Spatial Enablement
and
the Response to Climate Change
and
the Millennium Development Goals

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Outline of presentation

The global agenda
- Facing the Millennium Development Goals

Land governance
- Managing land rights, restrictions, and responsibilities

Spatially enabled government
- The significant role of the cadastre

Climate change
- Land administration in support of climate change adaptation

Natural disaster prevention and management
- Land administration in support of natural disaster risk management

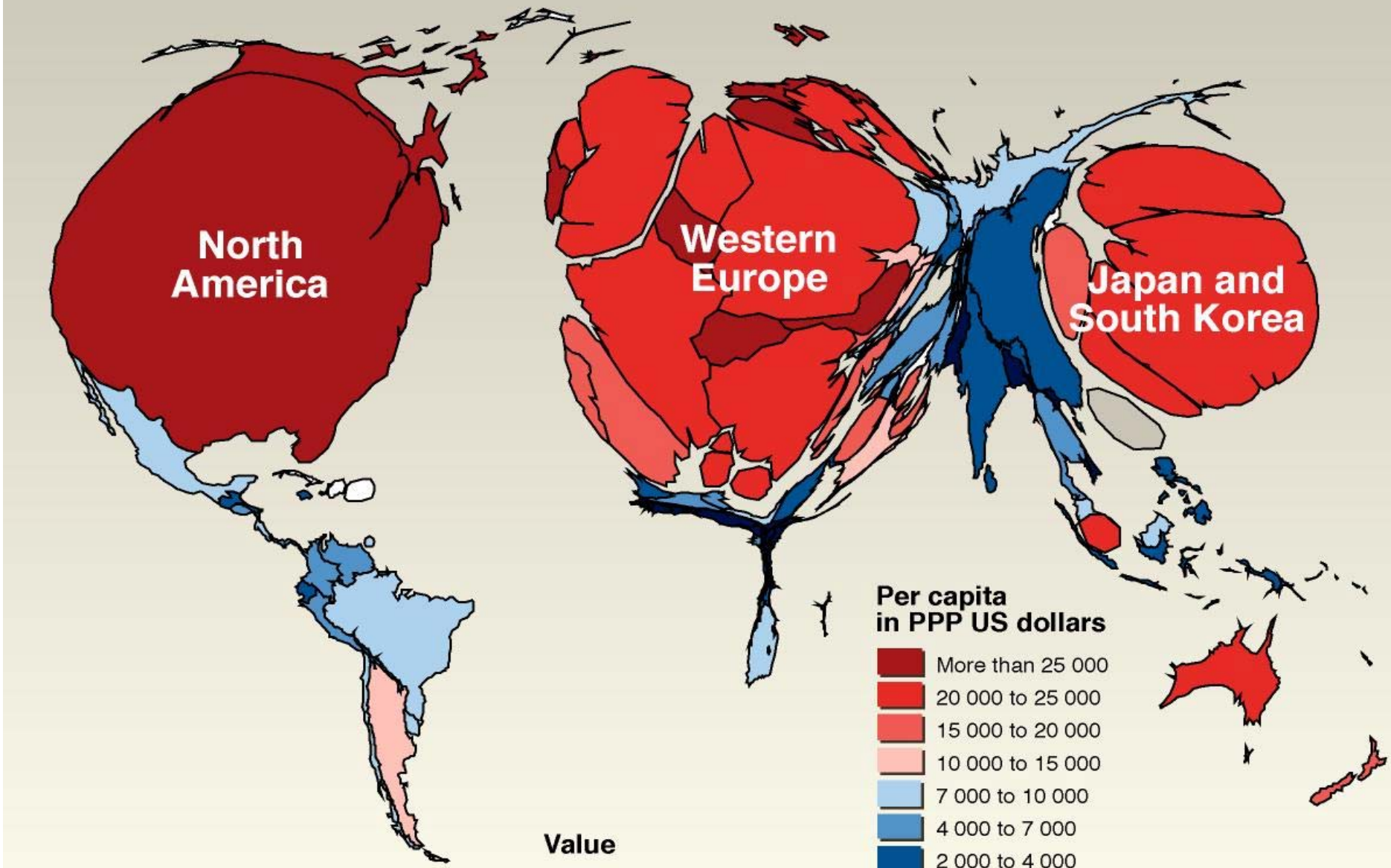
The Millennium Development Goals

Goal 1: Eradicate extreme poverty and hunger
Goal 2: Achieve universal primary education
Goal 3: Promote gender equality and empower women
Goal 4: Reduce child mortality
Goal 5: Improve maternal health
Goal 6: Combat HIV/AIDS, malaria and other diseases
Goal 7: Ensure environmental sustainability

Goal 8: Develop a Global Partnership for Development

The framework includes 18 targets and
48 indicators enabling the ongoing
monitoring of annual progress

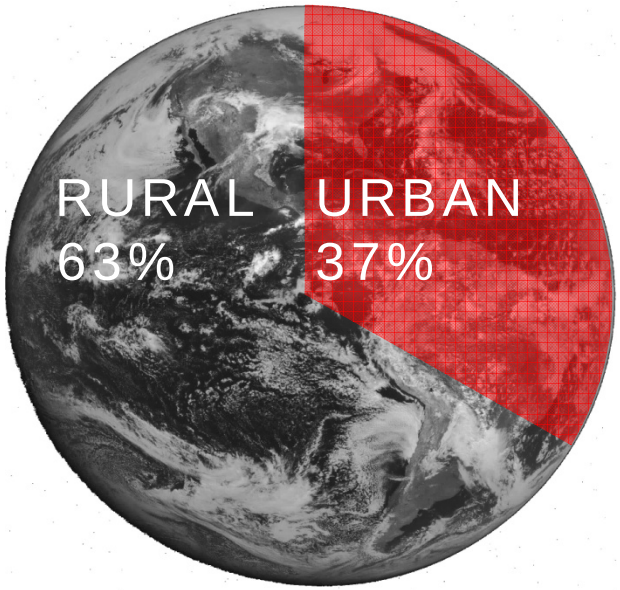
Gross Domestic Product



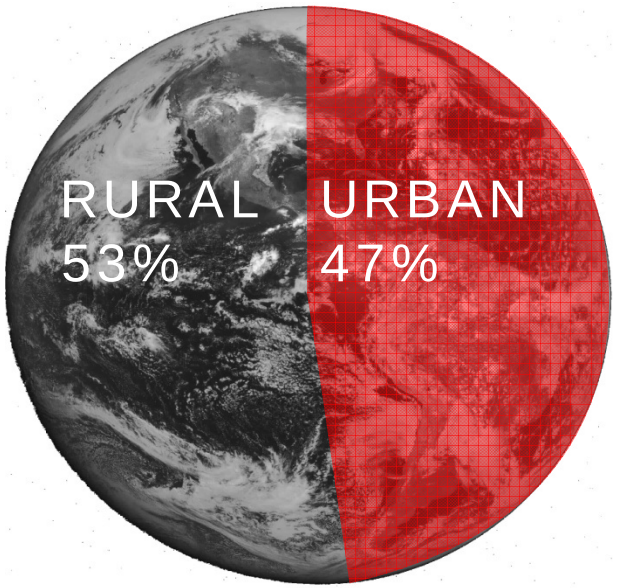
UNEP GRID Arendal

VLADIMIR S. TIKUNOV
MAY 2002

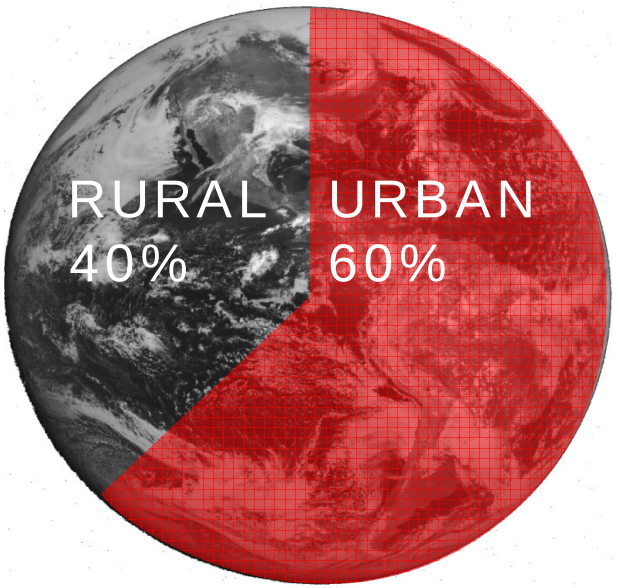
Urban population growth



1970



2000



2030

2007:	Total world population :	6.5 billion
	Total urban population:	3.3 billion
	Total slum dwellers:	1.1 billion


Kibera, Nairobi, 250 ha, 1 mill+ people

It is all about:

People, **human rights, engagement and dignity**

Politics, **land policies and good governance**

Places, **shelter, land rights, and natural resources**

and Power, **decentralisation and empowerment**

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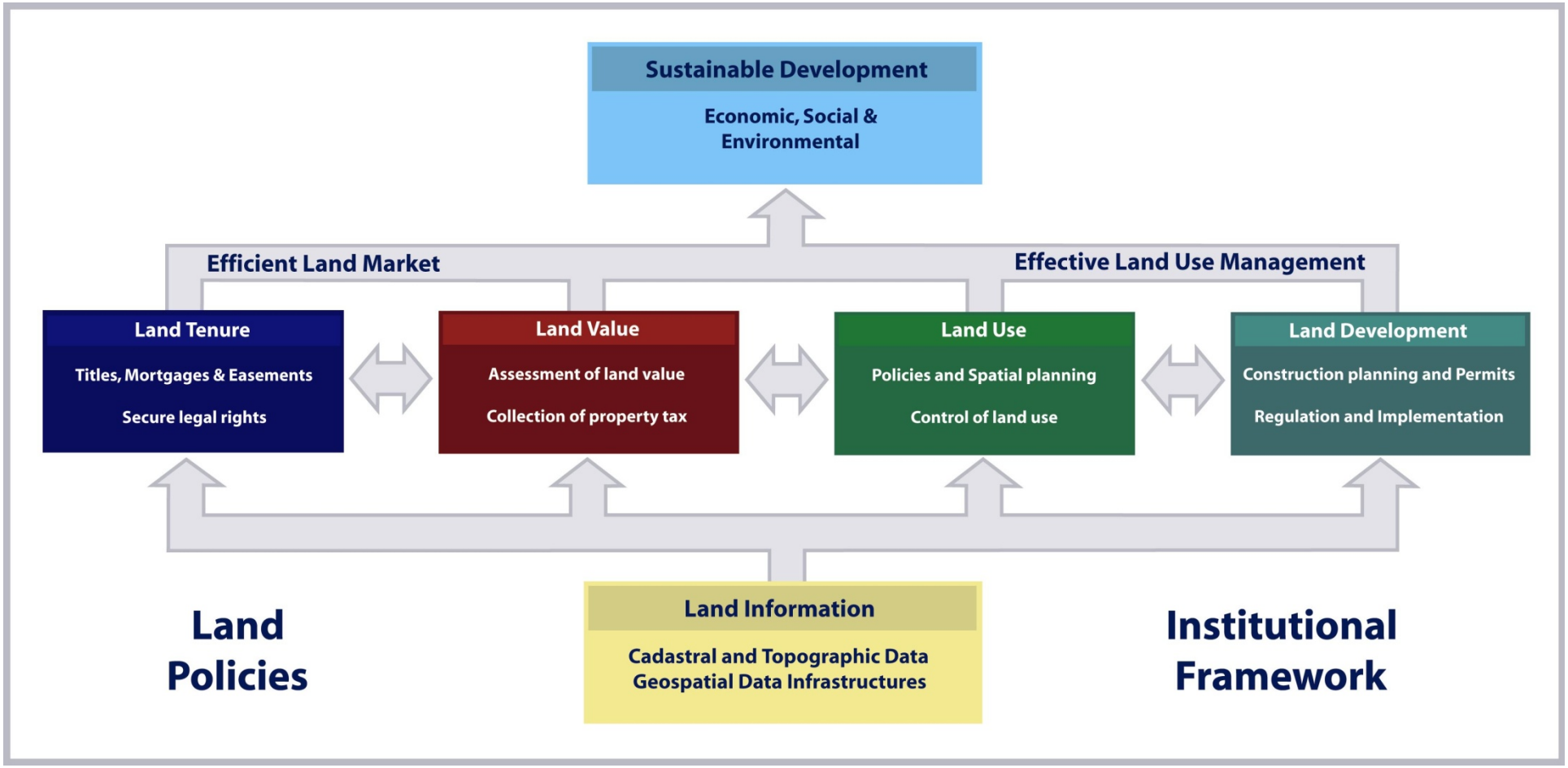
Land governance

Land governance is about the policies, processes and institutions by which land, property and natural resources are managed.

This includes decisions on access to land; land rights; land use; and land development.

Land governance is about determining and implementing sustainable land policies.

A global land management perspective



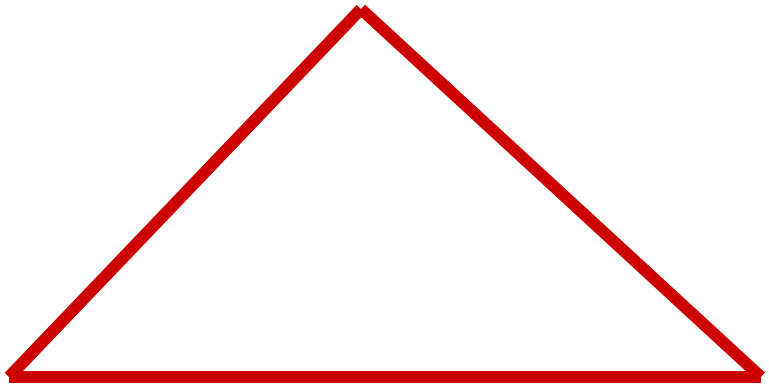
LAS provide the infrastructure for implementation of land polices and land management strategies in support of sustainable development.

Interests in land

Land administration systems are the basis for conceptualising rights, restrictions and responsibilities related to people, policies and places.

Rights:

Registration and security of tenure positions



Responsibilities:

Social, ethical commitment to environmental sustainability and good husbandry

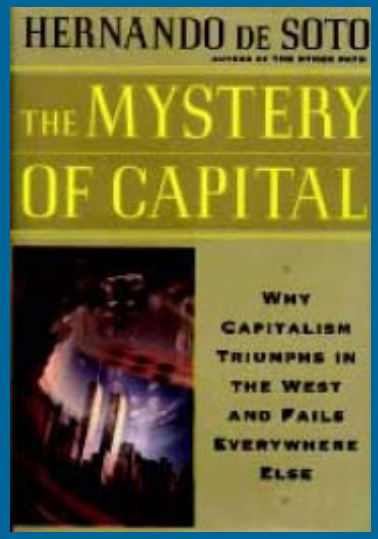
Restrictions:

Planning and control of land-use and land development

The increasing role of property rights

”Civilised living in market Economies is not simply due to greater prosperity but to the order that formalised property rights bring”

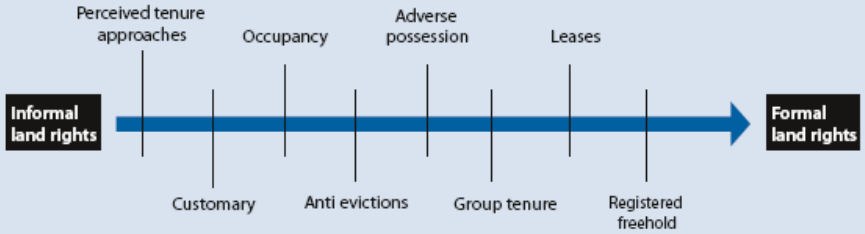
Hernando de Soto – 1993



Continuum of rights (GLTN-agenda)

From: illegal or informal rights

To: legal or formal rights

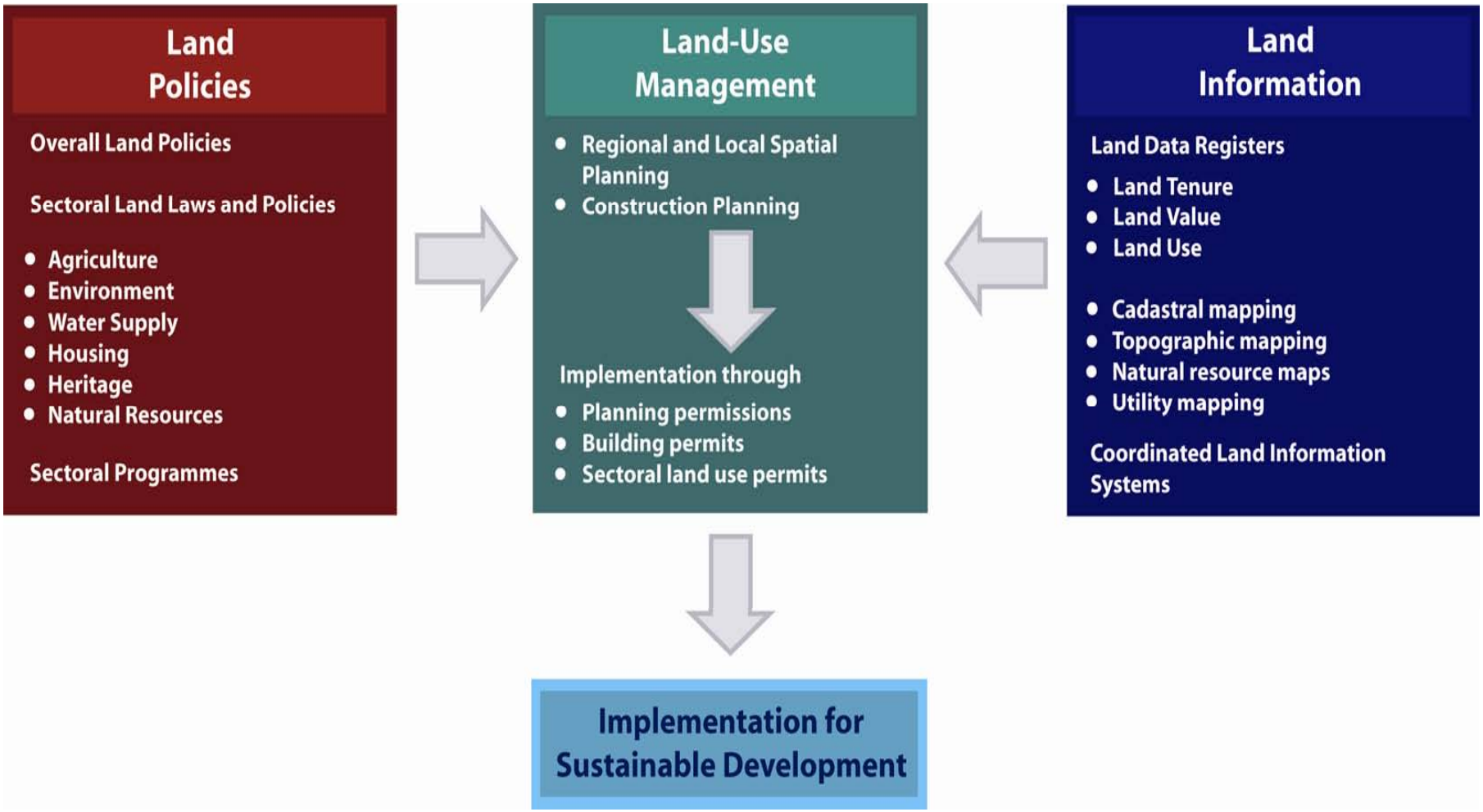


Property Restrictions

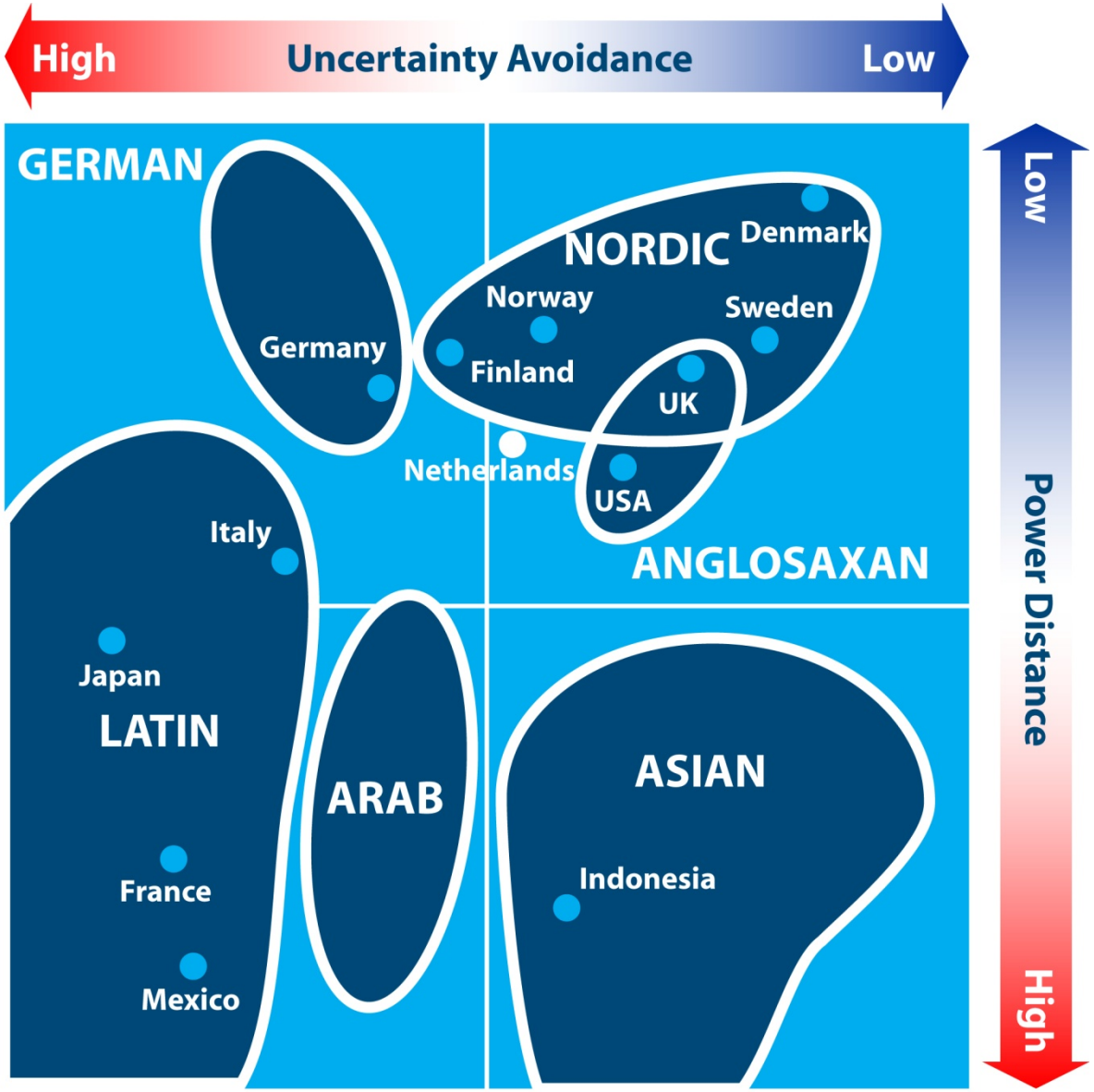
- two conflicting approaches

- The free market approach (current debate in the US)
  - Land owners should be obligated to no one and should have complete domain over their land.
  - The role of government to take over, restrict, or even regulate its use should be non-existent or highly limited.
  - Planning restrictions should only be imposed after compensation for lost land development opportunities
- The central planning approach (European perspective)
  - The role of democratic government include planning and regulating land systematically for public good purposes.
  - A move **from** every kind of land use being allowed unless it was forbidden **to** every change of land use is forbidden unless it is permitted and consistent with adopted planning regulations and restrictions.

Integrated land-use management



Responsibilities:
A cultural map of the world



Uncertainty avoidance:

The preference of structured situations over unstructured or flexible ones

Power distance:

The degree of inequality among people accepted by the population

Geert Hofstede (2001).

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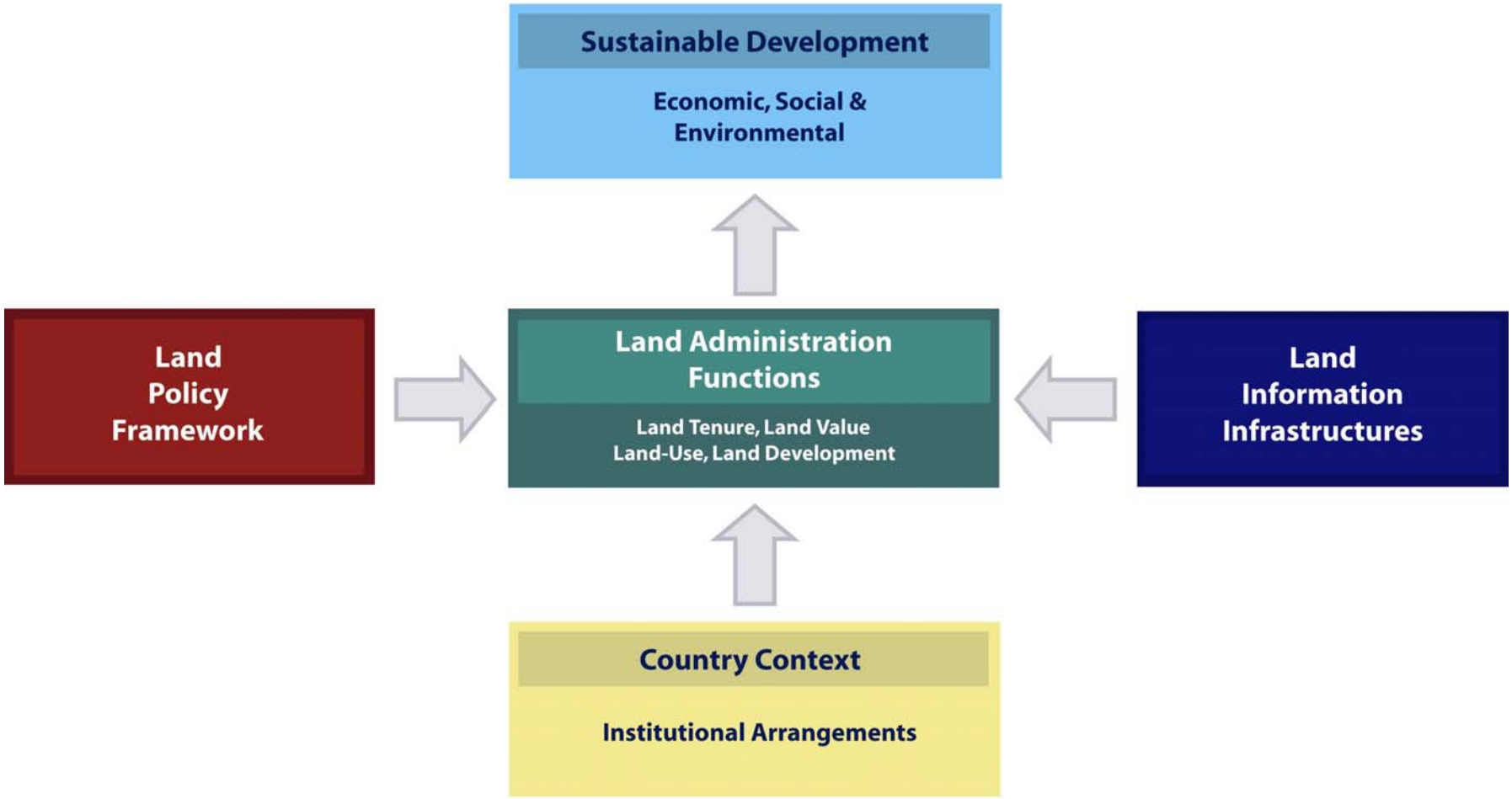
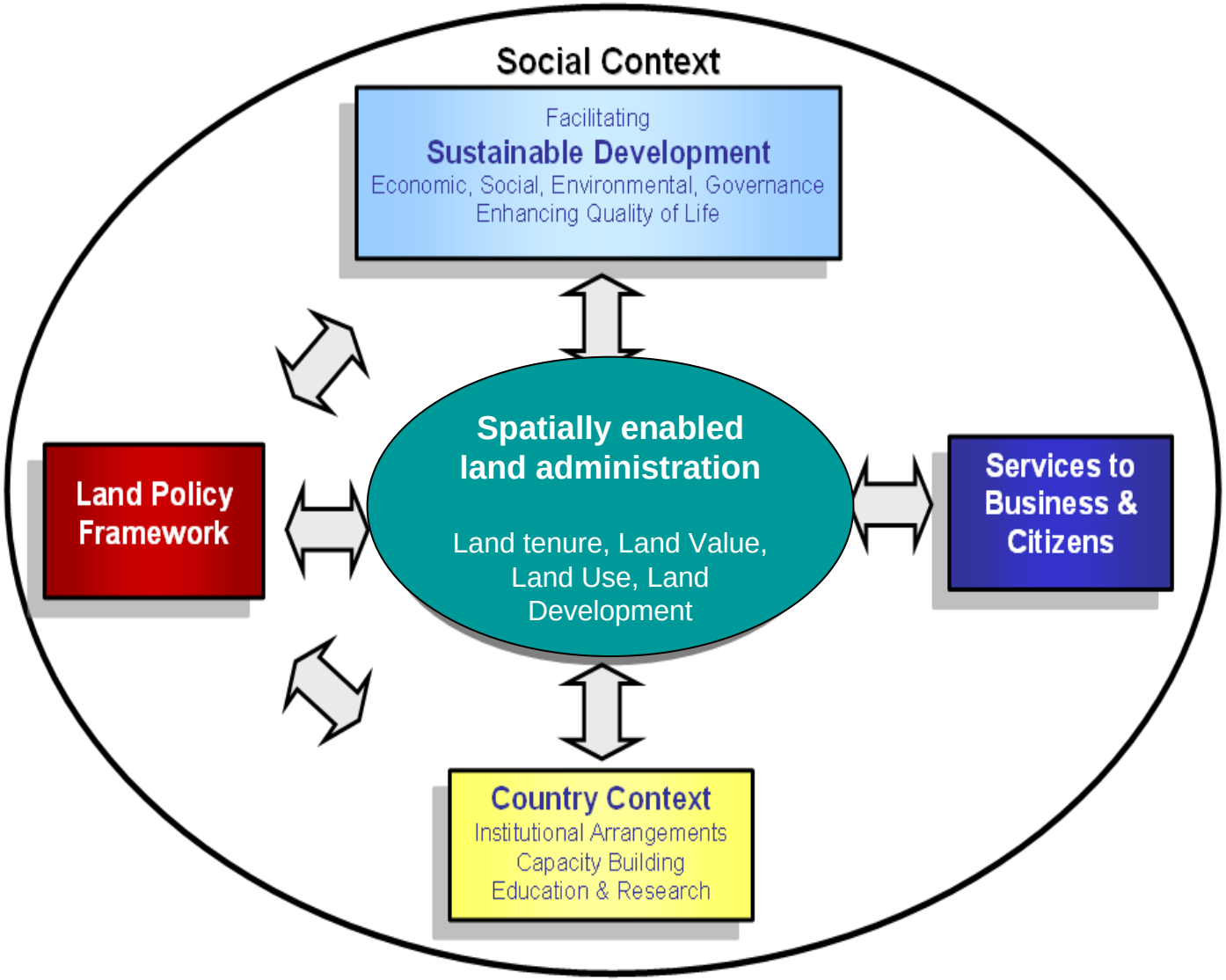
Understanding the land management paradigm



A land management vision



Place matters

Everything happens somewhere

If we can understand more about the nature of “place” where things happen, and the impact on the people and assets on that location, we can plan better, manage risk better, and use our resources better.

“Heading toward spatial enabled society”

Institutional Challenges

- There are a range of stakeholder interests

  This includes Ministries/Departments such as:

  Justice; Taxation; Planning; Environment; Transport; Agriculture; Housing; Interior (regional and local authorities); Utilities; and civil society interests such as businesses and citizens.

- Creating awareness of the benefits of developing a shared platform for Integrated Land Information Management takes time and patience.

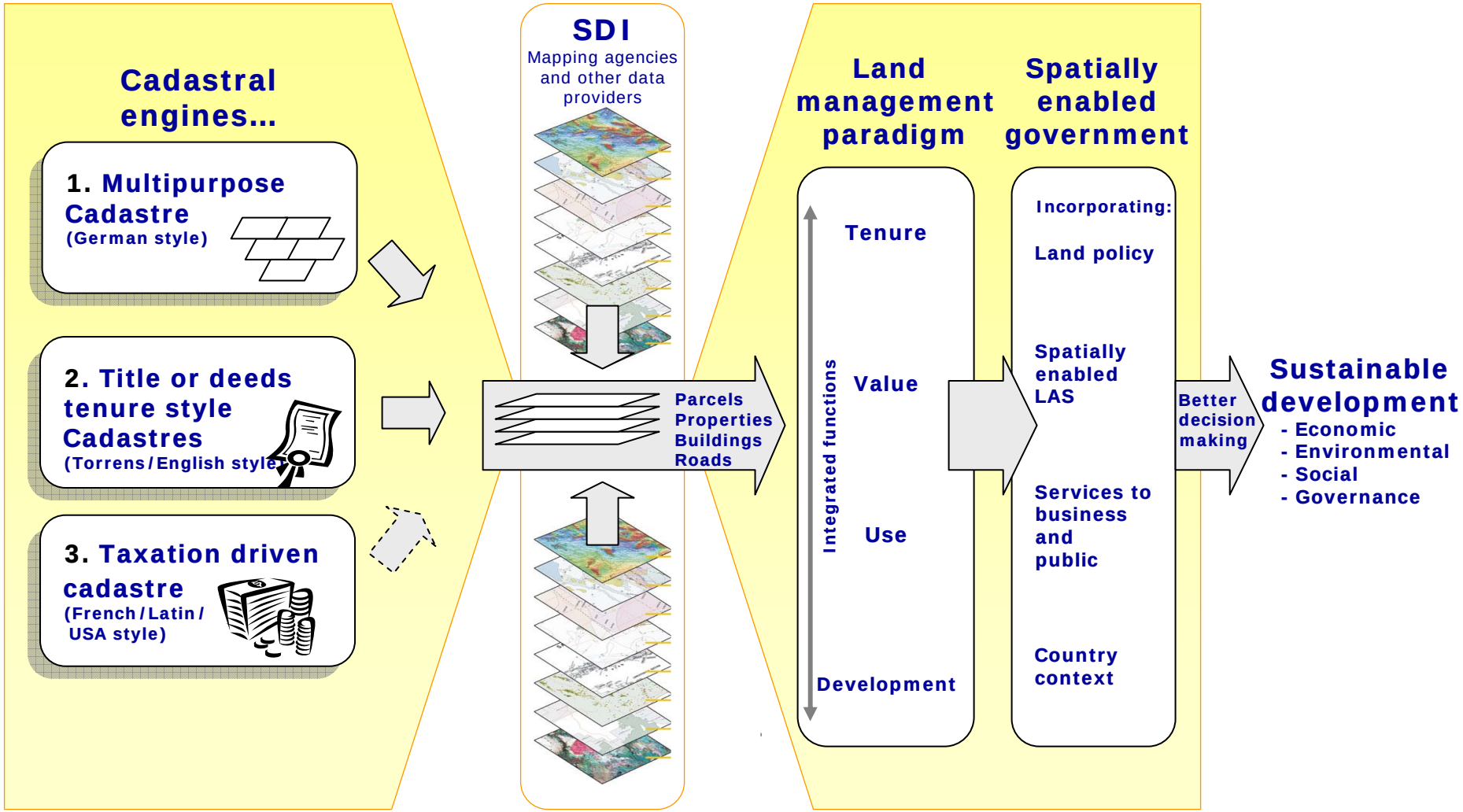
- Mapping/Cadastral Agencies have a key role to play

Spatially Enabled Government

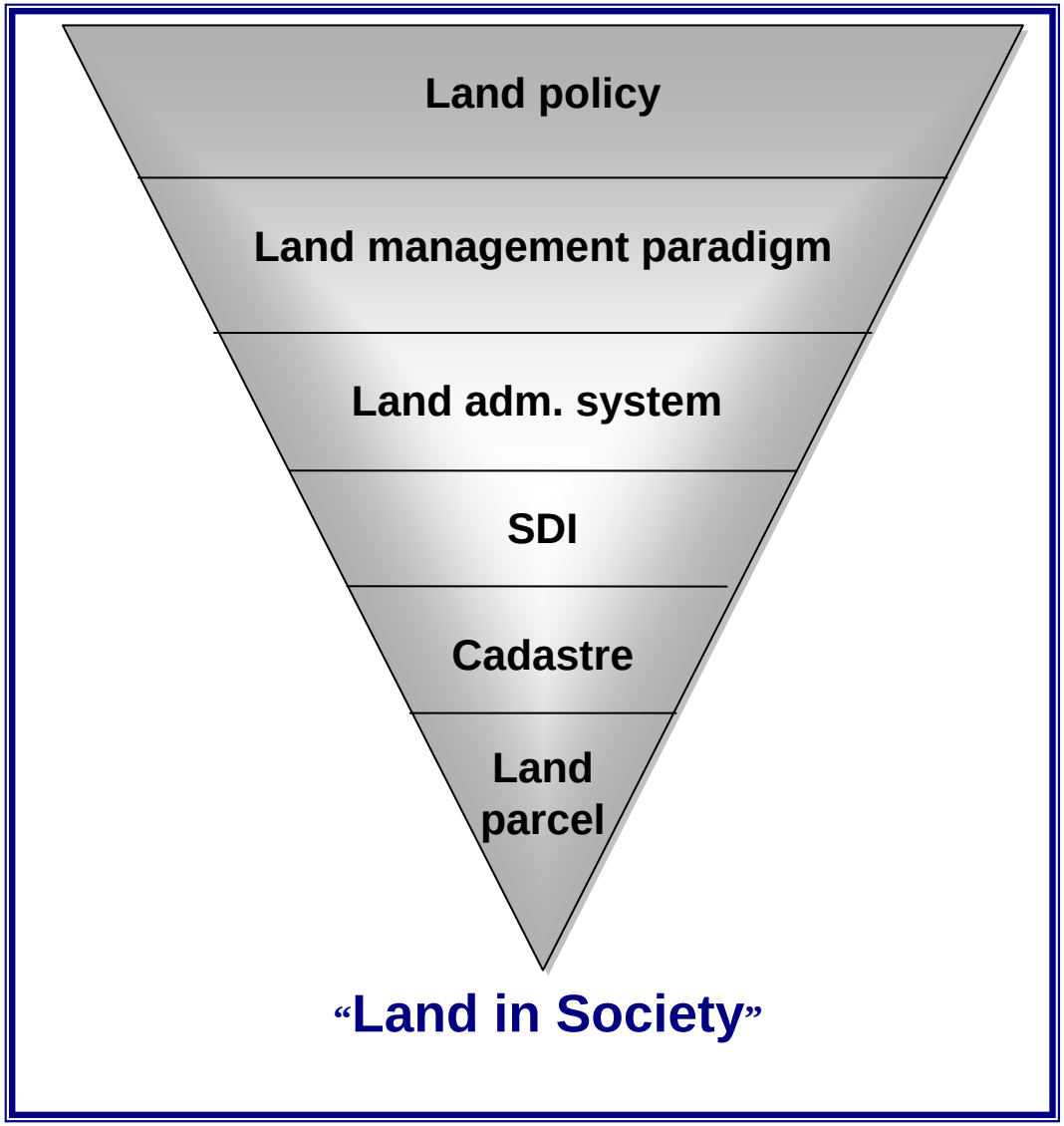
A spatially enabled government organises its business and processes around “place” based technologies, as distinct from using maps, visuals, and web-enablement.

The technical core of Spatially Enabling Government Is the spatially enabled cadastre.

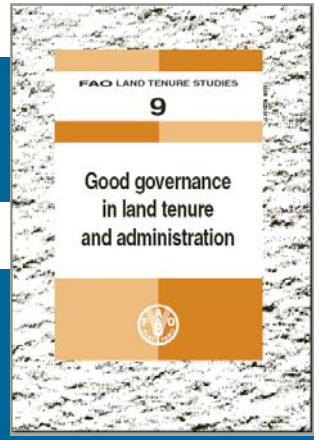
Significance of the Cadastre



Land Governance – a hierarchy of land issues



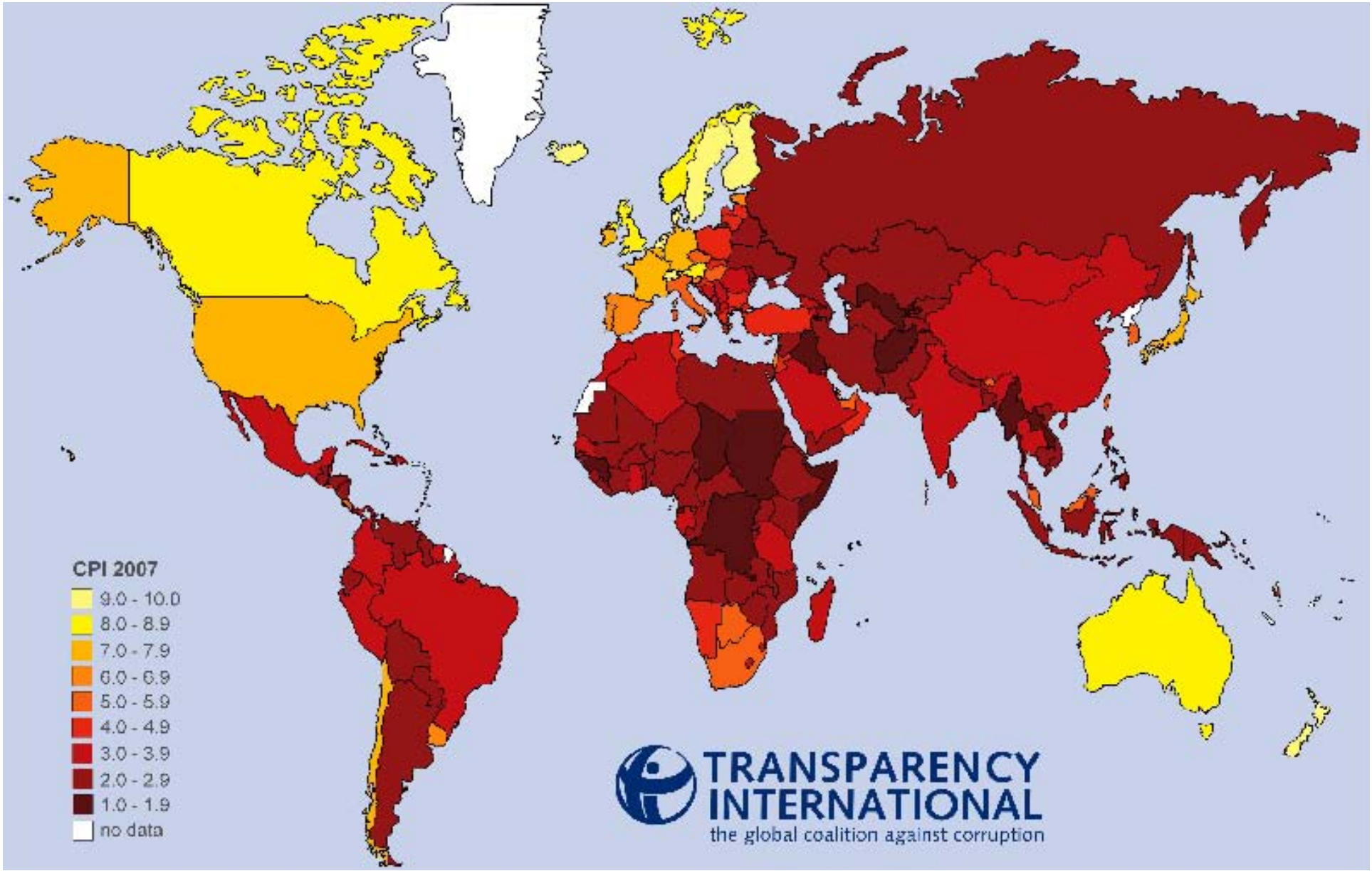
Good governance is:



- **Sustainable and locally responsive:** It balances the economic, social, and environmental needs of present and future generations, and locates its service provision at the closest level to citizens.
- **Legitimate and equitable:** It has been endorsed by society through democratic processes and deals fairly and impartially with individuals and groups providing non-discriminatory access to services.
- **Efficient, effective and competent:** It formulates policy and implements it efficiently by delivering services of high quality
- **Transparent, accountable and predictable:** It is open and demonstrates stewardship by responding to questioning and providing decisions in accordance with rules and regulations.
- **Participatory and providing security and stability:** It enables citizens to participate in government and provides security of livelihoods, freedom from crime and intolerance.
- **Dedicated to integrity:** Officials perform their duties without bribe and give independent advice and judgements, and respects confidentiality. There is a clear separation between private interests of officials and politicians and the affairs of government.

Adapted from FAO, 2007

Good governance and corruption



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Facing the new challenges

Focusing on land Governance and achieving the MDGs, also includes facing the big challenges of the new millennium:

- Climate change
- Food shortage
- Energy scarcity
- Urban growth
- Environmental degradation
- Natural disasters
- Global financial crisis

All these challenges relate to governance and management of land

Land professionals play a key role

Climate change

“Climate change is the defining challenge of our time”

Combining the impacts of climate change with the current global financial crisis we risk that all the efforts to meet the MDGs will be rolled back.
Those that contributed the least to this planetary problem continue to be disproportionally at risk.

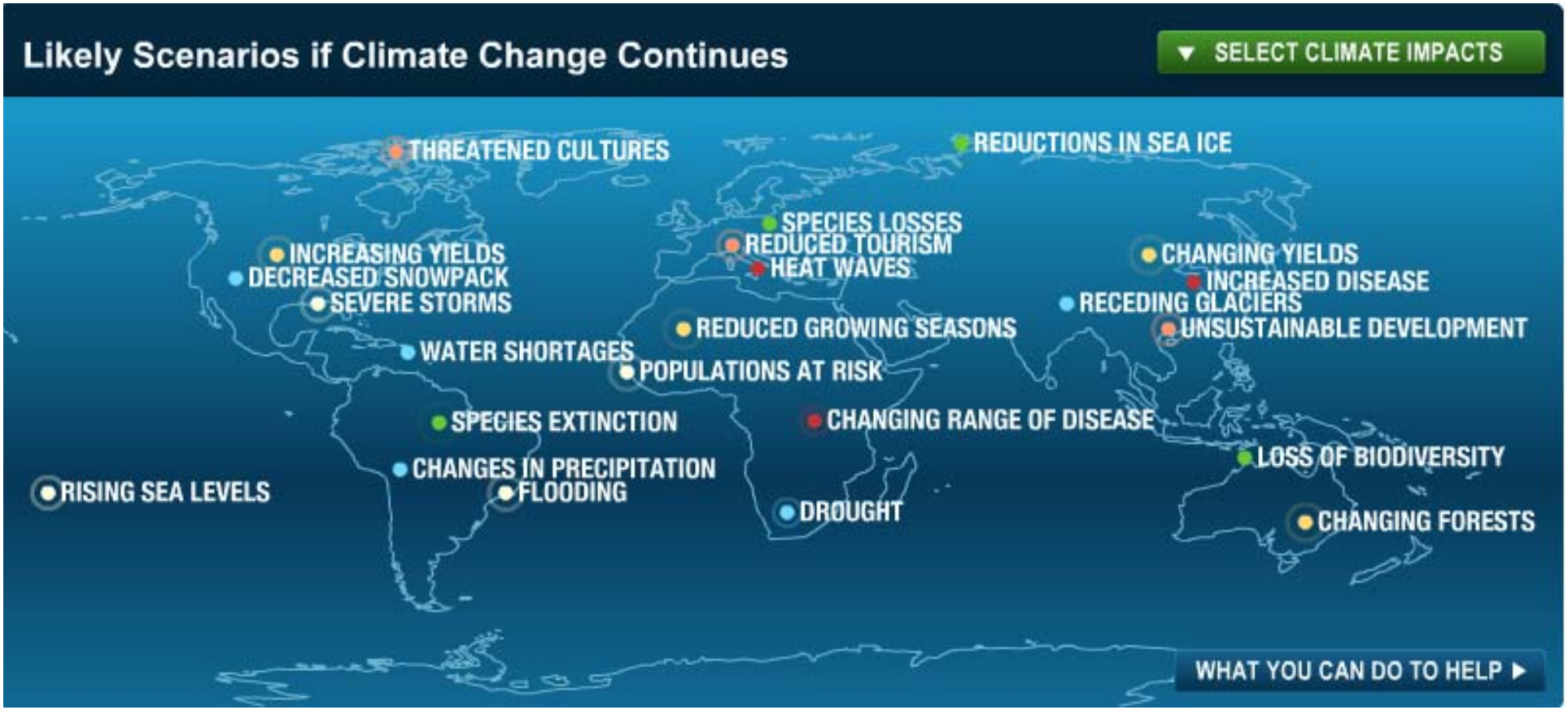
Ban Ki-moon, UN secreatry general

“Climate change also provides a range of opportunities”

Prevention of climate change can be greatly enhanced through better land-use planning and building codes so that cities keep their ecological footprints to a minimum and make sure that their residents, especially the poorest, are protected as best as possible against disaster.

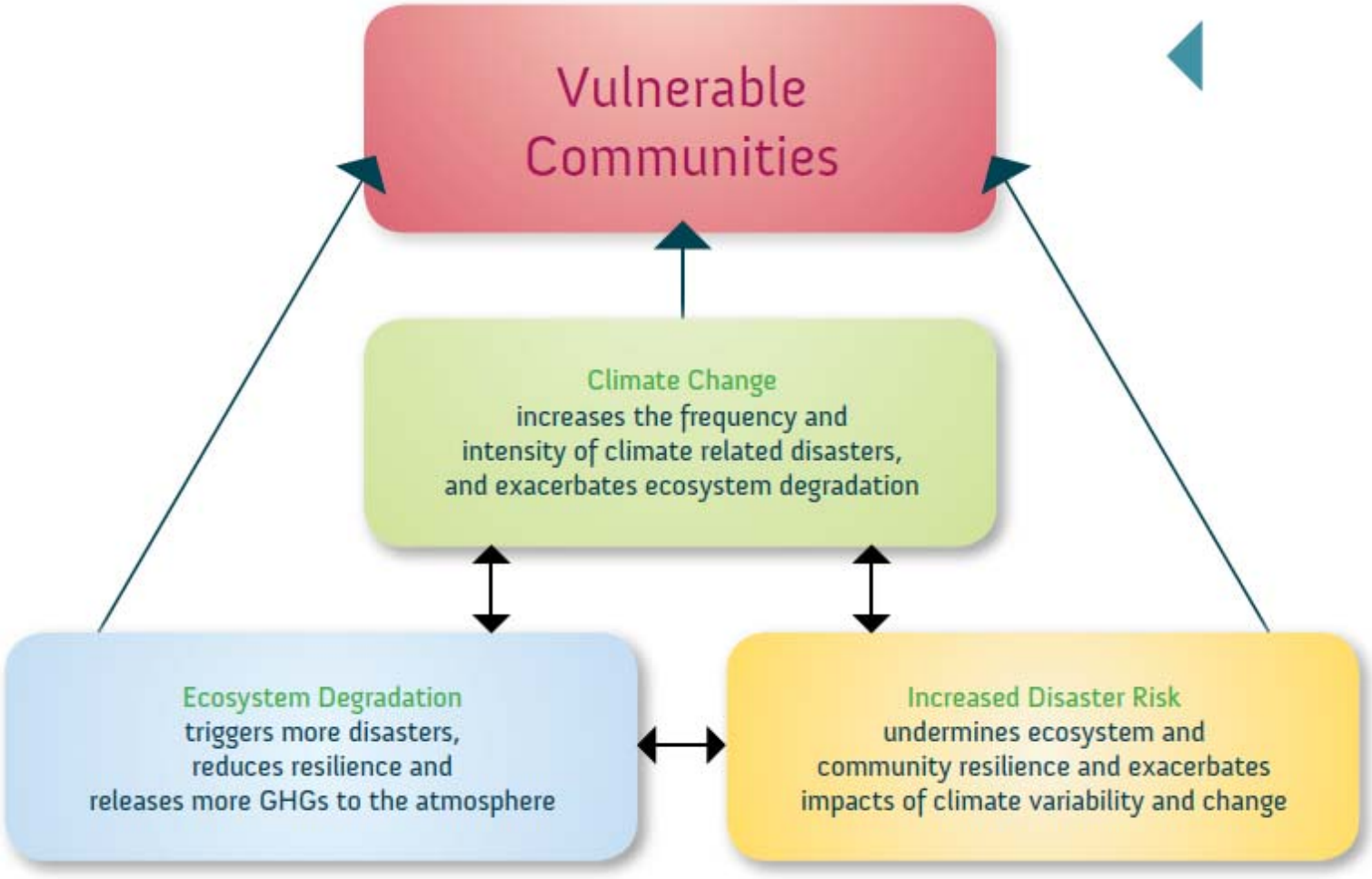
Anna Tibaijuka, Executive Director, UN-Habitat

Climate change impacts

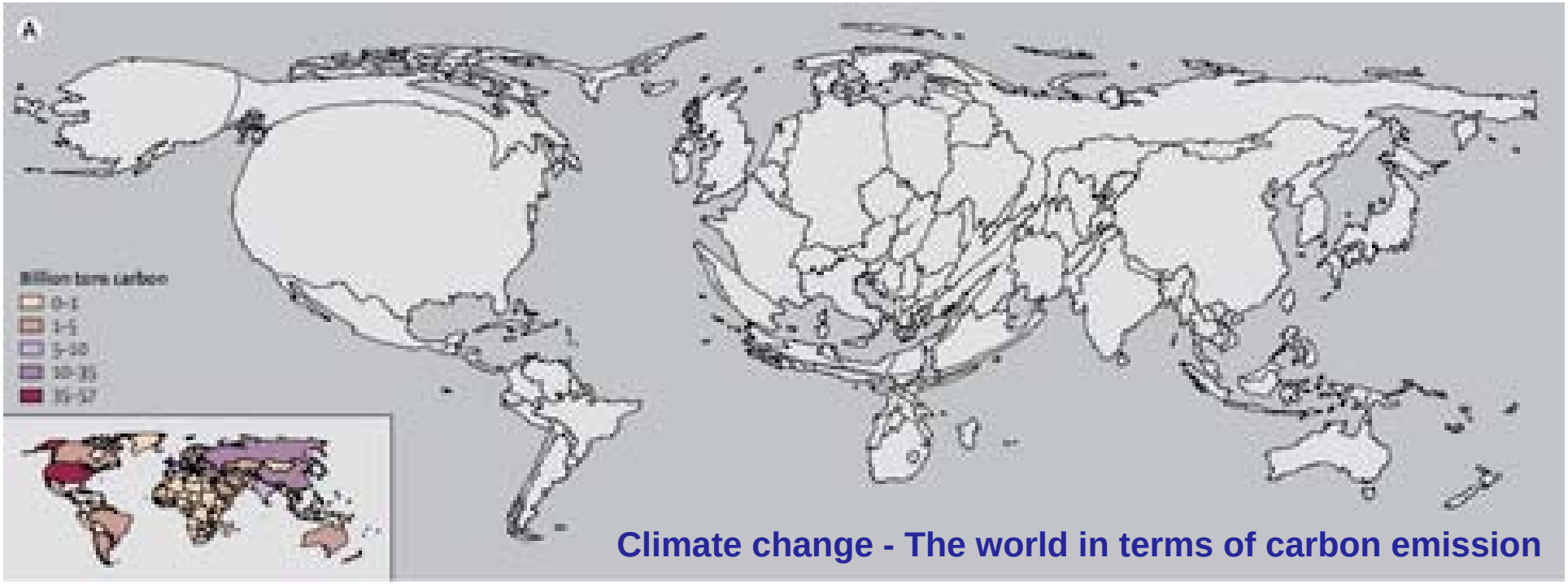


Based on Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability, Summary for Policymakers, Intergovernmental Panel on Climate Change, April 2007.

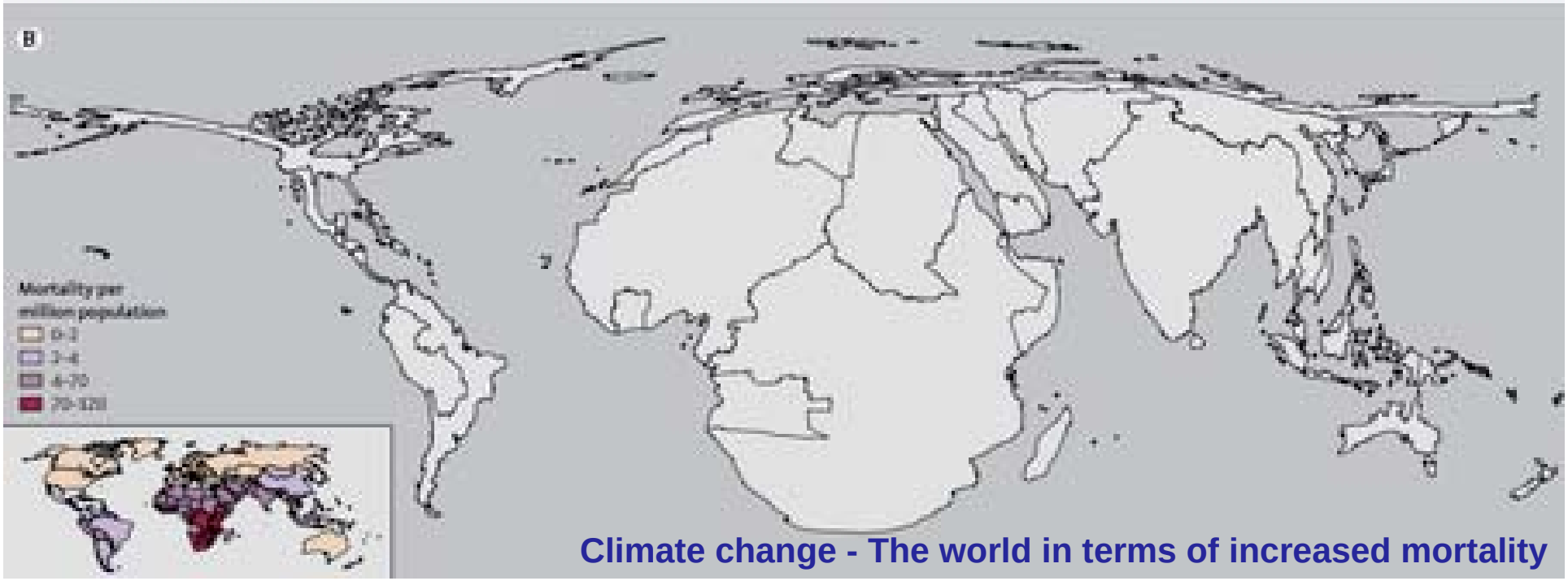
The impact of climate change



The interaction between climate change, ecosystem degradation and disaster risk, UNEP, 2009



Climate change - The world in terms of carbon emission



Climate change - The world in terms of increased mortality

Climate Change

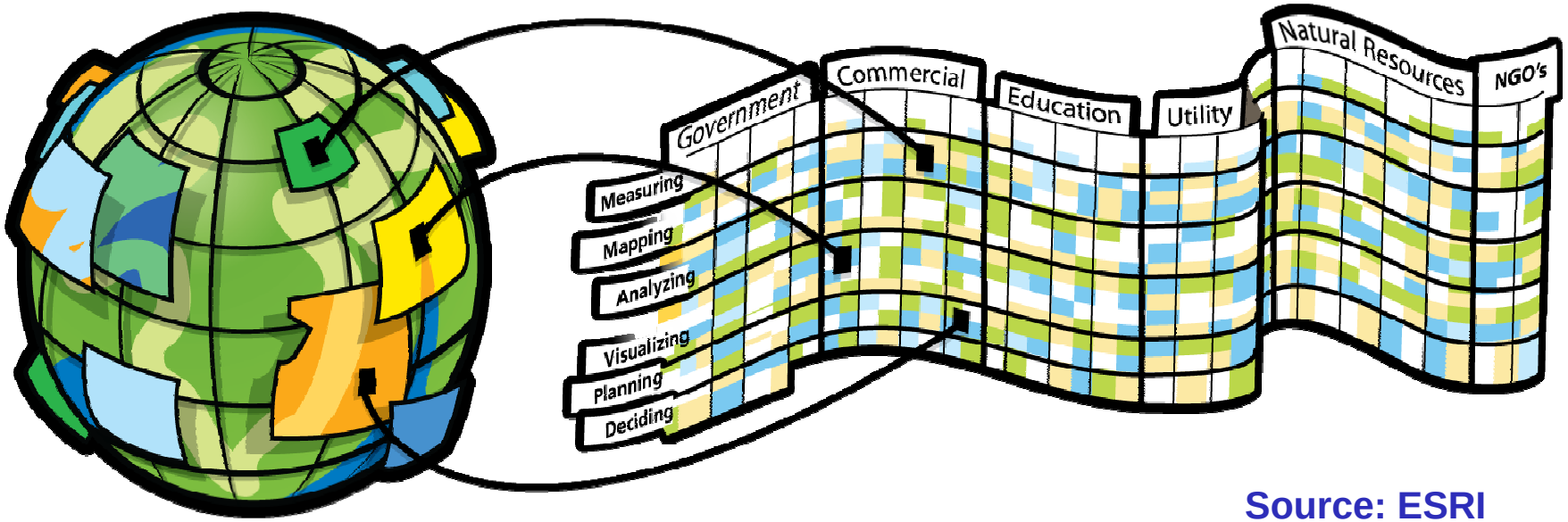
No matter the inequity between the developed and developing world in terms of emissions and climate consequences, there is a need to develop relevant means of adaptation to climate change both in the rich and the poorer countries.

Sustainable Land Administration Systems should serve as a basis for climate change mitigation and adaptation as well as prevention and management of natural disasters.

- Incorporating climate change into current land policies
- Adopting standards for energy use, emissions, carbon stock potential,.....
- Identifying prone areas (sea level rise, drought, flooding, fires,...)
- Controlling access to land and the use of land in relation to climate change and disaster risks
- Controlling building standards and emissions in relation to climate change
- Improving resilience of existing ecosystems vulnerable to climate change

Geo-information management

…creates a strong foundation



Source: ESRI

...for sustainable action

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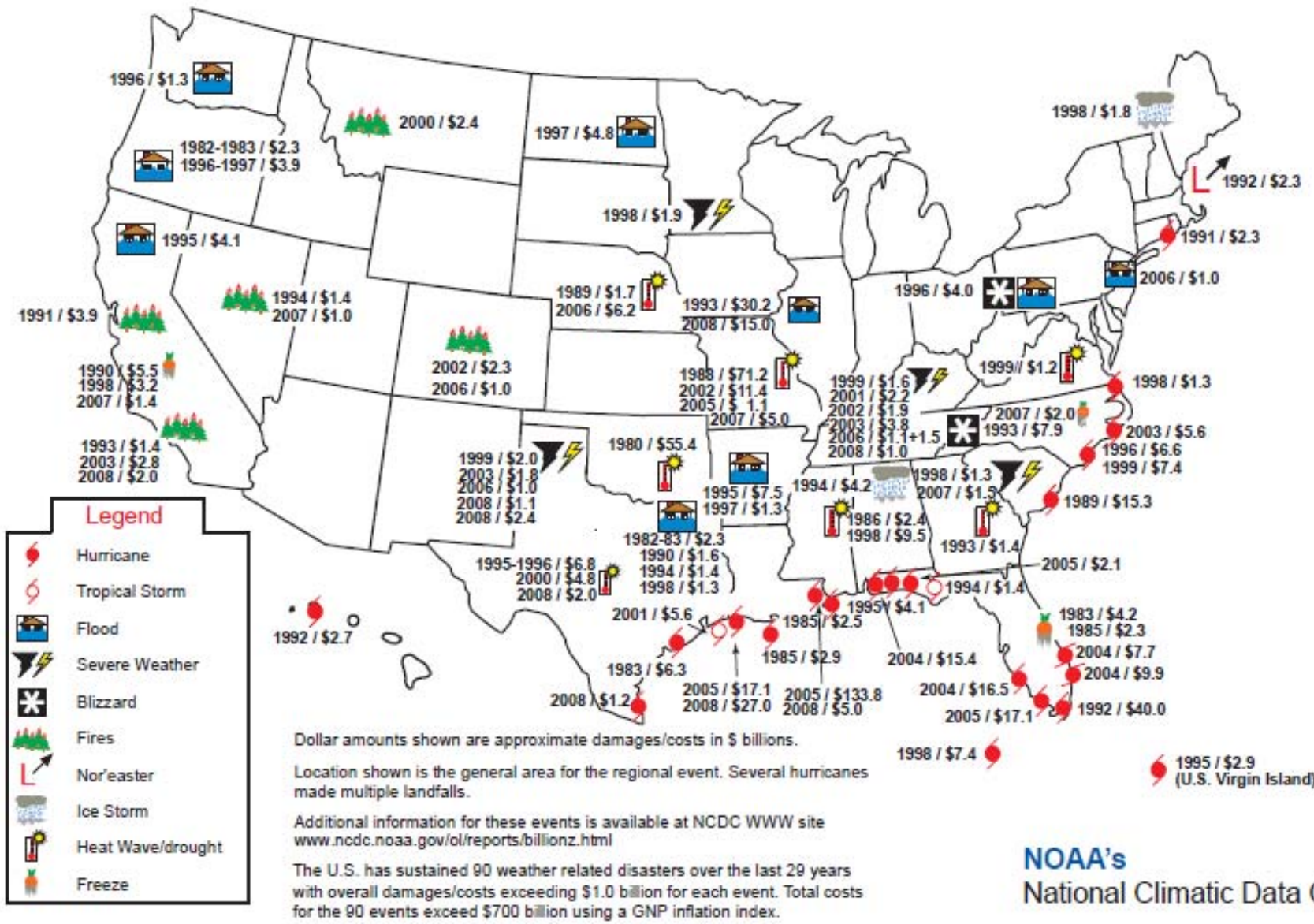
USA

Billion Dollar Weather Disasters 1980 - 2008



Dollar amounts shown are approximate damages/costs in $ billions.

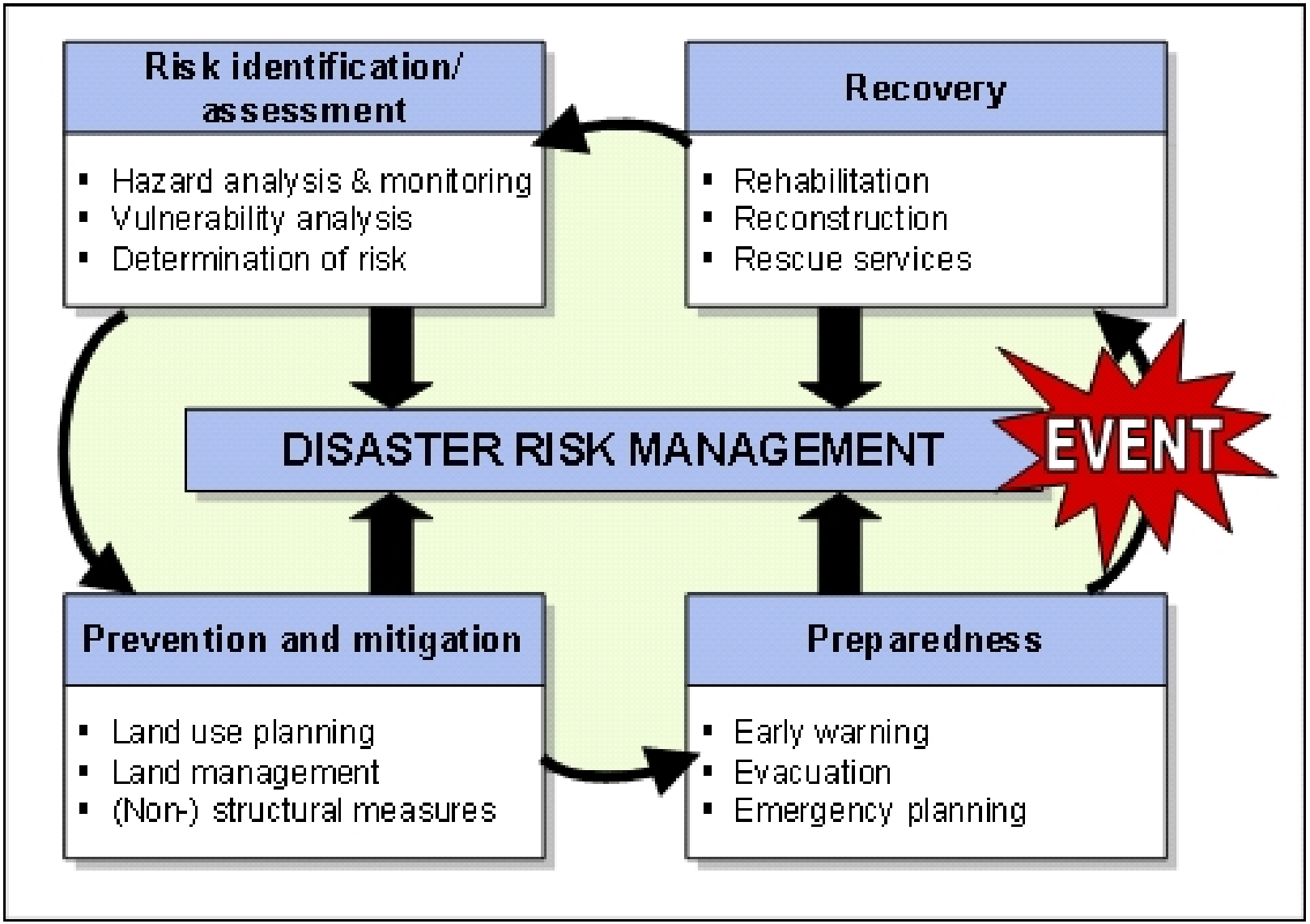
Location shown is the general area for the regional event. Several hurricanes made multiple landfalls.

Additional information for these events is available at NCDC WWW site www.ncdc.noaa.gov/ol/reports/billionz.html

The U.S. has sustained 90 weather related disasters over the last 29 years with overall damages/costs exceeding $1.0 billion for each event. Total costs for the 90 events exceed $700 billion using a GNP inflation index.

NOAA's
National Climatic Data Center

The disaster risk management cycle

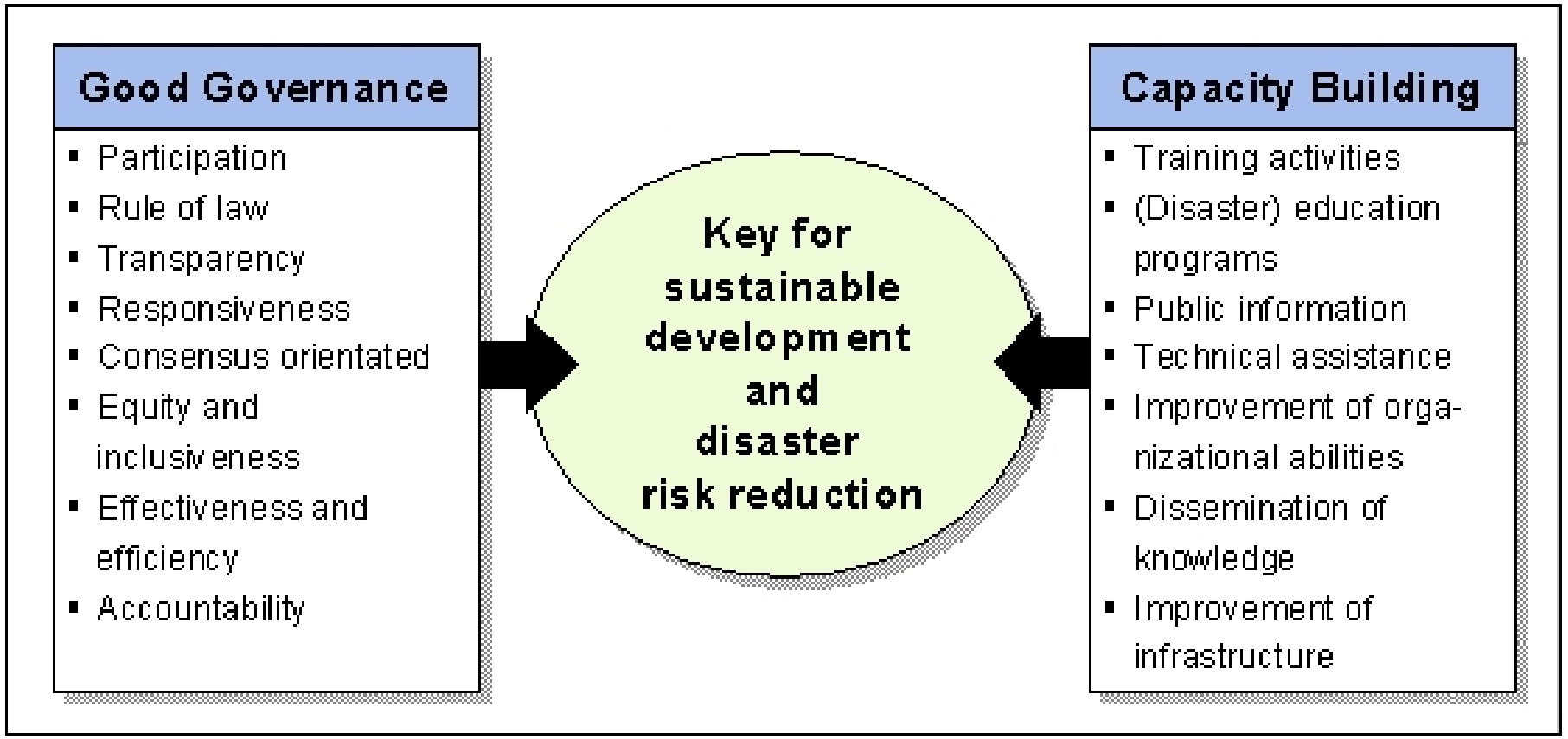


Disaster risk prevention and management

- Humanitarian actors are often confronted with land issues when undertaking emergency shelter and protection activity.
- The information on the people to land relationship is crucial in the immediate post disaster situation.
- Disaster risks must be identified as area zones in the land-use plans and the land information system with the relevant risk assessment and information attached.
- Measures for disaster risk prevention and management should be integrated in the land administration systems

Post Disaster Land Guidelines developed by FAO/UN-Habitat

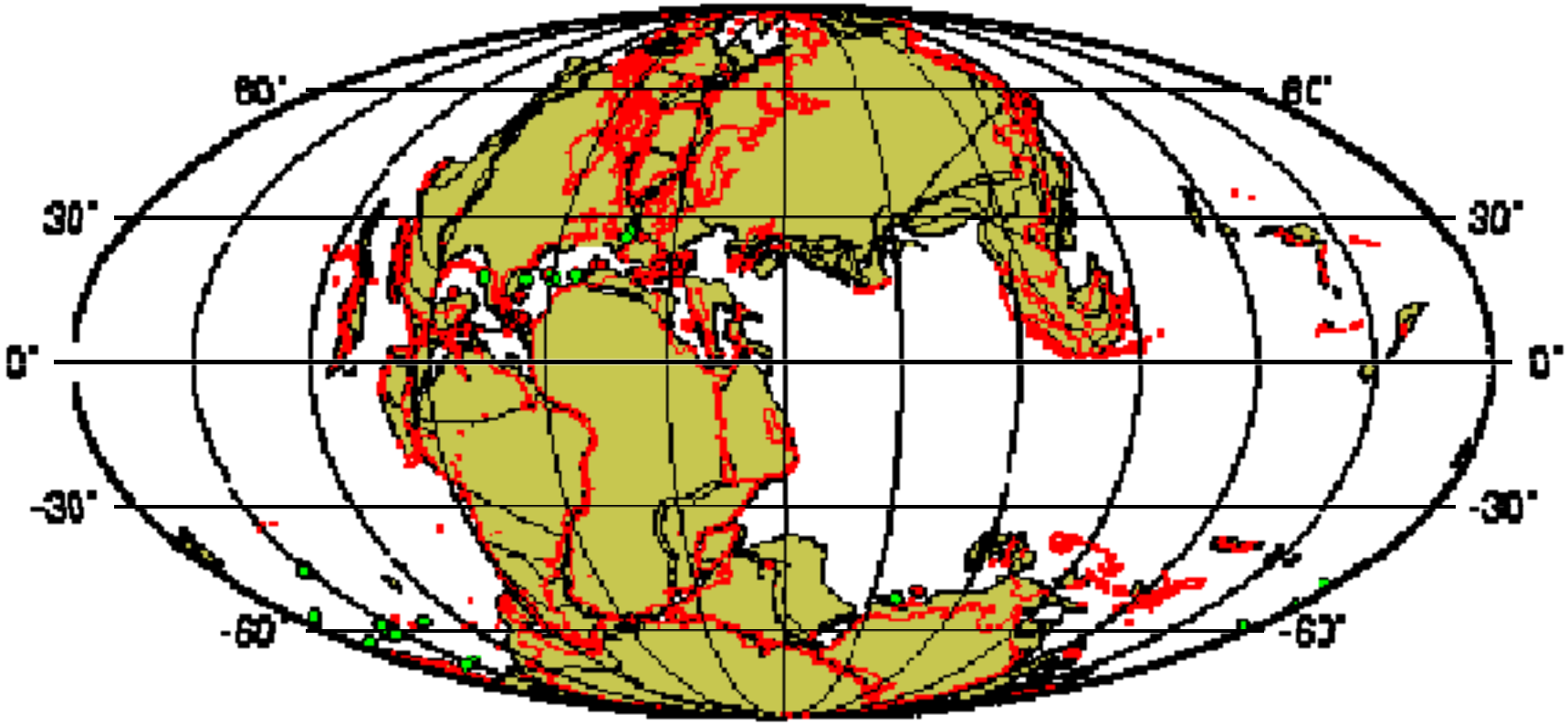
Building the capacity



"While many people are aware of the terrible impact of disasters throughout the world, few realise this is a problem that we can do something about"

Kofi Annan, 2004

Climate Change …



150 My Reconstruction

We cannot change the Hazard
but we can manage the Risk

The role of FIG

FIG intend to play a strong role in building the capacity to design, build and manage Land Governance systems in response to Climate Change and and in support of The Millennium Development Goals

"Building the capacity
for taking the land policy agenda forward"

FIG publications

WWW.FIG.NET

The XXIV FIG International Congress 2010

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Facing the Challenges – Building the Capacity

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Thank you
For your attention