

TWIN SEA

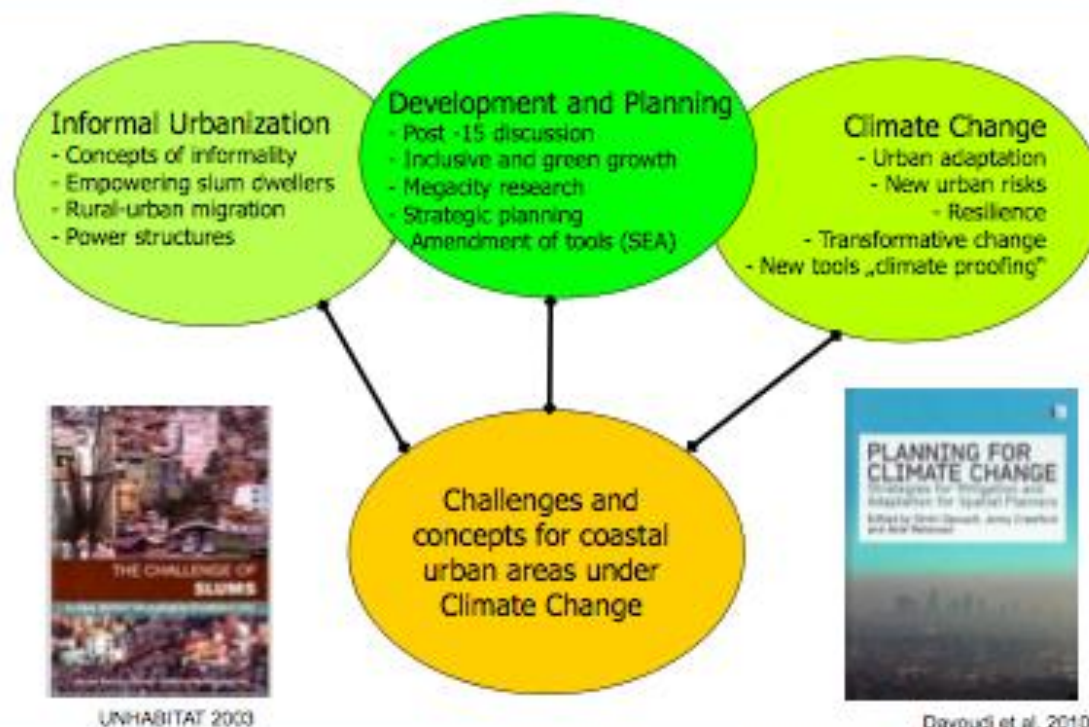
Spatial Planning and Risk Reduction: Lessons between Indonesia and Germany

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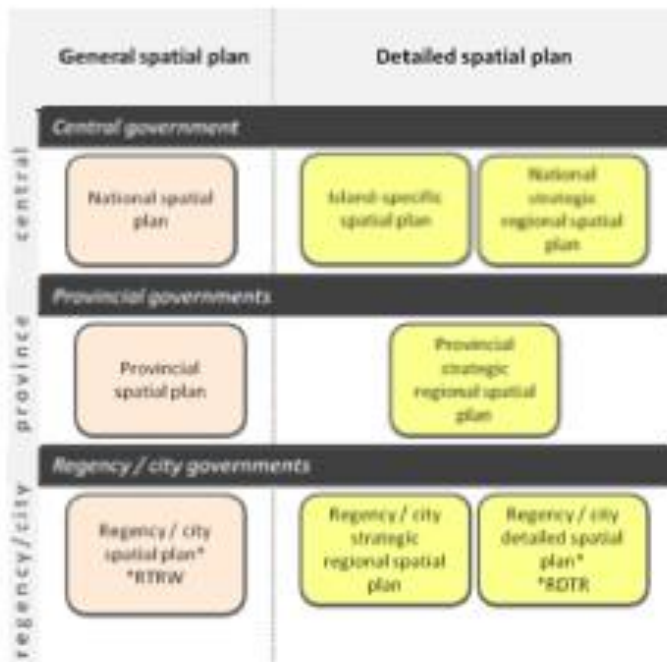
Overview: Research fields

ireus | Institute of Regional
Development Planning




Planning system Indonesia

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Source: Based on Spatial Planning Law Indonesia, Foto: Birkmann 2008 IANN / joern.birkmann@reus.uni-stuttgart.de

A background image showing a group of people, likely at a community meeting or public consultation. A man in the foreground is speaking into a microphone. Other people are visible behind him, some looking towards the camera and others looking away. The image is somewhat dark and has a grainy texture.

Community participation is a goal in the planning legislation (UU/Law 26/2007).

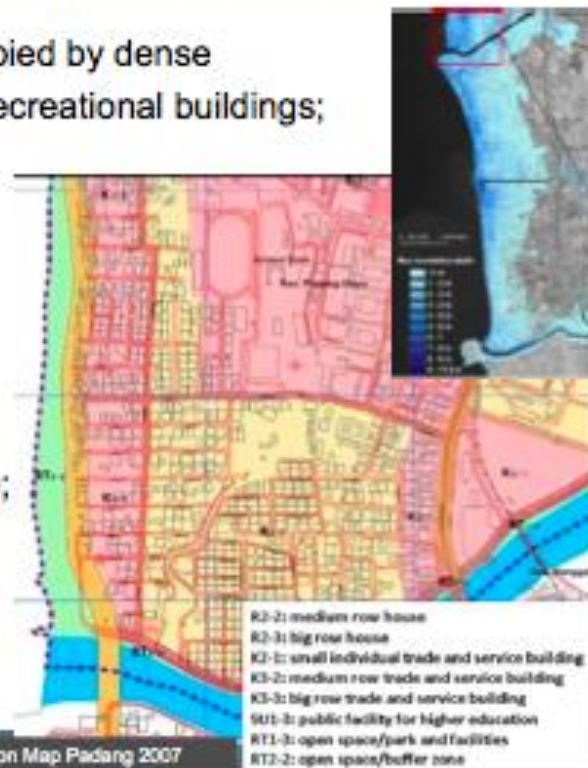
Participation/consultation:

- language challenges (technical issues);**
 - comments are made available, responses not;**
- [BAPPEDA and TRTB].**

The City Spatial Plan (1:25,000) considers floods, earthquakes, tsunamis, coastal erosion and landslides.

Hazard maps are used to distinguish between high and low risk zones; - restrictions for urban development.

- High risk zones are occupied by dense housing, commercial or recreational buildings;
- Goals:
 - improvement of building standards;
 - reduction of density;
 - relocation;
 - increase of green space;
 - new road;
 - commercial buildings.



Source: Zoning Regulation Map Padang 2007

Mismatches

- Scientific studies versus local knowledge and beliefs (role of cultural/religious leaders);
- High risk zones are only high hazard zones;
- Relocation reduces exposure, but might increase vulnerability of people relocated;
- Housing versus business (value of the property; power structures).



Source: Photos Birkmann 2007, 2009

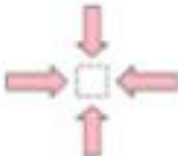

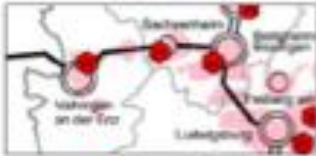





**Spatial Planning in
Germany: have we learned
the lessons right?**

Positive and Negative Planning

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	„Positive planning“	„Negative planning“
Meaning	Development! („where to allocate development?“)	No development! („where development is unwanted/prohibited?“)
Principle		
Examples	  Development!	  No development!

Source: Siedentop 2012

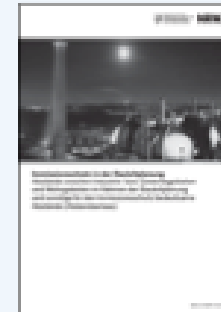
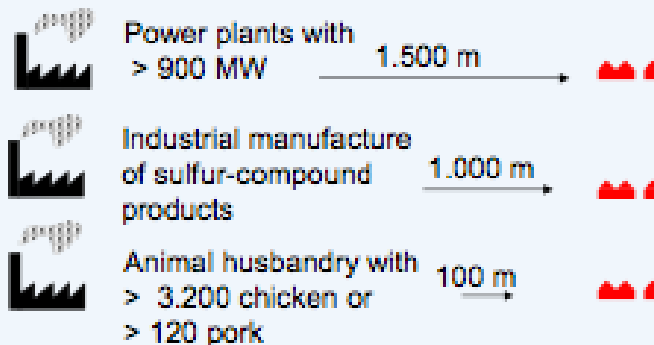
Land Use Zones - Zoning

- Zoning is the assignment of permitted uses to an area
- Zoning regulates:
 - Type of land use (forest, agricultural, housing,....)
 - Intensity of certain land uses (planned population density)
- Scope of zoning:
 - Separation of incompatible/conflicting uses:
 - a) Within the same area
 - b) Between neighboring areas

Exposure is not sufficient

Risk Management Strategy: Spatial Separation and Relocation

Spatial separation of potentially conflicting land uses.
Minimum distances between (newly planned)
polluting industries and sensitive land uses.



The central place system – a concept for coordinated redevelopmen t and retreat?

Source: Ministry of Economic
Development, 2008



- A significant number of „planned“ urban development does not sufficiently account for the complexity of climate change
- Planning regulations are based primarily on physical phenomena, the vulnerability of people and infrastructures is not sufficiently considered.
- Public participation is required, however, communication is often „one-directional“ – particularly in Indonesia.
- Increasing tensions between a) strategic planning and b) incremental project management are likely

THANKS

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Birkmann, J. and M. Garschagen (2014): New challenges for urban and spatial governance in highly dynamic environments – comparison of guiding visions, planning systems/approaches and actor networks; *Urban Climate* (accepted for publication)

Birkmann, J.; Cutter, S.; Rothman, D.; Welle, T.; Garschagen, M.; Van Ruijven, B.; O'Neil, B.; Preston, B.; Kienberger, S.; Cardona, O.D.; Siagian, T.; Hidayati, D.; Setiadi, N.; Binder, C.; Hughes, B.; Pulwarty, R. (2013): Scenarios for Vulnerability - Opportunities and constraints in the context of climate change and disaster risk; *Climatic Change* ; (DOI 10.1007/s10584-013-0913-2).

Birkmann, J.; Garschagen, M.; Kraas, F.; Quang, N. (2010): Adaptive urban governance: new challenges for the second generation of urban adaptation strategies to climate change. *Sustainability Science* 5(2), p. 185-206