





Land Registry



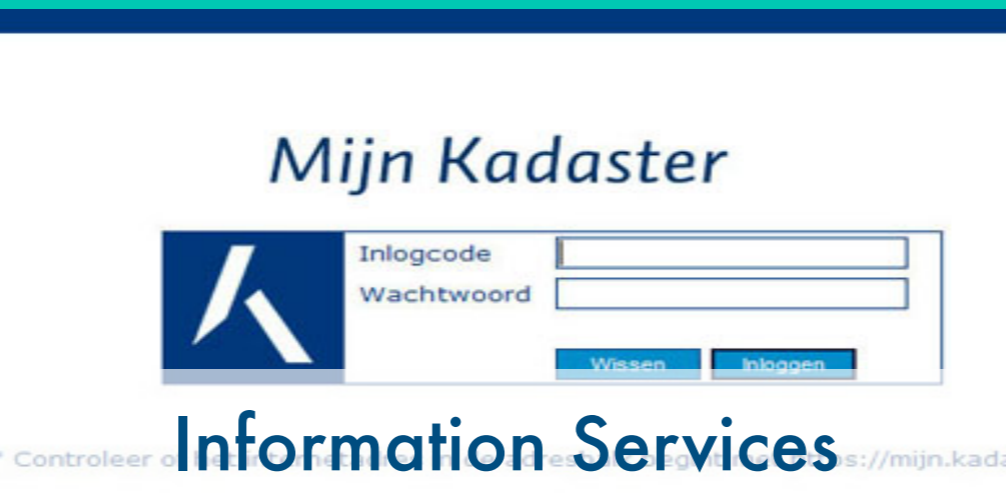
Cadastral Surveying



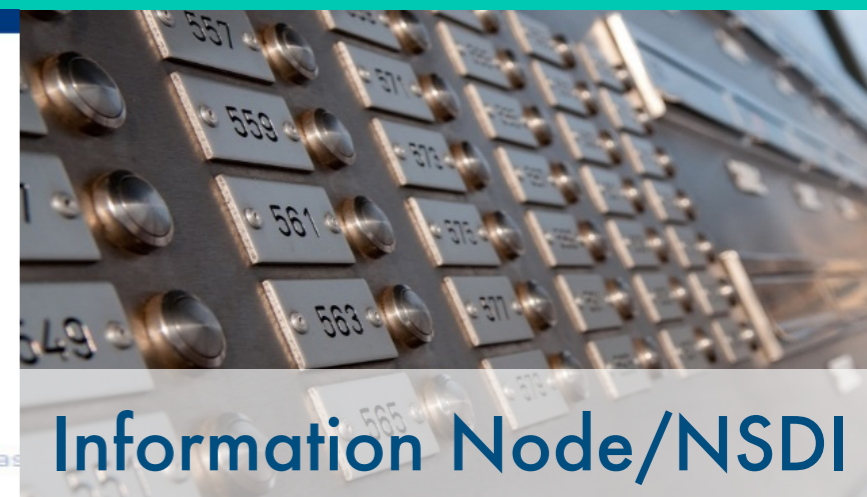
Land consultation



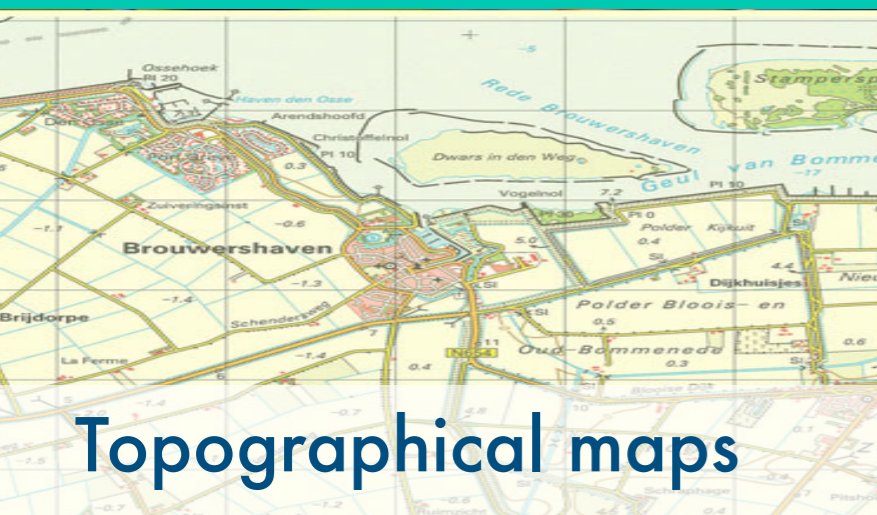
Key registers



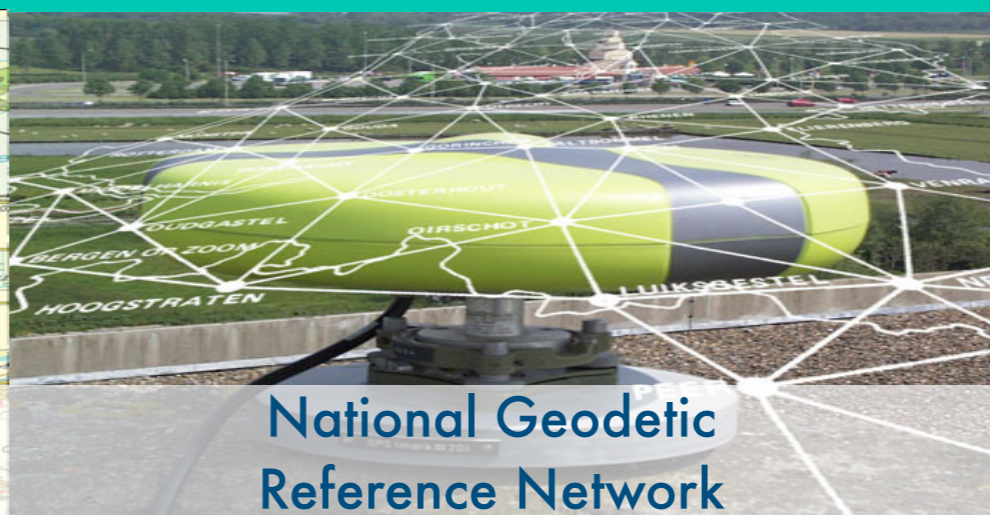
Information Services



Information Node/NSDI



Topographical maps



National Geodetic Reference Network



Cables and Pipelines

Movie

# International Consultancy



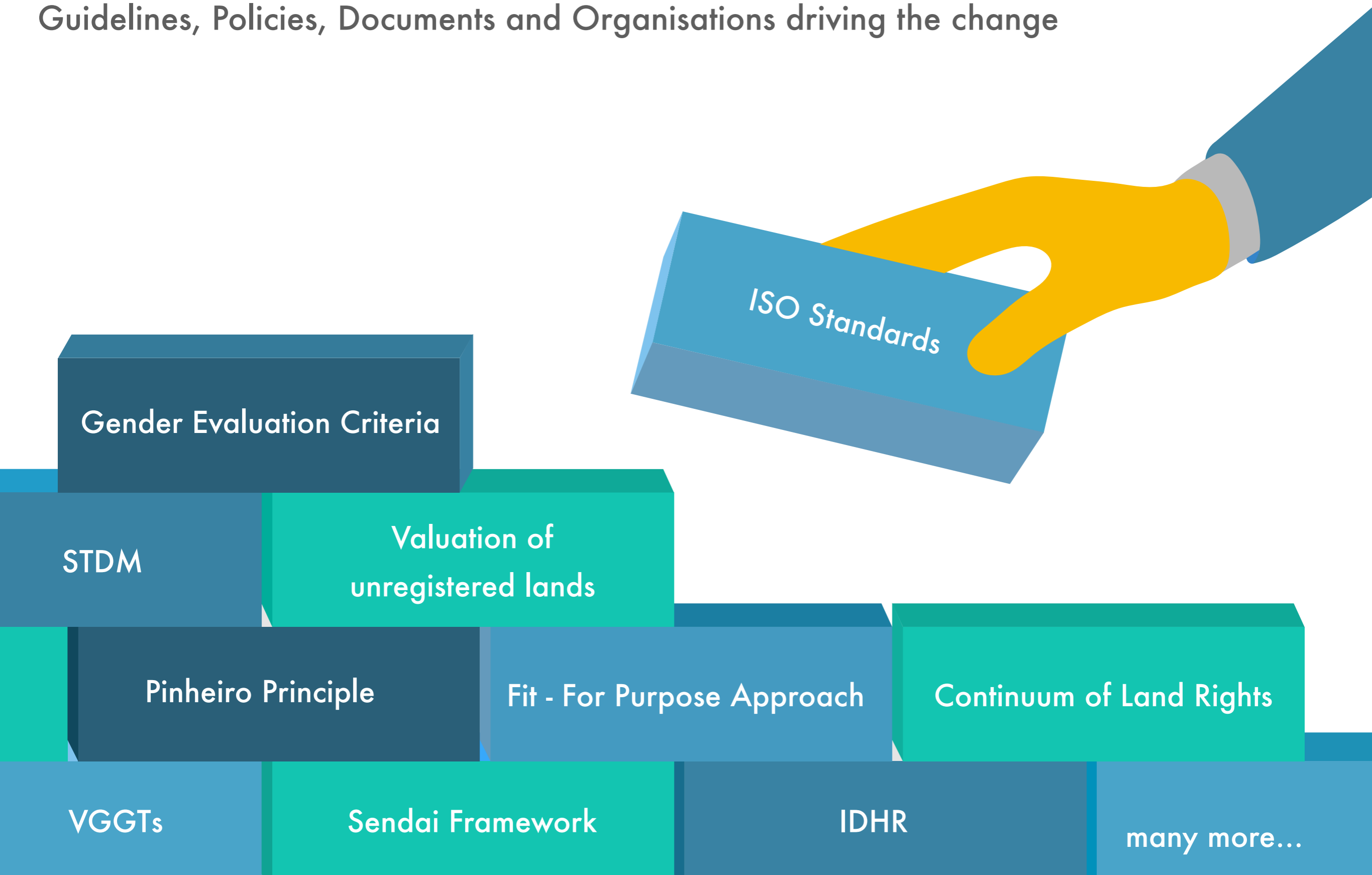
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... tenure security for ALL

*kadaster*

# Tools provided by global organisations

Guidelines, Policies, Documents and Organisations driving the change



ISO Standards

Gender Evaluation Criteria

STDM

Valuation of  
unregistered lands

Pinheiro Principle

Fit - For Purpose Approach

Continuum of Land Rights

VGGTs

Sendai Framework

IDHR

many more...

# Nepal



# Kenya



## FFP LA



# Colombia

# Indonesia

# Nepal



# Kenya



## FFP LA



# Colombia

# Indonesia

# Movie

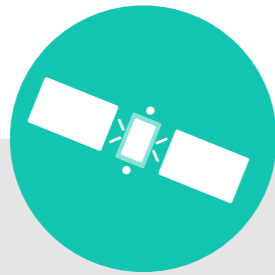
full movie can be found at [Kadaster Homepage](#)



# Tenure Security & Disaster Risk Management

- :: recording and documenting all people-to-land relationships
- :: in earthquake affected areas (access to reconstruction grants, resettlement...)
- :: impact at local, regional and national level through FFP strategy
- :: key to success participation and partnership

## Data Collection **Tools** and Deliverables



### **SATELLITE IMAGE**

were purchased to  
be plotted and be  
used in the field



### **HANDHELD GPS**

were used to record  
the constructions/  
buildings with one  
Point



### **QGIS & STDM**

OPEN SOURCE

was used to digitise  
the satellite images  
and to establish the  
people - land  
relationships

... for sustainable development

## Data Collection Tools and Deliverables



### QUESTIONNAIRES

two different questionnaires have been developed (Household and Farm Questionnaire)



### TRAINING

enumerators/  
grassroot surveyors  
were trained in how  
to conduct  
participatory  
enumeration and VB



### HANDBOOK

for each of the steps  
Handbooks were  
produced - to  
ensure sustainable  
capacity building

... for NGO (HURADEC) and governmental agencies

Steps of the Visual Boundary Approach



| Purchase   | Methodology  | Plotting  | Training                       | Test   | Handbook  | Application                                       |
|--|--|---|--------------------------------|--|---|---|
| of the satellite image including the digital terrain model | Developing the methodology for the visual boundary approach based on the regional & cultural context | Satellite Images for the Use on the ground<br><br>Size: A0<br><br>Scale | of enumerators on the approach | of methodology with the trained enumerators in the field<br><br>last adaptions | Develop Handbook for Use in the Field and for Future Applications | Visual Boundary Approach carried out in the field |

# Methodology



# Methodology

## STEP 1

### Data Entry

Questionnaire and importing of the GPS Point of the house into STD

## STEP 2

Georeferencing  
the Satellite Imagery from the  
field after Visual Boundary  
Approach

**LOCAL  
NGO**

## STEP 3

### Digitising

Boundaries of Spatial Units using  
QGIS

## STEP 4

People-Land-Relationship  
establishing the People-Land-  
Relationship using STD

# Methodology



# Methodology



# Methodology



|    | Household Number | Annual Expense | Annual Farming Income | Annual Non Farming Income | Household Priority | Village Priority  |
|----|------------------|----------------|-----------------------|---------------------------|--------------------|-------------------|
| 1  | BUL1             | ८००००          | ५००००                 | १०००००                    | बिजुली             | बिजुली            |
| 2  | BUL10            | ७००००          | ३००००                 | २०००००                    | घरधुरी सुधार       | स्वास्थ्य केन्द्र |
| 3  | BUL11            | ६००००          | ५००००                 | ३००००                     | घरधुरी सुधार       | सड़क              |
| 4  | BUL12            | १०००००         | २५०००                 | १०००००                    | घरधुरी सुधार       | सड़क              |
| 5  | BUL13            | ३००००          | १५०००                 | २४०००                     | घरधुरी सुधार       | सड़क              |
| 6  | BUL14            | १०००००         | ३००००                 | १०००००                    | घरधुरी सुधार       | बिजुली            |
| 7  | BUL15            | १०००००         | १५०००                 | ३०००००                    | घरधुरी सुधार       | सड़क              |
| 8  | BUL16            | १२००००         | ४००००                 | ५०००००                    | घरधुरी सुधार       | बिजुली            |
| 9  | BUL17            | १०००००         | ०                     | २०००००                    | घरधुरी सुधार       | सड़क              |
| 10 | BUL18            | १०००००         | ३००००                 | १०००००                    | घरधुरी सुधार       | बिजुली            |
| 11 | BUL19            | ५००००          | १००००                 | ३५०००                     | खानेपानी           | स्वास्थ्य केन्द्र |
| 12 | BUL2             | २०००००         | २००००                 | ३६००००                    | घरधुरी सुधार       | स्वास्थ्य केन्द्र |
| 13 | BUL20            | १५००००         | ०                     | २०००००                    | घरधुरी सुधार       | सड़क              |
| 14 | BUL21            | १०००००         | ५००००                 | ३०००००                    | घरधुरी सुधार       | बिजुली            |
| 15 | BUL22            | ९००००          | ५००००                 | ४००००                     | घरधुरी सुधार       | मोबाइल नेटवर्क    |
| 16 | BUL23            | २०००००         | १५०००                 | १५०००                     | घरधुरी सुधार       | सड़क              |
| 17 | BUL24            | १०००००         | १५०००                 | १५००००                    | घरधुरी सुधार       | सड़क              |

Look For

In Column

## Data Validation



### INTERNAL

check and double  
check from data by  
data entry persons



### ENUMERATORS

by enumerators  
during and after  
enumeration - field  
supervisors when  
handing in



### COMMUNITY

in each community by  
displaying it in the  
community hall for  
various days

making an impact at local, district and national level

# Impact at National Level

## Queries

development of queries  
using the questionnaires,  
see what is possible

## Selection

of relevant queries  
addressing the overall  
objectives of the project  
per site



## Presentation

preparing analysis outcome  
so that it can be used at  
different levels

local, district and national

# Impact at National Level



## KEY FINDING:

1/3 of the Households in the 3 pilot areas do not have land documents.

Phulappa



Bulungkhani



Jilu



This key finding was retrieved from a combination of the house status and the land documents.

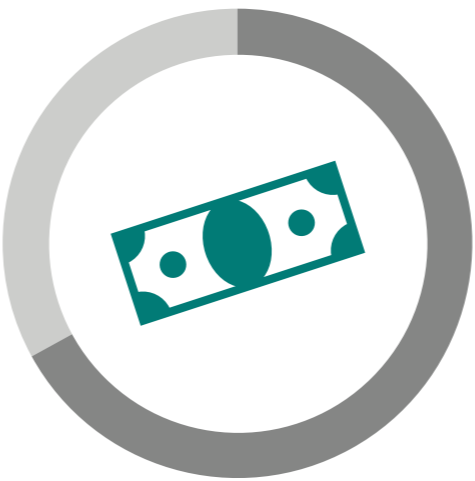
Households with no official land documents are more vulnerable as they hardly can access reconstruction grants or have limited access to other supplied aid. Further it is proven in research that households with no land documents are less likely to improve their building standards as tenure is not secured.

Within this study NRA (National Reconstruction Authority) changed their policy and also granted households with no official land documents.



## KEY FINDING:

Because of the lack of documents 1/3 of the Households in the 3 pilot areas could not access the reconstruction grants.



133

out of 421 houses in the three pilot areas were not eligible for the reconstruction grants.

# Impact at National Level



## KEY FINDING:

Women's ownership of land not only enhances their livelihood options, but also the socioeconomic well-being of their families and societies. Policy interventions and improvements are for instance, the Eleventh Amendment of the *Muluki Ain* (Civil Code) in 2002, Gender Equality Act 2006, the Interim Constitution of Nepal 2007 and the Constitution of Nepal 2015 which includes provisions ensuring women's equal access to parental or inherited property.

However, due to prevailing patriarchal traditional practices in Nepal, women continue to be marginalised in terms of land ownership. Therefore this study collected and analysed the number of joint ownership in the three pilot areas. Only 16% of land ownership in Phulappa, Bulungkhani and Jilu is with spouse.



## KEY FINDING:

In the rural areas, where farming is the main source of income more than 73 per cent of women are engaged in agricultural production the land ownership though is with the man.



429

out of 603 women in the three pilot areas have farming as their only income

# Impact at National Level



GLTN PUBLICATIONS

Full report: Fit-For-Purpose  
Land Administration – A  
Country Level  
Implementation Strategy for  
Nepal



GLTN PUBLICATIONS

Summary report: Fit-For-  
Purpose Land  
Administration – A Country  
Level Implementation  
Strategy for Nepal

FFP integrated in national land policy

Land rights for all under planning and implementation

- Women's access to land
- Poor and Vulnerable

# **!Draft!** Different Roles in FFP Spatial Framework

|                        | Land Professional   | Grassroot Surveyors   |
|------------------------|---|---|
| Training               | <ul style="list-style-type: none"><li>• Conduct training on methodology; identification; image preparation, interpretation and explanation</li><li>• Create spatial &amp; cadastral intelligence within the grassroot surveyors</li></ul> | <ul style="list-style-type: none"><li>• Receive training and building confidence and routine through exercising</li><li>• Able to conduct training after successful completion of training from the professional surveyor</li></ul> |
| Planning & Preparation | <ul style="list-style-type: none"><li>• Organize local and / or national support from governmental agencies (decentralised and central approach)</li></ul>  | <ul style="list-style-type: none"><li>• Organize when and where to conduct communication and data acquisition with the communities</li></ul>  |
| Approach               | <ul style="list-style-type: none"><li>• Define approach</li></ul>   | <ul style="list-style-type: none"><li>• Review the approach in regards to local circumstances</li></ul>   |
| Awareness              | <ul style="list-style-type: none"><li>• Show support in the field through governmental representation</li></ul>   | <ul style="list-style-type: none"><li>• Build Trust relation with local community</li></ul>   |
| Tools and Manuals      | <ul style="list-style-type: none"><li>• Draft and create manuals</li><li>• Use existing manual for training purposes for the grassroot surveying</li><li>• Conduct tools customisation</li></ul>  | <ul style="list-style-type: none"><li>• Review manuals on usability</li><li>• Use manuals for conducting sensitisation and training</li></ul>   |

# **!Draft!** Different Roles in FFP Spatial Framework

|                         | Land Professional   | Grassroot Surveyors   |
|-------------------------|---|---|
| Data Acquisition        | <ul style="list-style-type: none"><li>• Supervise data organisation, data management, tool/hardware management, logistical arrangements</li><li>• Check data on consistency</li><li>• Keep the overview</li></ul> | <ul style="list-style-type: none"><li>• Conduct field work (data collection by drawing on image or using GPS or other data acquisition method), collecting evidence on existing rights through photos of documents, photo of ID and person,</li><li>• Introduce (communicate purpose and procedure) to household</li><li>• Check data in detail after acquisition</li></ul> |
| Validation              | <ul style="list-style-type: none"><li>• Train grassroot surveyors on how to conduct an inclusive and gender responsive validation in the field</li></ul>  | <ul style="list-style-type: none"><li>• Conduct validation in the field with the communities</li></ul>  |
| A/D Conversion          | <ul style="list-style-type: none"><li>• Check quality after A/D conversion</li></ul>  | <ul style="list-style-type: none"><li>• Perform A/D conversion after required training</li></ul>  |
| Data Analysis           | <ul style="list-style-type: none"><li>• Conduct advanced/complex data analysis</li></ul>  | <ul style="list-style-type: none"><li>• Analyse data by using predefined basic queries</li><li>• Support the interpretation of analysis results (both basic and complex)</li></ul>  |
| Presentation of Results | <ul style="list-style-type: none"><li>• Support grassroot surveyors bringing institutional knowledge and guidance</li></ul>   | <ul style="list-style-type: none"><li>• Present and sharing results to local communities</li></ul>  |
| Maintenance             | <ul style="list-style-type: none"><li>• Purpose dependent</li></ul>   | <ul style="list-style-type: none"><li>• Purpose dependent</li></ul>   |

# Purpose

Pilot FFP Approach  
(Proof of Concept) to achieve nation  
wide coverage together with the  
Kenyan Institute of Surveyors (ISK)

# Field Methodology



**KENYA**

- :: Imagery - Esri Living Atlas and Tool/Device - GPS and Smartphone
- :: Professionals learnt from it
- :: integrated data collection and acceptance by the community
- :: no certificates (pilot)
- :: difficulty institutional setup (with different IDs)

# Observations

# Purpose

Determination of existing rights (situation on the ground) in the Post - Conflict area using the FFP approach

# Field Methodology



**COLOMBIA**

- :: complete participatory approach
- :: data available for public inspection
- :: project under development - aim to issue titles

# Observations

# Purpose

Support the Indonesian authorities to accelerate land registration in Indonesia using FFP approach

# Field Methodology



INDONESIA

- :: Partnership and Cooperation between local and national level
- :: Focusing on scaling up through use of Grassroot Surveyors
- :: people collect their own data - increases the acceptance
- :: accelerate the process with lower cost - it can be done!

# Observations

# Key Observation

*“Importantly, prior to building the spatial framework and issuing any certificates of land rights, it must be ensured that the regulations and institutions for maintaining and updating the FFP land administration system are in place.”*

... more work to be done!



# Small Initiative - Huge Impact

- :: Bottom up approach - impact at policy level
- :: Relation between guidelines/principles and technology  
- to get things done
- :: show the close link of DRM and Conflict and LA and  
need for cooperation
- :: example cases but important at global level