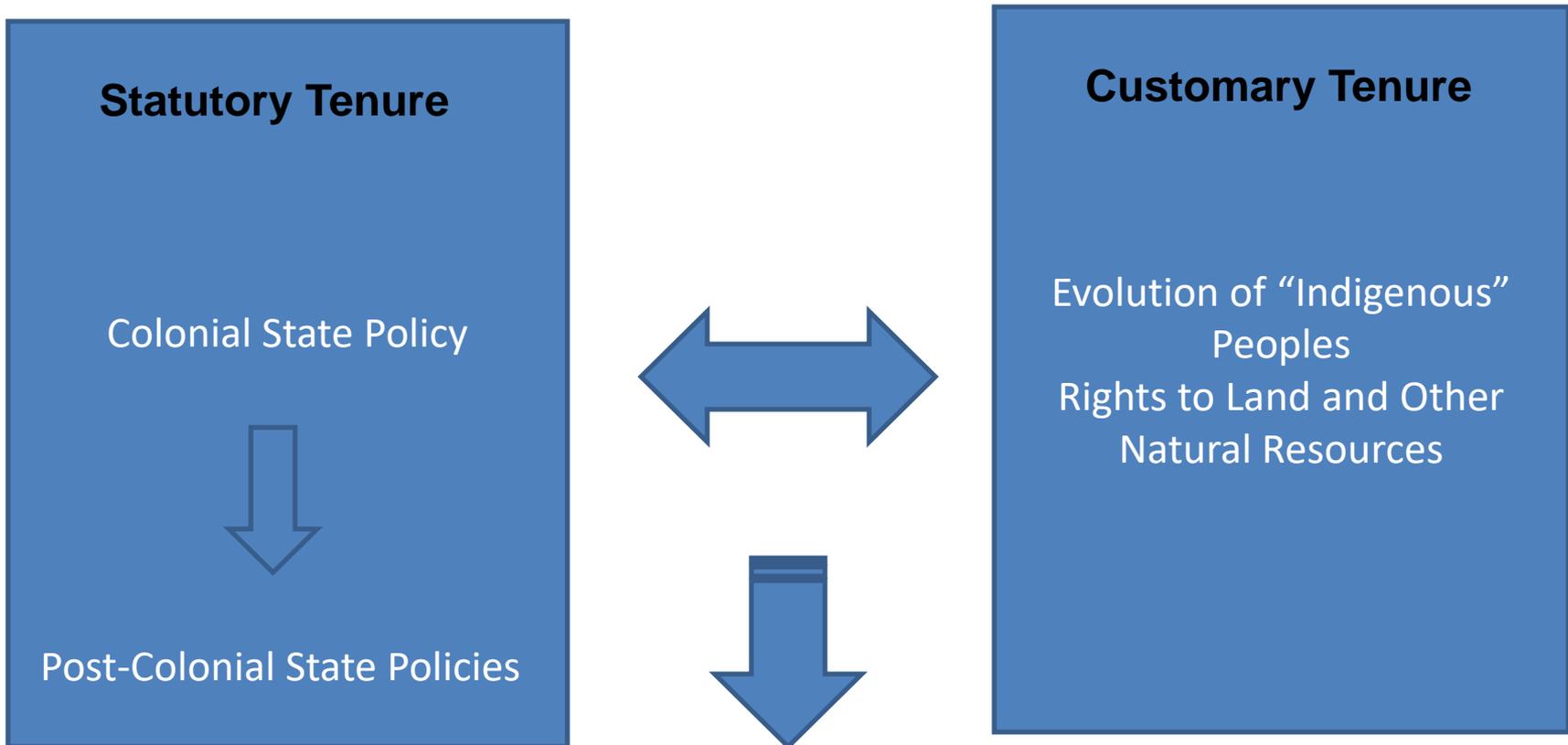


- Territorial control and exclusion
- Devolution of authority
- Local level rule-making
- Complex bundles of rights
- Respect for Indigenous rights
- Land charters
- Local level contracting
- “Adaptation” paradigm

- Facilitated access to all
- Centralization of authority
- National spatial planning
- Simplification of tenure regimes
- Standardization of land administration policies and practices
- “Replacement” paradigm

# Climate Change and the Evolution of Customary and Statutory Tenure

*How will these tenure regimes evolve in response to climate change? With what implications?*



Mosaic of Tenure Arrangements for Particular Places and Times

# Implications for Resource Tenure Policy and Administration?

- **Problem Identification:** How is climate change impacting livelihood systems in host countries? Who are vulnerable populations? Where located? What are the webs of causality?
- **Building Resiliency to Climate Change Perturbations:** How to foster resiliency within agricultural systems while strengthening incentives for investment in “climate sensitive agriculture”?
- **Clarifying Rights :** How to clarify and strengthen “bundles of rights” within statutory and customary tenure regimes while...
- **Promoting Flexibility in Tenure Regimes:** How to assure flexibility of movement of peoples in the face of climate induced perturbations? Implications on land administration?
- **Public Participation:** How to foster public policy formulation sensitive to equity considerations for adaptation and mitigation initiatives?
- **Land Administration:** Protecting land records in age of highly variable weather? Change in land administration services before relocating infrastructures or communities?

# Land Tenure and Property Rights Issue Briefs



## DEVOLUTION OF FOREST RIGHTS AND SUSTAINABLE FOREST MANAGEMENT VOLUME 1: A REVIEW OF POLICIES AND PROGRAMS IN 16 DEVELOPING COUNTRIES

PROPERTY RIGHTS AND RESOURCE GOVERNANCE PROJECT (PRGRP)

June 2012

This publication was produced for review by the United States Agency for International Development. It was prepared by Tetra Tech ARD.



## FOREST CARBON RIGHTS GUIDEBOOK

A TOOL FOR FRAMING LEGAL RIGHTS TO CARBON BENEFITS GENERATED THROUGH REDD+ PROGRAMMING



### USAID ISSUE BRIEF CLIMATE CHANGE, PROPERTY RIGHTS, & RESOURCE GOVERNANCE EMERGING IMPLICATIONS FOR USG POLICIES AND PROGRAMMING PROPERTY RIGHTS AND RESOURCE GOVERNANCE BRIEFING PAPER #2

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

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

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

U.S. Agency for International Development  
www.usaid.gov



## DEVOLUTION OF FOREST RIGHTS AND SUSTAINABLE FOREST MANAGEMENT VOLUME 2: CASE STUDIES

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