Outline of the presentation

- Land Administration
- Spatial Data Infrastructures
- Vietnam Land Administration System
- Issues and barriers to the enhancement of LAS and SDI
- Development of SDI for Land sector in Vietnam
- Benefits of SDI Land to Vietnam Land Administration

Land Administration

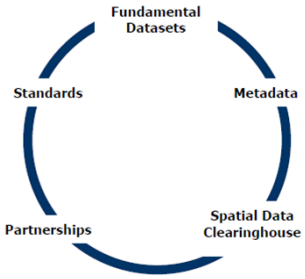
- the processes of recording and disseminating information about the **ownership**, **value** and **use of land** and its associated resources. The processes include the *adjudication* of rights, the *survey* and description and detailed *documentation* and the *provision of relevant information* in support of land markets.
- (UN ECE Land Administration Guidelines)
- provides a country with the infrastructure to implement land-related policies and land management strategies (Williamson, I., Enemark, S., Wallace, J., & Rajabifard, A., 2010)
- is a critical public infrastructure delivering public capital, private wealth, stability, and improved environmental outcomes (Bennett, R., Tambuwala, N., Rejabifard, A., Wallace, J., & Williamson, I., 2013).

Spatial Data Infrastructures

- A **Spatial Data Infrastructure is fundamentally about facilitating and coordinating the exchange and sharing of spatial data between stakeholders in the spatial community** (Rajabifard, A., Feeney, M. E., & Williamson, I., 2002).
- was first introduced in the mid-1980s.
- first mentioned in an executive order by the President Clinton in 1994.
- viewed by different perspectives depending on the government awareness and understanding of the importance of SDI and their approach
- (e.g. Grus, L., Crompvoets, J., & Bregt, A. K., 2007; Rajabifard, A., Feeney, M. E., & Williamson, I., 2002; Thellufen, C., Rajabifard, A., Enemark, S., & Williamson, I., 2009).

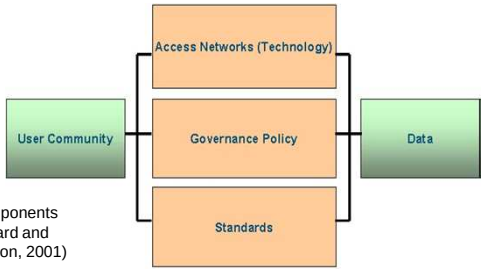
SDI components

Key Components of SDI:

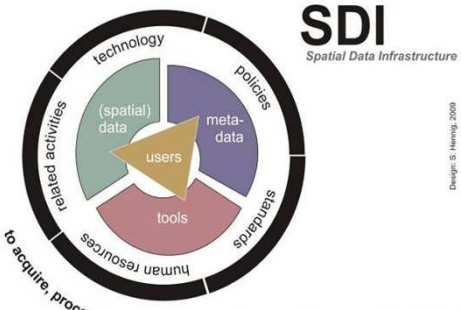


SDI components (Executive Office The US President, 2002)

Common components:
- USERS
- DATA (DATASET, METADATA)
- POLICIES
- STANDARDS
- TECHNOLOGY



SDI components (Rajabifard and Williamson, 2001)



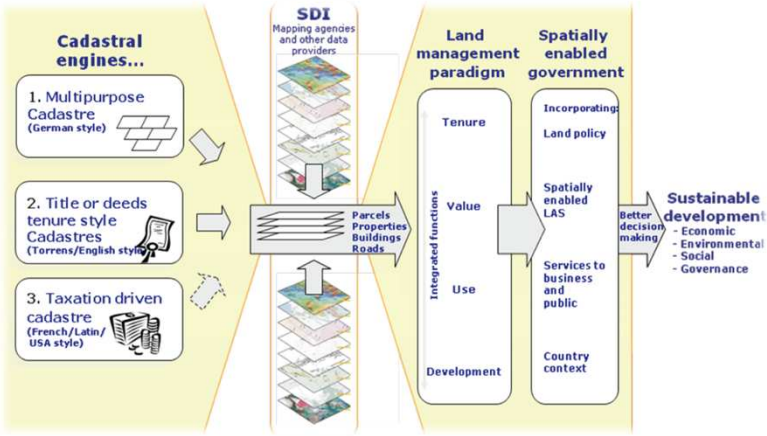
A user-centric SDI components (NatureSDI website)

Assessing the Performance of Spatial Data Infrastructures

- Giff and Crompvoets (2008) presented *a critical analysis of a framework to access SDI based on its performance indicators* including accountability assessment, development assessment, and knowledge assessment.
- An *SDI goal-oriented assessment view* has been developed by Grus, L., Castelein, W., Crompvoets, J., Overduin, T., Loenen, B. v., Groenstijn, A. v., and Bregt, A. K. (2011) based on the multi-view SDI assessment framework for assessing the realization of SDI's goals.
- Borza and Craglia (2012) developed *a methodology to estimate the social and economic benefits* of SDIs using a case study on *e*-Cadastres.

SDI is an important element of efficient and effective land administration

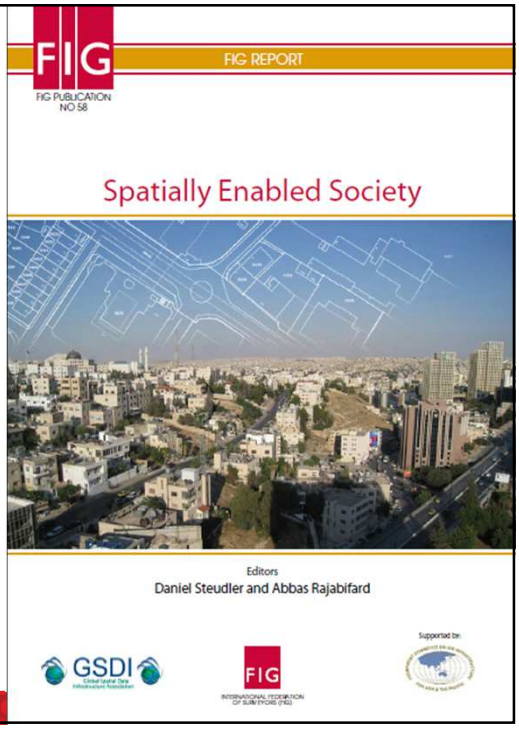
(Williamson *et al.*, 2010)



- An efficient and effective land administration system supporting sustainable development requires an effective SDI (Williamson, I., Enemark, S., Wallace, J., & Rajabifard, A., 2010)

SDI and LA and Spatially Enabled Society

- SDI and information on land ownership are two of six fundamental elements of a Spatially Enabled Society
- (RMIT Publication 58 Spatially Enabled Society, Steudler and Rajabifard, 2012)

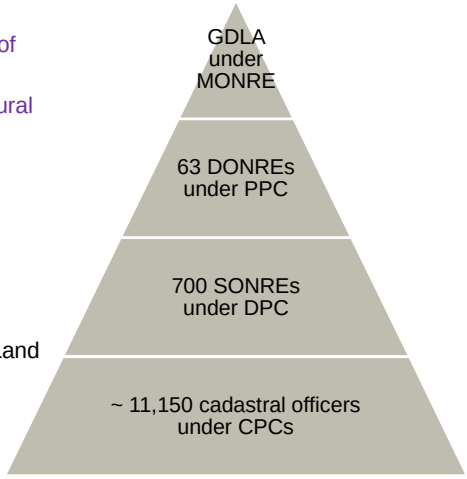


Vietnam Land Administration System

- Land belongs to all Vietnamese people, managed by State as a representative owner
- (Vietnam National Assembly, 1992).
  - Area: 331,210 km^2
  - Population: ~ 90,400,000 (estimated by 2012)
  - Number of land parcels: ~ 110 million (estimated by GDLA)

Vietnam Decentralised Land Administration System

- Multi-level decentralised Land Administration System
  - Central Level: General Department of Land Administration
  - Provincial Level: Department of Natural Resources and Environment (63 provinces)
  - District Level: Section of Natural Resources and Environment (700 districts)
  - Communal Level: cadastral officer (11,143 communes)
- In Vietnam much of the process of Land Administration is carried out at the Provincial level



Key issues for the Vietnam Land Administration System

Key Issues	Reasons
Land titling process not yet completed.	There is a considerable gap between land policy and its practical implementation
One of the three most corrupt public services; 70% of civil disputes and administrative complaints related to land.	The decentralisation has provided local authorities with a greater autonomy in land sector without clear accountability or interoperability in neither organisational arrangement nor data sharing policy
The level of access to land information in Vietnam remains rather weak and has been decreased over time	There have been no regulations for access to electronic land information
The land records are stored and managed by different departments and institutes and usually become out-of-date after a year of establishment	Lack of a well-established framework for technical and institutional arrangements

Development of SDI for Land sector in Vietnam

Although there have been significant improvements in the last two decades,

❖There is not yet a Spatial Data Infrastructure for Land sector (Land SDI) model in place in Vietnam.

Current status of Vietnam LAS:

❖Vietnam is now in a critical phase of land information development - establishing an online land administration system.

❖Order to take the development of the land administration system to the next level now is an extremely important time to develop an SDI Land.

We have adopted the term ***"SDI Land"*** to describe an SDI for the Land Sector

Current status of SDI and LAS initiatives in Vietnam

- *Program for the Development and Modernization of Land Administration for 2005-2020* and the *Strategy for Information Technology Application and Development for the Management of Natural Resources and Environment to 2015 and towards 2020* were approved.
- A road map for the development of an NSDI for sustainable development in Vietnam has been created.
- The topographic maps have been created in digital format to cover the whole country.
- Vietnam has given priority to developing a comprehensive land information system policy.
- The Electronic Transactions Law was introduced and enacted.

Barriers to the development of SDI Land

- *Lack of an overall policy* for spatial data acquisition, management and distribution (Steudler and Rajabifard, 2012; Thellufen, C., Rajabifard, A., Enemark, S., & Williamson, I., 2009)
  - data ownership, usages, exchange, access and security
- *Limitations on the institutional arrangements* (Cook, E., Stanley, V., Adlington, G., Bell, K., & Torhonen, M., 2008; Rajabifard, A., Binns, A., Masser, I., & Williamson, I., 2006)
  - role and contribution of private and academic sectors in SDI projects should be recognized
- *Inconsistent data standards* (Moses, M., Stevens, T. S., & Bax, G., 2012)
  - cost sizable investment and budget for data integration.
- *Poor metadata* (Steudler and Rajabifard, 2012)
  - inconsistent/ incomplete knowledge about availability and quality of spatial data.
- *Weak of capacity to ICT infrastructure and literacy* (Cook, E., Stanley, V., Adlington, G., Bell, K., & Torhonen, M, 2008)
  - running two systems concurrently imposes extra costs; limited computer literacy in the major part of intended user group (community – land users)

Other issues for SDI Land in Vietnam (World Bank, 2011)

- *Inadequate or incomplete investments in SDI – for example, problems with a land portal established at the central level.*
- *Limitations in commitment and support from key stakeholders*
  - A major constraint to SDI development
  - Can lead to financially unsustainable land project implementations

How an SDI Land can benefit the Vietnam LAS

- *Improvement of access to land information by all stakeholders*
  - Sharing and exchanging land information
  - Support Govt to Govt (G2G), Govt to Business (G2B) and Government to Citizens (G2C) interaction models
  - Improving the quality of decision making by reducing time and costs
  - Reducing mistakes and duplication
  - Ensuring consistency of land information

How an SDI Land can benefit the Vietnam LAS (cont.)

❖ *Enhancement of government land processes*

- Reducing government administrative effort and resources by linking land stakeholders
- Supporting greater responsiveness in land related processes more timely, costly and accurately, especially in land complaints and dispute handlings
- Supporting streamlined public services and reduced transaction time by providing service standard which clearly provides a time frame for particular service as well as required forms and related proofs.

How an SDI Land can benefit the Vietnam LAS (cont.)

❖ *Contribution to good land governance*

- Supporting integration of data by accessing directly and ensuring every single error is corrected in the source data;
- Improving communication with the public and easier access for citizens to participate in government land related decision-making such as land use planning community consultation; and
- Increasing inter-agencies collaboration and this contribute to the e-government implementation supported by an NSDI;
- Providing opportunities for revenue growth by a land information fee collection regulation under a sustainable financial model. This revenue will help offset the ongoing cost of the system.

Conclusions

- While there has been significant reform in LAS and SDIs there are considerable issues to address.
- The Development of SDI Land will enhance LAS and the establishment of a Spatially Enabled Society.
- AN effective SDI Land would provide the following continuing land administration reform process.
  - improved access to land information by all stakeholders,
  - improved transparency in the land sector, and
  - increase efficiency and effectiveness of existing projects and programmes.
- Ultimately, this will enhance land governance in Vietnam.

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