

# Mobile Applications to Secure Tenure



**USAID**  
FROM THE AMERICAN PEOPLE

# Secure Land Rights:



reduce  
conflict



empower  
women and  
youth



increase food  
security



promote  
economic  
investment



address climate  
change

70%

**of land**

in the developing world is  
**undocumented**. In many places,  
it is prohibitively **expensive** and  
**difficult** for rural people to map  
and record their **land rights**.

**USAID is using mobile technology and participatory approaches to solve this problem.**

# Technology innovations Human Solutions

USAID has developed a suite of low-cost, open-source **Mobile Applications to Secure Tenure (MAST)**, providing flexible tools that help people and communities secure rights—whether **customary** or **formal**—to their most important asset: **land**.



Photo Credit: Freddy Feruzi

Innovations in technology are making it easier for people, communities and governments to map, document, and maintain records of land and resource rights with greater transparency and at lower costs.



Photo Credit: Freddy Feruzi

## Improved Lives

By pairing technological solutions with human ones—**local knowledge** and **community participation**—USAID is delivering cost-effective, sustainable solutions that build capacity and help to strengthen land rights, **empower women, improve land and resource management**, and **reduce conflict**.



Photo Credit: Jeremy Green



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MAST includes a suite of flexible tools that can be customized for different countries and contexts to record information on different types of rights and resources.



Photo Credit: Freddy Feruzi



Photo Credit: Jeremy Green

# Global apps; local contexts

In **Tanzania, Zambia, Kenya and Namibia** USAID is successfully working with local communities, governments and traditional leaders to use MAST to map, validate and certify land rights and improve land management.



## Zambia

In **Eastern Zambia**, USAID is working with four chiefs and a local NGO to clarify, map and certify customary land rights in 150 villages. MAST/Zambia runs on low-cost, GPS-enabled phones and tablets. The project works to map, record and clarify boundaries at both household and village levels.

Community participation is key to this process. Farmers and their neighbors walk the boundaries of their fields together, recording the borders only once all parties agree. The resulting maps are validated by the wider community before land certificates are issued by customary authorities. These provide greater security and clarity over rights and responsibilities.



## Tanzania

In **Central Tanzania**, MAST uses a smartphone app and cloud database to help rural communities map and document their land rights. The project trains youth to use a simple, open-source mobile application to map parcel boundaries and gather the information that government officials need to issue land rights documents called Certificates of Customary Rights of Occupancy. The open-source technology and participatory approach piloted by MAST/Tanzania makes the process of securing land rights easier, quicker, more accessible, and more transparent for local people and communities.



Improving land use management can help to increase resilience, address climate change, and enhance productivity



## Kenya and Namibia

In **Northern Kenya** and **Northern Namibia**, USAID and USDA are jointly supporting a user-friendly mobile platform that links a global knowledge network of researchers and practitioners through two mobile applications. This platform, called LandPKS, helps people and communities—in both farmland and rangeland areas—to identify management strategies to sustainably increase production, tailored to their land's unique climate, soils and topography. The two mobile applications, LandInfo and LandCover, empower users with valuable, practical knowledge and support sustainable land use planning.



## Key Lessons

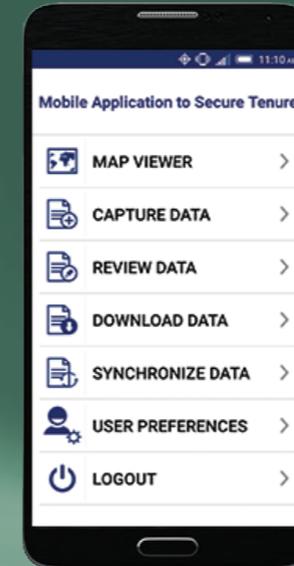
- 1) Technology-focused solutions must be coupled with land rights training and participatory processes
- 2) Women, men and youth can be trained to use the MAST technology to map and document the land rights of their communities—and can train others
- 3) Working collaboratively with local leaders (customary and formal) is critically important
- 4) Coupling efforts to record land use rights with training on land use management tools may amplify benefits of recording land rights
- 5) Long-term administration of this data at the household level and the use of the information at the village/community/administration level is central to the success of these activities. Putting these tools in the hands of communities, governments and customary leaders must be coupled with a long-term vision for keeping these systems up-to-date.

# What are the next steps?

Now that the initial MAST technologies have been developed and piloted, USAID is exploring how these flexible tools can be adapted to solve various development challenges and can be scaled for different countries and contexts.

We are working with development partners around the globe to explore opportunities to adapt MAST technologies to meet different programming needs. This may include: improving land use management; mapping indigenous and other customary land rights; identifying boundaries of natural resources such as forests, pastures and water sources; and identifying migratory routes of pastoralists and wildlife.

## Learn More



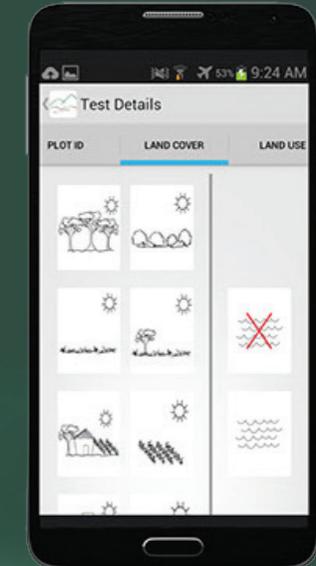
### MAST/Tanzania

[www.usaidlandtenure.net/  
MAST-Tanzania](http://www.usaidlandtenure.net/MAST-Tanzania)



### MAST/Zambia

[www.usaidlandtenure.net/  
MAST-Zambia](http://www.usaidlandtenure.net/MAST-Zambia)



### LandPKS

[www.usaidlandtenure.net/  
LandPKS](http://www.usaidlandtenure.net/LandPKS)

**For more information, visit [www.usaidlandtenure.net](http://www.usaidlandtenure.net) or contact USAID's E3/Land Office at [landmatters@usaid.gov](mailto:landmatters@usaid.gov).**



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#landmatters

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