MOBILE APPLICATION TO SECURE TENURE

Using Technology to Strengthen Land Rights

Credit: USAID/Tanzania

MOBILE TECHNOLOGY TO IMPROVE LAND GOVERNANCE

Around the world, millions of people lack documented land rights. This may be the result of weak land governance systems or limited capacity to provide accessible and accountable land administration services. These institutional challenges are widespread and drive costly and systemic problems on the ground.

Without documentation, people often lack secure tenure over land and natural resources. They are more vulnerable to wrongful displacements that disrupt their livelihoods and important social networks. They also have fewer incentives to invest labor and capital to improve productivity and enhance the future value of their land. For too many, tenure insecurity means that agricultural productivity and incomes remain low; resources are used in unsustainable ways; and, costly conflicts are all-too common. Additionally, poor land governance creates special hardships for women and other vulnerable groups.

USAID is addressing these problems through an innovative pilot called the Mobile Applications to Secure Tenure (MAST) project. The project team has developed an easy-to-use, open-source smartphone application that can capture the information needed to issue formal documentation of land

rights. Coupled with a cloud-based data management system to store geospatial and demographic information, the project is designed to lower costs and time involved in registering land rights and, importantly, to make the process more transparent and accessible to local people.

The project is being implemented in rural Tanzania where USAID is working directly with villagers to map and record individual land rights, strengthen local governance institutions, and build government capacity.

The project will provide training on land laws to raise awareness of women and men's legal rights, and will work with community institutions to strengthen local capacity to implement these laws. The project will also conduct outreach to ensure that mapping and registration processes are participatory and inclusive. Local people will be trained in data collection and verification and the results of mapping activities will be presented to community-wide gatherings for validation.

This innovative and cost-effective approach to formalizing land rights can be adapted for use in many different settings and scaled to provide land services to women and men around the world.
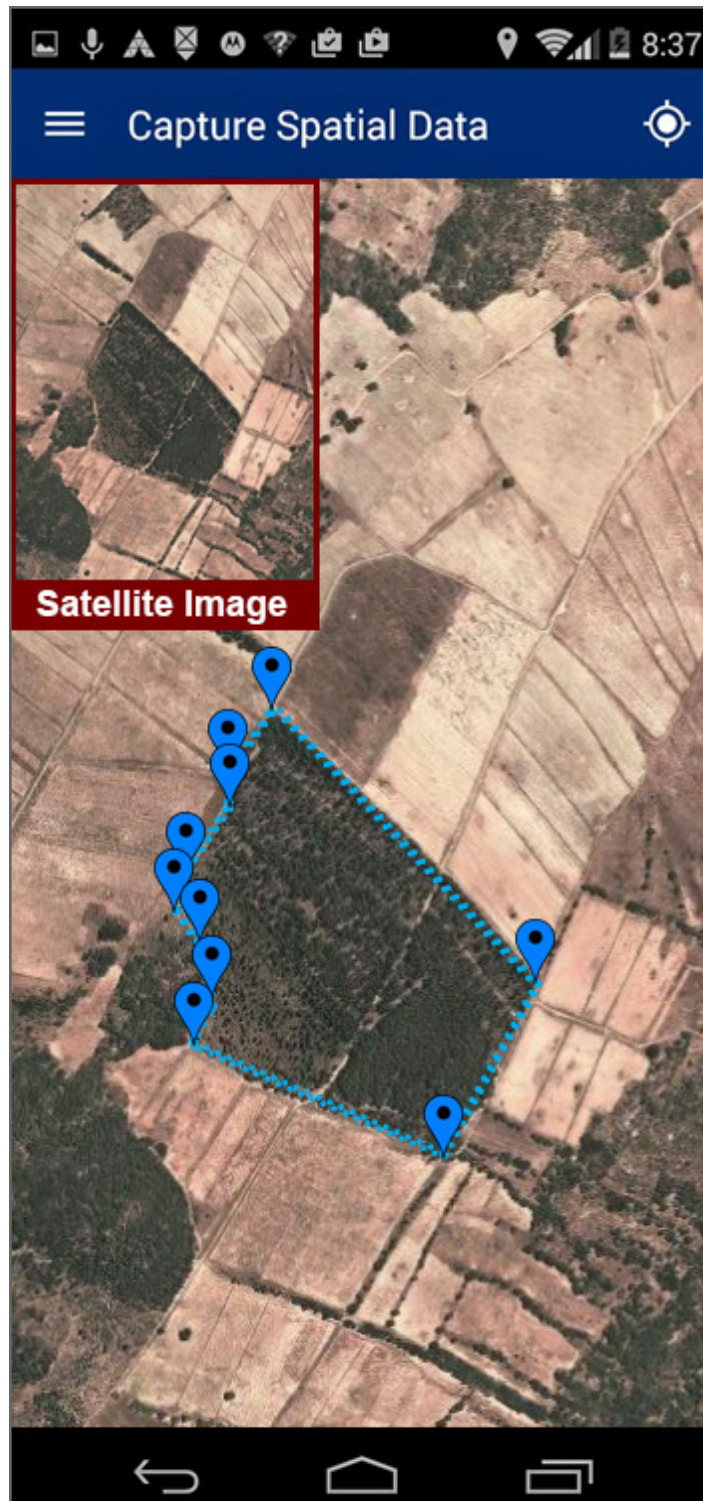
PRINCIPAL COMPONENTS OF THE MAST APPLICATION

The MAST Application Suite consists of two principal components: a smartphone application that is specifically developed for the capture of land rights information and a cloud-based data management infrastructure.

The Data Capture Application component is an Android-based mobile application with two functions:

- Capture land rights information (spatial, alphanumeric, and multimedia)

- Capture data in offline mode and transfer data to cloud-based data management server when a connection is available

The Land Rights Infrastructure component is an open-source data management and storage facility that is designed to receive, manage and store land rights information collected on mobile devices. It has the following functionalities:

- Provides administration tools which allow for customizable set-up and security of data;

- Facilitates intake and validation of data into a relational database management system that is configured on the Land Administration Domain Model/Social Tenure Domain Model;

- Configures the database, including the addition of customized fields and porting of attributes to data collection forms on mobile applications;

- Processes and validates data according to predefined rules;

- Visualizes and edits spatial data collected in the field, via a Web-based GIS; and

- Configures and integrates template reports and land rights documentation

The MAST Application Suite is flexible and adaptable to a variety of country contexts and uses. Some potential uses include:

- Systematic Registration

- Spot Registration

- Adjudication

- Conflict Resolution

- Sustainability Planning

- Natural Resource Management

- Land Use Planning

For more information, contact:

USAID's Land Tenure and Resource Management Office
Email: landmatters@usaid.gov

Webpage: www.usaid.gov/land-tenure

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U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
Tel: (202) 712-0000
Fax: (202) 216-3524
www.usaid.gov