

Addressing Land Sector Opportunities with Geospatial Information in Nepal

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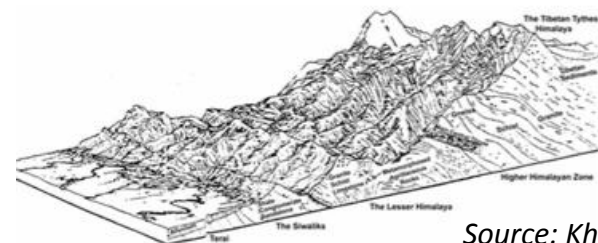
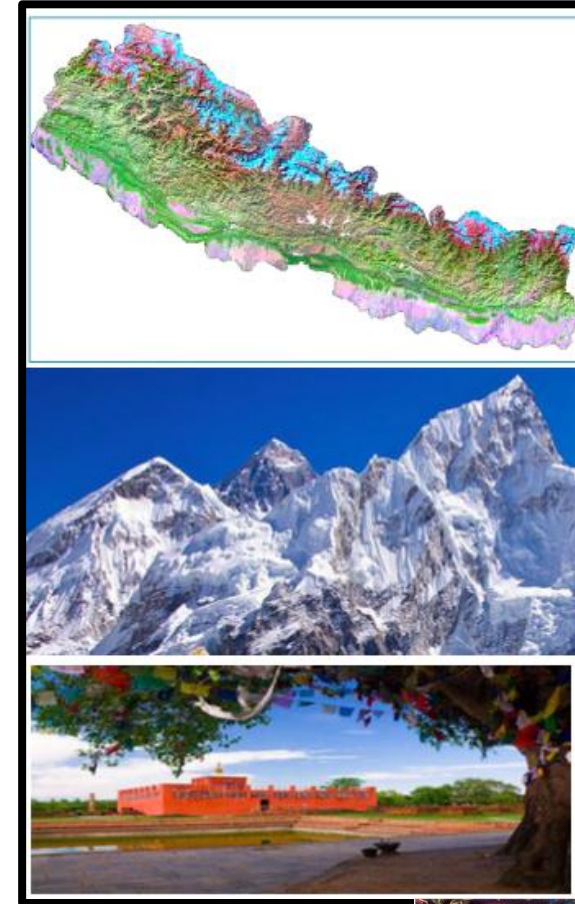


Presentation Outline

- Country Context
- Main characteristics of Cadastre, Land administration and Management
- How Land is perceived in Nepalese Society
- Issues, Challenges and Land sector Opportunities
- The Way Foreword

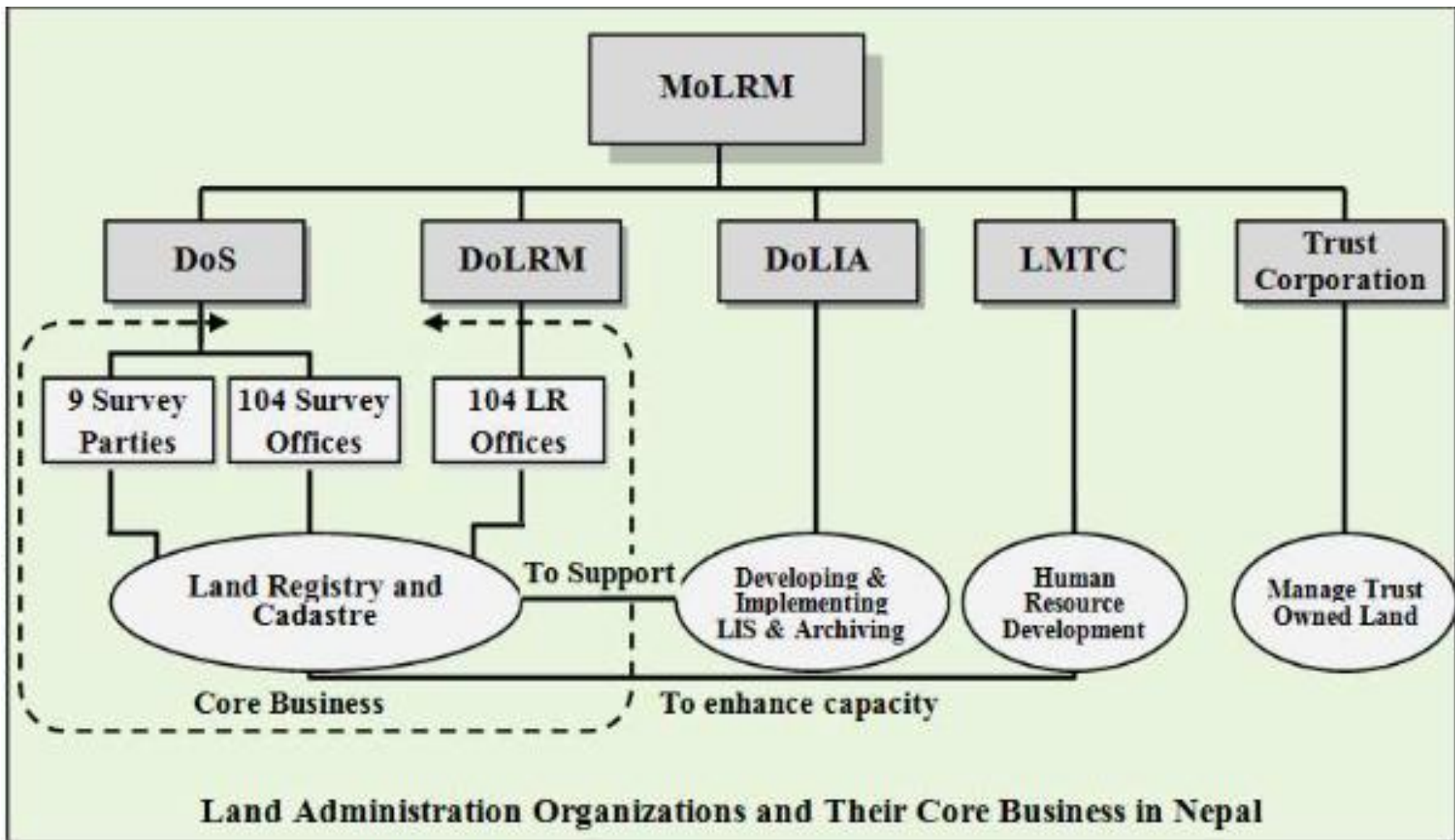
COUNTRY CONTEXT

- Landlocked Himalayan Country in South Asia bordered with China and India
- Federal Democratic Republic Country
- Area:147,181 Square Km
- Population: 26.6million (2011 Census)
- Rugged Topography (Altitude ranging from 60 m in the South to 8848 m (Mt. Everest) in the North)
- Multi-lingual, multi- ethnic, and with diverse culture
- Geographically, Nepal is divided into three ecological regions i.e. Mountain, Hill and Terai.



MAIN CHARACTERISTICS OF NEPALESE CADASTRE

ORGANIZATIONAL STRUCTURE



MAIN CHARACTERISTICS OF NEPALESE CADASTRE..

CADASTRAL MAPPING

- The Modern cadastral mapping was started in 1964 with the enactment of the Land (Survey) Act, 1962
- Completed in 1998 and took about 34 Years to prepare Cadastral maps and land records of the whole country.

Main Features:

- 38 Districts were mapped on free sheets/ island maps based on local coordinate system and 37 Districts on Geodetic Reference
- GRAPHICAL Survey was carried
- Cadastral maps were prepared in paper form.
- Based on General boundary system
- No of Map sheets : 82, 528 maps,
- Total no. of land parcels: 18.8 millions
- Total no of land owners: 2.9 millions
- Map scales: 1:1200, 1:2400 and 1:4800
- At present 28 million parcels

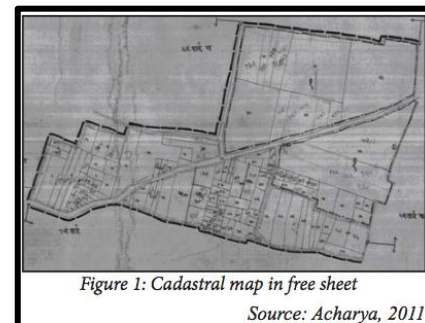
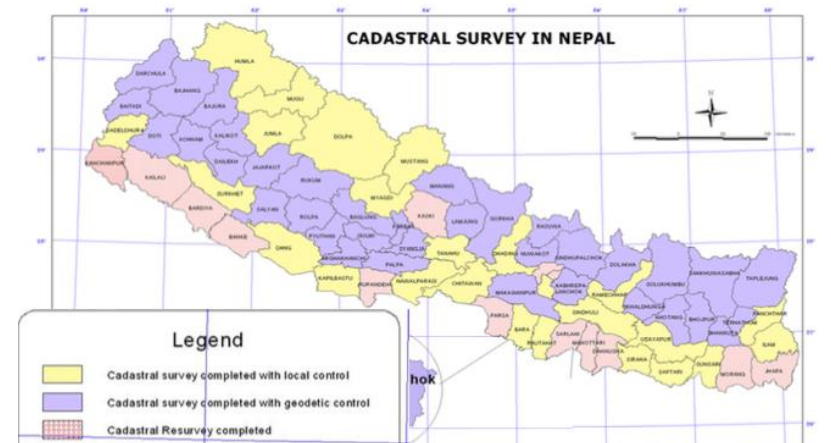


Figure 1: Cadastral map in free sheet

Source: Acharya, 2011

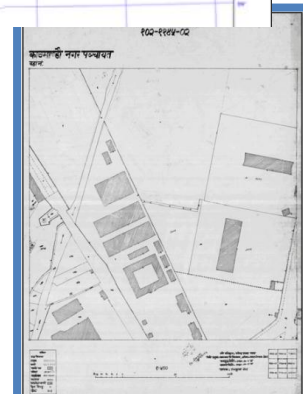


Figure 2: Cadastral map in controlled sheet
source: Department of Land Information and Archives

Source: Survey Department)

MAIN CHARACTERISTICS OF NEPALESE CADASTRE

■ LANDTENURE

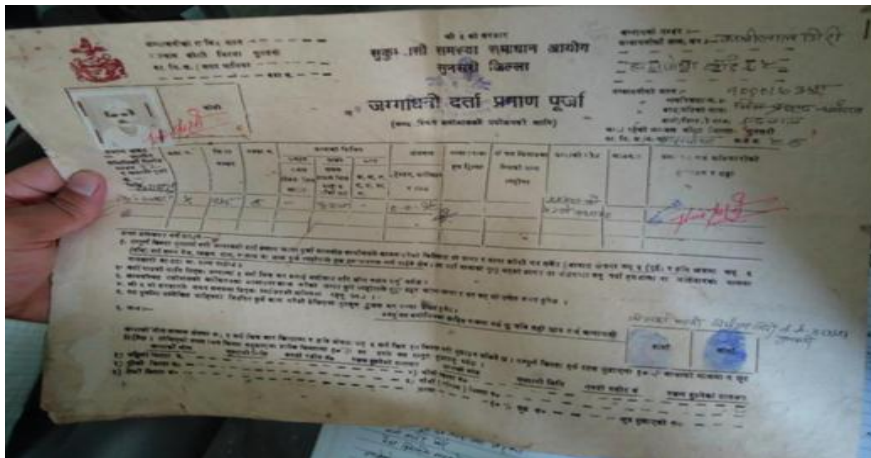
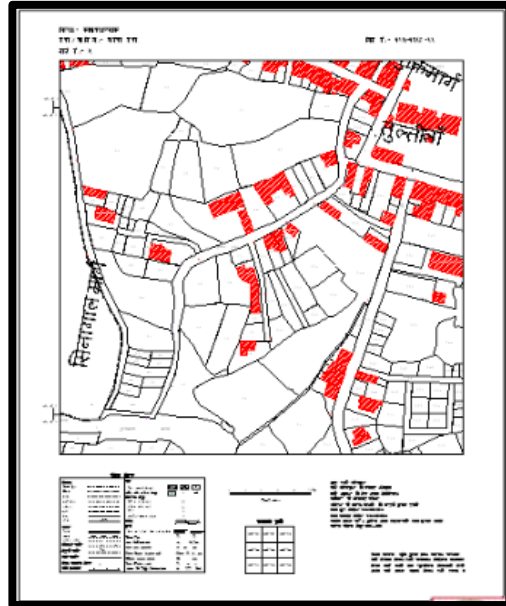
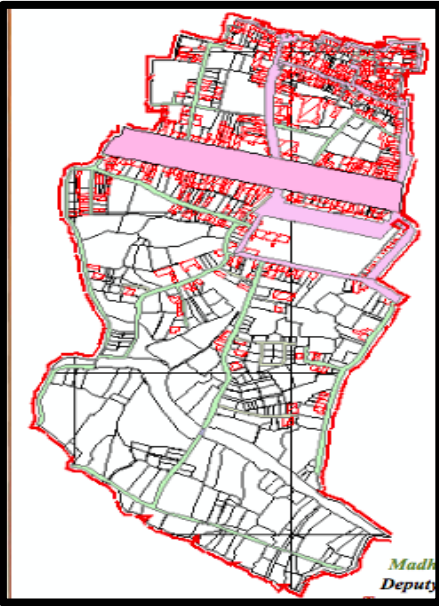
- *Government lands (as a **State property** and recorded in the name of Nepal Government).*
- *Public lands (as a **public property** recorded in the name of the particular public use or Nepal Government depending on its use).*
- *'Raikar' lands (as a **private property** and recorded in the name of the individual land owners.*
- *'Guthi' lands (as a trust lands for **religious property** and recorded in the name of religious 'Guthi' or Trust*

■ LAND REGISTRATION

- Adopted Deed registration system based on cadastral map
 - Unique parcel ID number, which is common to both map and Land Register
 - Must be registered on Land Register maintained by each Land revenue office.
 - not guaranteed by the state
- Improved Deed registration system

MAIN CHARACTERISTICS OF NEPALESE CADASTRE

DIGITAL DATABASE



Computerization of Cadastral maps and Land Register data were started two decade ago;

1. All cadastral maps have been scanned and Digitized and cadastral database developed in all survey Offices
1. Digitalized attribute data (ownership data) in all Land revenue offices.

MAIN CHARACTERISTICS OF NEPALESE CADASTRE

■ Policy

- Land Use Policy, 2015 (Recently Revised)
- Subsidy Policy on Registration Fee during land transaction to Women (25% to 40%) and marginalized people
- Second Generation Reform Plan on Geospatial Information, Land Administration and Management.

■ Legal Frameworks

- Land (Survey) Act 1963 and Regulation 2001
- Land Act 1964 and Regulation 1964
- Land Revenue Act 1978 and Regulation 1980
- Guthi (Trust) Act 1976 and Regulation 1976
- Land Acquisition Act 1978

LAND IN NEPELESE SOCIETY

- Land is of fundamental importance to all societies. In the context of Nepal, Land is perceived as;
 - It is the social, economic and political power.
 - an **element of social equity and social justice** where majority of people lives in rural area, livelihood is based on agriculture and 1/4th of the population lives below Poverty line.
 - a **critical element in peace-building** where a decade long arm-conflict had occurred and equitable access to land was one of the issue.
 - rapid growing population, rapid urbanization and unsustainable use resulted that it is a **scarce resource**, and a high competition for this.

ISSUES AND CHALLENGES

Different aspects of in-effective Service delivery

Weak Data Management

- Record keeping system is paper based and more traditional, thus weak cadastral maps and land records management
- Poor quality, Less secure (physically and technically)
- Out of date Cadastral data and Land Records.



Conventional way of maps and records keeping (Source: DoS, DoLRM)

ISSUES AND CHALLENGES..

Impairs Geo-referencing

- Conventional Triangulation based sparse National geodetic networks, GPS based Geodetic Networks and local coordinate system which impairs geo-referencing,
- Lack of proper knowledge and Use of standards
 - Knowledge gap for the advancement and management of cadastral/land information and land administration systems, Geodetic networks strengthening with the use of modern Geospatial tools and technology



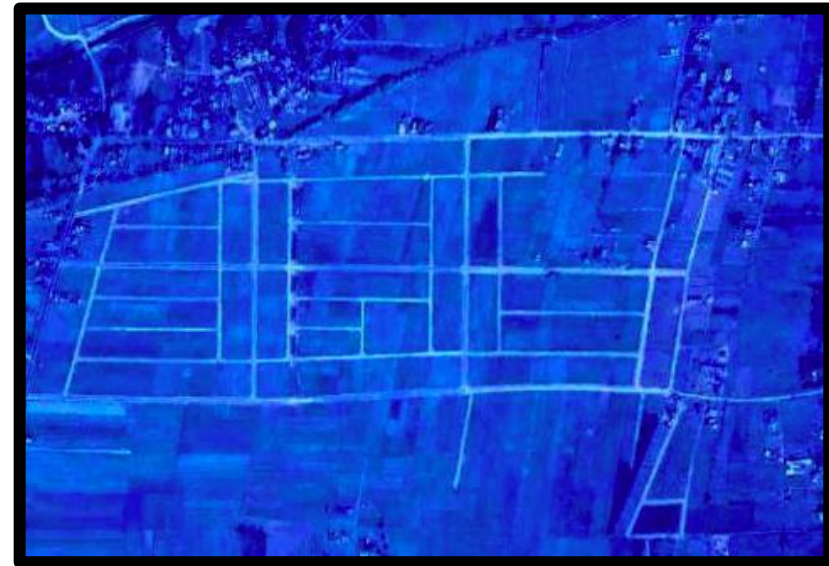
(Source: Survey Department)

▪As a result affected on providing transparent, effective & satisfactory service delivery related to Cadastre and land administration

ISSUES AND CHALLENGES..

Different aspects of un-sustainable use and management of of Land

- Degradation of fertile Agricultural lands
 - Converting of agricultural lands into Housing due to unsustainable use, random urbanization, unsustainable human-activity, soil erosion etc.



Converting of fertile agricultural land in to Concrete jungle

Un-sustainable use of land and an example of Land slide and soil erosion

ISSUES AND CHALLENGES..

- Encroachment to Public, Government, Forest Lands due to the Population pressure, Internal Migration etc



ISSUES AND CHALLENGES..

■ Increased in Absentee Landownership

- Continue migration of Youth population from the rural parts has created feminization in agriculture.
- Increased in idle Land
- Degraded cultivated land resulting from unsustainable use has frequently been abandoned and left idle



■ As a result continue affecting on sustainable use, planning, and management of Land and resources has also increased Food insecurity .

ISSUES AND CHALLENGES..

Highly Vulnerable to natural disaster due to its Seismic, Topographic and Climatic conditions

Earthquake 2015

Serious earthquake after 1934

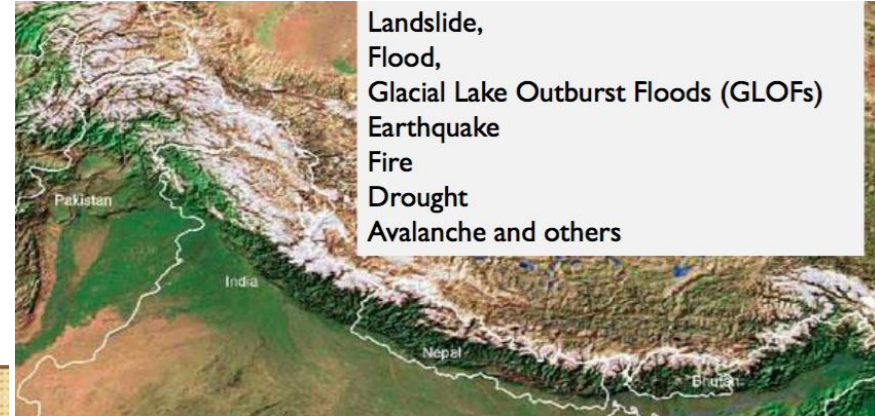
Saturday April 25, 2015 at 11:56, **7.6 Richter scale** and at 12:30, **6.6 Richter scale**

Sunday April 26, 2015 at 12:54, **6.9 Richter scale**

Tuesday May 12, 2015 at, 12:50 **6.8 Richter scale**

numerous landslides have occurred in the steep mountains and hills throughout the earthquake impacted zone. (ICIMOD, 2015)

Over 8790 casualties, 22300 injuries and damaged over 760,000 homes and affected 8 Mil. people in 31 of country's 75 districts out of which 14 were declared 'crisis-hit'. (PDNA Report, 2015)



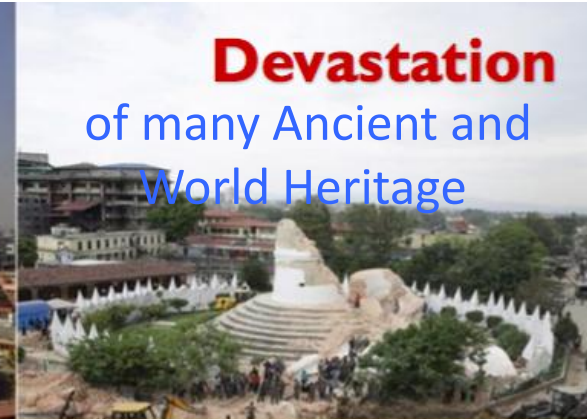
ISSUES AND CHALLENGES..

Devastation due to Earthquake 2015

Devastation of many settlements and villages



Devastation of many Ancient and World Heritage



As a result, it demands Rehabilitation and Reconstruction of damaged settlements & infrastructures with focusing on **safe and planned settlements**, spatial planning and infrastructure development including mitigate **disaster risk reduction**.



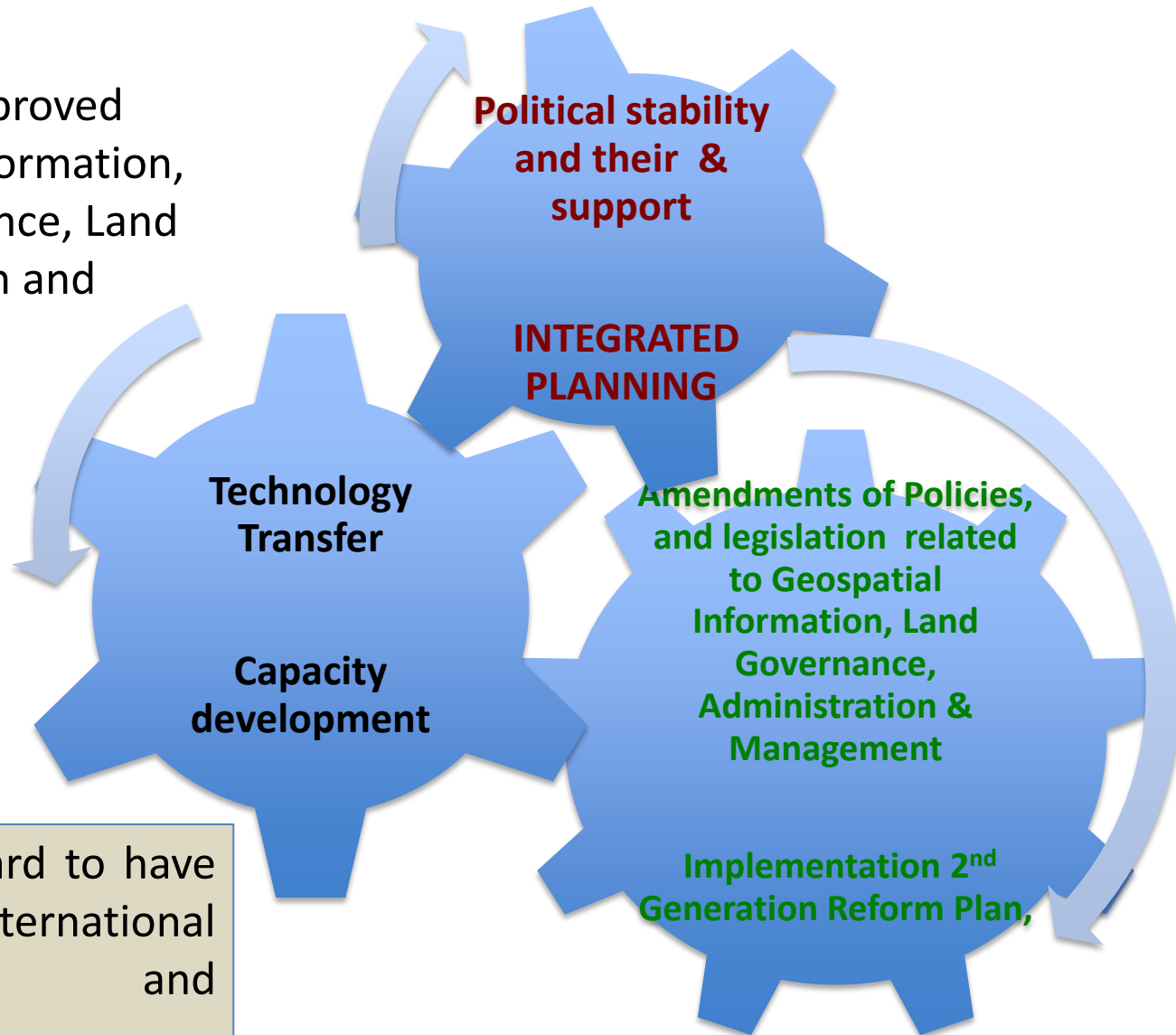
LAND SECTOR OPPORTUNITIES

- Nepal is in political transition since a decade, recently New Constitution “**Constitution of Nepal**” has been promulgated on September 20, 2015)
- Hopefully, the Country will gain political stability and move towards the improvement of the socio-economic conditions of the country.
- Updated and Reliable Geospatial/Land information and its proper management has a vital role for solving many geographical problems and the issues & challenges of land governance, administration and management mentioned above and it will create ample of opportunities to support social justice, socio-economic growth and eventually contribute to the sustainable development of the country.
- In this aspect, the Ministry of Land Reform and Management has given a high priority on Geospatial Information management, Proper Land governance, administration and management, & Capacity development through its **2nd Generation Reform Plan**.



WAY FORWARD

To achieve Improved Geospatial Information, Land Governance, Land Administration and Management,



we look forward to have the international collaboration and cooperation

WELCOME TO NEPAL

INTERNATIONAL WORKSHOP ON “ROLE OF LAND PROFESSIONALS AND SDI IN DISASTER RISK REDUCTION: IN THE CONTEXT OF POST 2015 NEPAL EARTHQUAKE”

25-27 NOVEMBER, 2015
KATHMANDU, NEPAL

Organizers



Co-Organizers



Ministry of Land Reform
and Management



Survey Department



Land Management
Training Center

A joint event of FIG Commission 2 and ISPRS Commission IV

www.workshopnepal2015.com.np

Thank you

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