

## FIG-WB Forum on Land Administration and reform in Sub-Sahara Africa

Ethiopia  
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## Country at a Glance

Statistic	
Total population	91.2 m (2012)
Area (km <sup>2</sup> )	1.1 m
Urban %	17%
Rural %	83%
Per capita GDP	\$513
No. of surveyors/capita	
No. of Lawyers/capita	

Ethiopia: Rural Land Certification

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## Country Land Initiative

- Rural land certification
- Regional Governments with guidance from Federal government
- First level certification largely undertaken by Ethiopia. WB, USAID, SIDA provided some input in early stages and MFA, DFID more recently

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## Scope of Initiative

- Policy target to issue certificates to all rural land holders over 5 years
- Process started in 1998 in Tigray and then extended to Amhara, Oromia and SNNP
- By 2010 holding books had been issued to 7.3 m HHs (total rural HHs 12.8 m). Estimated ~ 25m parcels registered
- Issues – records, updating, spatial framework

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## Rural Land Tenure Typology

Tenure type	Legal recognition & characteristics
Public Land	<p><b>Legal recognition:</b> Recognized as 'state holding' in the Federal Proclamation (456/2005) and regional land laws.</p> <p><b>Registration/recording:</b> While all rural land is to be measured and registered, only 4 regions undertook relevant programs which focused on individual holdings, thus leaving out a large portion of land. The majority of state forestlands and protected areas are yet to be demarcated and registered.</p> <p><b>Transferability:</b> Public land cannot be transferred, only allocated by the government. Per Art. 5 of Proclamation, 456/2005, the government can allocate rural land to be used by peasants and pastoralists (free of charge), investors, non-governmental and other social and economic institutions.</p>
Private individual holding	<p><b>Legal recognition:</b> The right of rural households to acquire (perpetual) rights to land free of charge is recognized under articles 40/4f of the Constitution.</p> <p><b>Registration/recording:</b> Four of the 9 regional states established systems to record individual rural holdings covering an estimated 70% of total population.</p> <p><b>Transferability:</b> Private individual holdings cannot be sold and only transferred through inheritance to family members practising agriculture and living with the right holder. They can be leased to other farmers or investors, subject to restrictions on the extent and duration of leases.</p>
Private communal holding	<p><b>Legal recognition:</b> Access rights to communal holding over rural land are recognized by constitution and Proclamations (456/2005).</p> <p><b>Registration/recording:</b> No registration except for pilot cases.</p> <p><b>Transferability:</b> As they have access rights only, community members cannot transfer rights to common resources. "Government being the owner of rural land, communal rural land holdings can be changed to private holdings as may be necessary." (Pr. 456/2005; Art. 5/3).</p>
Commercial holding (investors)	<p><b>Legal recognition:</b> Private investors can acquire time-bound use rights over rural land to engage in commercial activities through contract with the state (Pr. 456/2005 Art. 5-8).</p> <p><b>Registration/recording:</b> Rural land up to 5,000 ha is given to investors by regional Investment Authorities with allocations beyond this being made by the Federal Authority. Overlapping institutional authorities and weak capacity imply that data is weak.</p> <p><b>Transferability:</b> Investors who holds rural land through lease or rent have the right to transfer and use as collateral their holding right</p>

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## Spatial framework

### Prior to intervention

- Traditional triangulation network started in 1957. Adindan datum modified Clarke 1880 Ellipsoid. 4 CORS stations (USAID)
- 1/50,000 being updated with SPOT imagery. Starting to produce 1/10,000 and 1/25,000 orthophotomap series (25,000 sq km)
- Traditional rope surveys – no maps

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## Field Assessment

- **Rapid field assessment** has been done....  
on the nature of parcel boundary demarcations and dispute resolution mechanisms.
  - **Highland area**
    - --- Amhara, SNNP, Tigray, Oromiya
  - In significant parts of the northern eastern and central highlands:
    - **"Uncultivated Grass Strips"/"soil or stone bunds"** and **"Small Ditches"** are the commonest boundary markers;
  - **Ditch**
  - **uncultivated strip**
  - **Grass Strips**
  - **Croton macrostachyus**" and **"Bissana**
  - **Euphorbia**

"SMALL DITCHES" USED A BOUNDARY MARKERS IN W. GOJAM ZONE AREA



"GRASS STIPS"/ "UNCULTIVATED STRIPS" OF LAND ALONG THE CONTOUR IN W. GOJAM ZONE



**Common Traditional Boundary Markers in W.Gojam Zone**

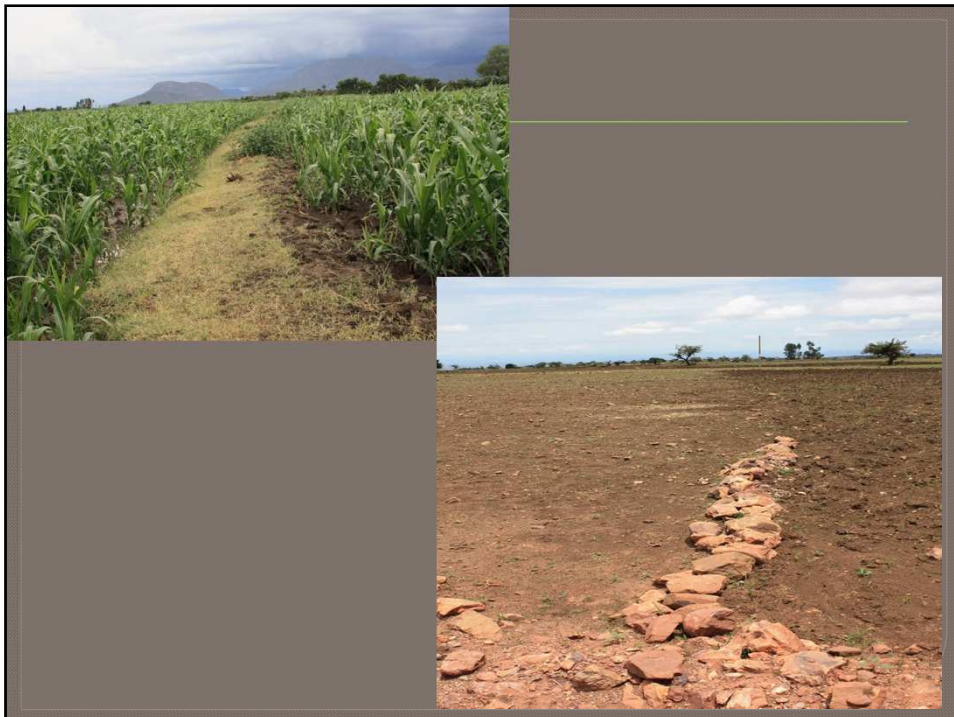
STONE BUNDS USED AS PARCEL BOUNDARY MARKERS IN TIGRAY REGIONAL STATE



SOIL BUNDS USED AS BOUNDARY MARKERS IN TIGRAY REGIONAL STATE



Stone and soil bunds used as parcel boundary markers











## Land Disputes

- A **qualitative study** conducted on status of rural land dispute resolution in the Country revealed the followings : **as major rural land related disputes in the highlands:**
  - Holding rights
  - Claims to land inheritance;
  - Martial status
  - land encroachment/boarder trespassing primarily on communal lands
  - breaching of rural land-related transactions / land exchange agreement.
  - Boundary conflict has been indicated as insignificant .

**The qualitative study have revealed that there is not a serious issue regarding boundaries .**

## Conclusion

- **With the above as a backdrop**, two **apparent general trends** can be stated on boundary definition and demarcation practices **have strong relevance to define boundary demarcation for the Highlands of Ethiopia.**
  - ✦ **Firstly, “Uncultivated Strips”** stand as the principal boundary markers, which often are a linear feature established all along the parcel boundaries.
  - ✦ **Secondly, in all cases disputes over parcel boundaries are noted to be lesser** when compared with other land-related disputes. In Most cases, disputes over boundaries are settled via the **“traditional Elder’s Committee”**;



## Conclusion

- **Based on this analysis of traditional practices regarding parcel boundaries** it is suggested that the “**General Boundary Approach**” is most appropriate.
  - The **rationale** includes the following:
    - **Land users seem satisfied and comfortable** with an approximate spatial description that shows the “Subject-parcel” and the neighboring parcels in all directions.
    - **Where there is a simple, community-accepted system of defining boundaries, or**
      - **where there is a low social cost in getting agreement on boundaries ,**
        - **There is reduced justification for accurate but costly surveys and comprehensive mapping systems.**
    - **there is a long tradition to define and demarcate parcel boundaries** using man-made structures mainly including “**uncultivated Grass Strips**”, “**small ditches**”, “**planted trees**” or “**hedges systems**” all along the boundary or at intervals.
    -

## International Experience

- a) **General factors and issues to be considered:**
  - ✓ **Australia:** The initial cadastre based upon graphical accuracy and being upgraded to survey accuracy;
  - ✓ **Thailand:** **Since significant part of the country is flat**, cadastral maps were compiled using rectified photography
  - ✓ **Kenya:** **Hedges grown as boundary markers and** enlarged aerial photography were used.
  - ✓ **Rwanda:** **Orhtorectified aerial photography - Multi-purpose use of the aerial photography**
- b) **Cost Factor- Major/limiting factor Key and Important Lesson**
  - **No Project in the developing world has been able to implement and sustain high accuracy surveys over extensive areas of their jurisdictions**



## Technology Options

- **Two broad approaches:**
  - Ground survey; and
  - Photogrammetric approaches
- **Photogrammetric approach/techniques:**
  - ✓ Cost-effective for initial compilation of cadastral plan,
    - Given *boundaries are visible on the image* and
    - **Large number of areas** are to be surveyed and mapped;
  - ✓ Factors to be considered on use and application :
    - Topography,
    - vegetation cover and
    - air –visibility of parcel boundaries.



## □ Context in Ethiopia

- ✓ About 60 % of the highlands part is steep, exceeding 30% slope:
- ✓ Characterization of **parcel boundaries in the highlands** is defined;
- ✓ **Forest covered area** cover about 3.6% of the country's land mass , most concentrated in **“Oromiya”**, **“SNNP”** and **“Gambella”** regional states ( data in 2000)

## Studies

- Indicative cost estimate based on piloting exercise in Ethiopia

Methodologies	Cost		Speed/Survey rate	
	Birr <sup>1</sup> /ha	Birr <sup>1</sup> /Parcel	WH/Ha	WH/Parcel
1-Hand-held GPS	80.41	43.15	34 Min	19Min
2-Tape & Compass	291.84	157.59	2.53Hr	1.34Hr
3-Total Station	117.41	63.01	44Min	23.0Min
4-HR IKONOS Imagery	229.87	123.35	31Min	17.0 Min

- Broad and crude assessment based on review of international literatures, using ortho-rectified satellite imagery for producing parcel map range from USD 2.27 to USD 2.40. **The study that had been conducted in Sebeta, they didn't take in to consideration the economy of scale. That is one of the constraint of the study.**

## General RECOMMENDATIONS

- General recommendations on cadastral survey strategic directions and methodologies include the following:
  1. Boundaries should be agreed and formalized in a manner that reflects local custom and practices;
  2. A cadastral index map using an orthophotomap base should be agreed as the spatial framework for second level certification with the cadastral index maps identifying the geographic location of land parcels.
  3. Survey procedures should be developed to supplement the cadastral index maps .
  4. Institutionalization of “common pool resources” of appropriate imagery sources for multiple uses for different organizations.

## "Fit for PURPOSE"

