technische universität dortmund

Institute of Spatial Planning
(IRPUD)

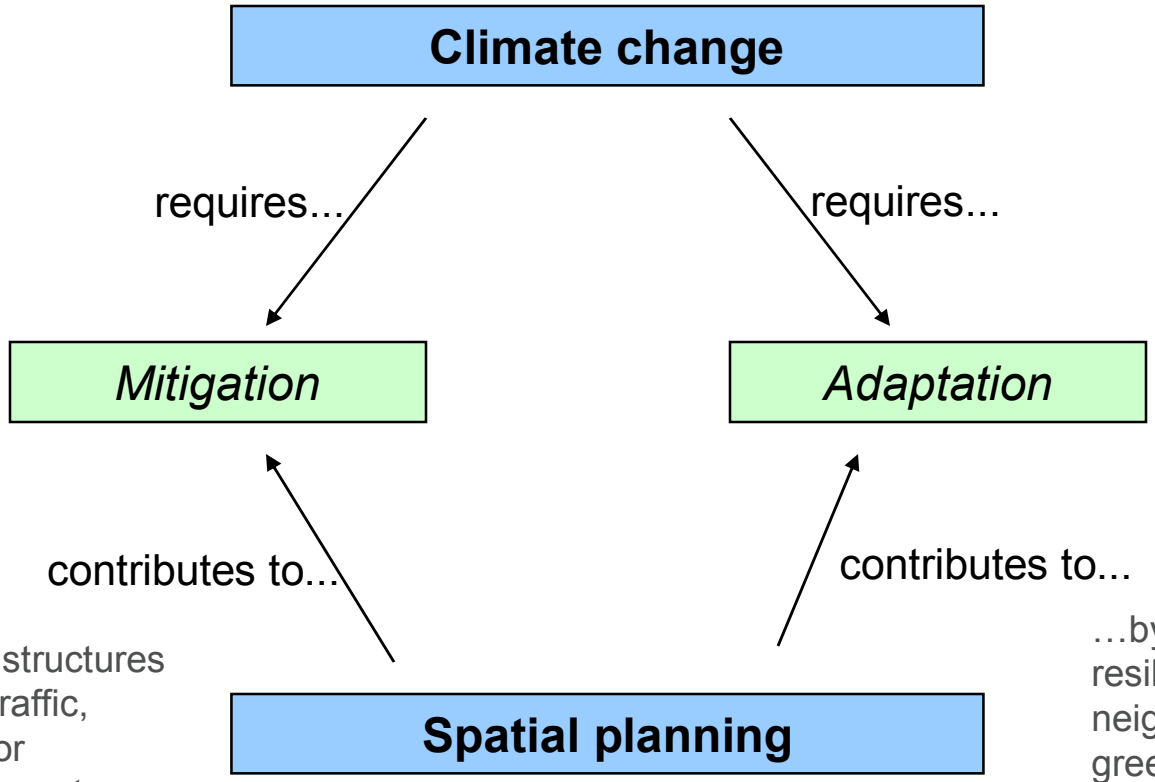
An Overview of Climate Change Activities in Europe

Mark Fleischhauer | Dubrovnik, 07.05.2009
„Changing Land Use to Mitigate Climate Change“

Outline

- Why should planners care about climate change?
- What is being done so far?
- What needs to be done in the future? / How should that be accomplished?
- What might be gained through an international exchange of ideas?

Why should planners care about climate change?



…by designing structures that need less traffic, provide areas for renewable energy etc.

…by designing disaster-resilient cities and neigborhoods, keep urban green to prevent heat islands etc.

What is being done so far?

- European/transnational level
  - White Paper on climate change adaptation (April 2009)
  - Directives on Energy Efficiency etc.
  - ESPON Programme 2007-2013 project „ESPON Climate - Climate change and territorial effects on regions and local economies (2009-2012)" and "ReRISK - Regions at Risk of Energy Poverty"
  - INTERREG Programme IIIB and IVB: climate change and energy efficiency as key priorities in the 2007-2013 programme; severeal climate change and spatial planning related projects (ESPACE, FutureCities, SEAREG, ASTRA, ClimChAlp, CLISP and many more)
  - European Research Areas: Complimentation of research at member state levels by European initiatives like ERA „URBAN-NET" or ERA „CIRCLE - Climate Impact Research Coordination for a Larger Europe"
- Member state level
  - National adaptation/climate change strategies: Finland, The Netherlands, Ireland, Germany, …
  - National research programmes, e.g. „Model Regions" in Germany (handbooks for regional/local climate change adaptation)
- Regional level
  - Adaptation strategies of the German Länder (e.g. Northrhine Westphalia)

What is being done so far?

- Local level
  - single examples
  - main implementation level
  - lack of resources/knowledge
  - …

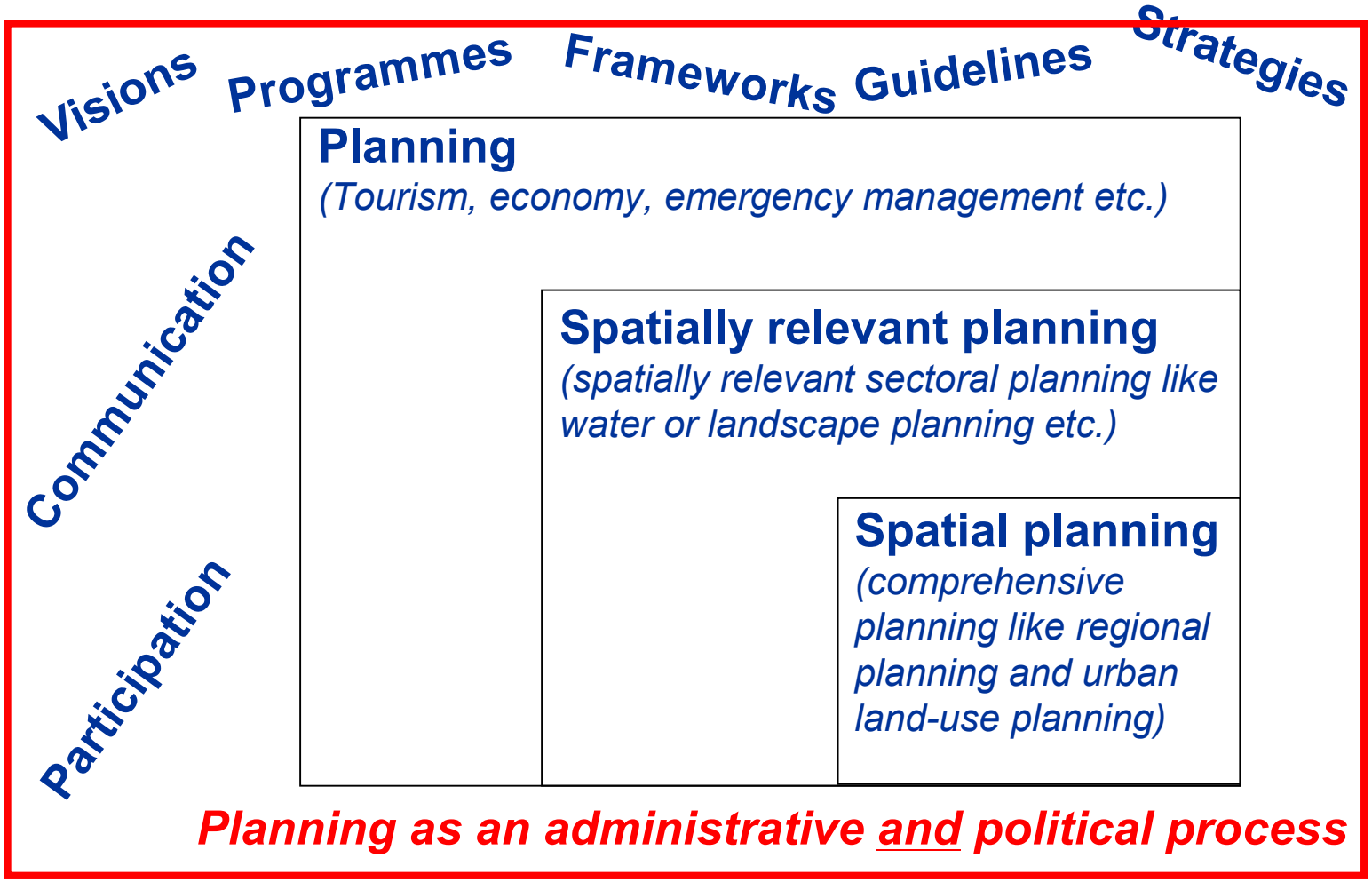
Role of Urban Planning and Management

Spatial level	Spatially relevant planning				Spatially non-relevant planning
	Comprehensive (use and development of land)		Sectoral (transport, water, geology, emergency response, etc.)		Forms of non-spatial management at different spatial levels
Europe	Spatial planning	**European spatial development (no binding character)**	Sectoral planning	**Environmental Policies, TEN, CAP**	**e.g. budget planning**
State		**Spatial development planning**		**e.g. national transport network plan**	**e.g. defence planning, education**
Sub-state level (federal state, region, or other spatial units)		**Regional planning**		**e.g. river basin authorities in charge of management plans**	**e.g. cultural development, education planning**
Municipality **(all planning at this level can be subsumed together under the term *"urban planning and management"*)**		**Land-use planning**		**(e. g. waste, sewage planning, public transport planning)**	**e.g. lower education, municipal budget planning**

What is being done so far?

- Adaptation often dominated by sectoral planning perspective (water, transportation), not by (integrated) spatial planning
- integretaion of mitigation and adaptation weak and differences in the approaches often not recognised
- …

Planning in the field of climate change



What needs to be done in the future?

- **Climate change as a new risk**

- Traditional risks: **real dangers because of occurrence in the past**
- New risks:
  uncertain, insufficiently known or recognized, imaginable hazards in the future
- **From** probability ***(traditional risks):***
  - past-oriented
  - informed by statistics
- **To** possibility ***(new risks):***
  - future-oriented
  - informed by … ??

➔Uncertainty, ambiguity

(Source: van Asselt, 2007)

Challenges for dealing with the „new risk“ of climate change

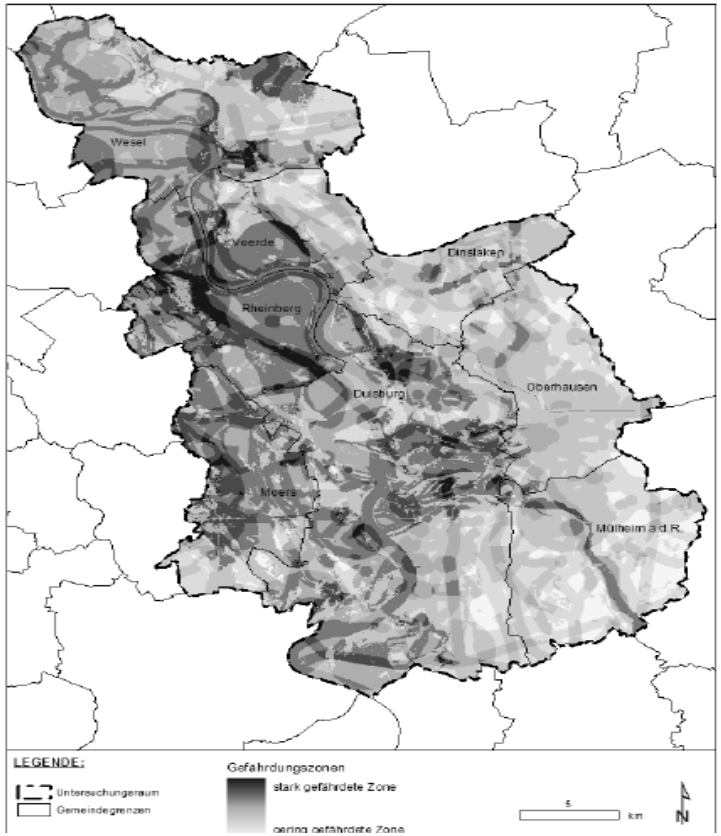
- How to deal with uncertainty?
  - Administrations are often confronted with a low acceptance of (risk related) decisions by the public;
- Distrust of the public:
  - Insufficient information about the risk,
  - Not understandable procedural steps,
  - Insufficient participation of the public in the decision making process.
- Trust plays a key role in dealing with risks:
  - Foundation for the interpretation of risk by the public between „real“ and „perceived“ risk.

Knowledge and implementation gaps: Data and information

- Data and information
  - Provide reliable data for planning decisions:
    - Transparent and reliable information about climate change and ist regional impacts as a foundation for designing sustainable policies and for public acceptance.
  - Identify hazards and vulnerabilities:
    - Climate risk areas: Efficiency and effectivity of adaptation measures
    - But: In general no task for spatial planning authorities
  - Knowledge/data transfer:
    - Translation of the „codes“ of climate research to planning and policy codes

Knowledge and information gaps: Multi-hazard perspective

- **Spatial planning decisions have to consider** all spatially relevant hazards**.**
- **Spatial planning is responsible for a** particular spatial area **(where the sum of hazards and vulnerabilities defines the overall spatial risk) and not for a particular object (like e.g. sectoral engineering sciences).**
- **Therefore spatial planning must adopt a** multi-hazard approach **in order to deal appropriately with risks and hazards in a spatial context.**
- Example: **Regierungsbezirk Düsseldorf, North Rhine Westphalia, Germany** ***(Source: Schlusemann, 2005)***



Knowledge and implementation gaps: Need for risk governance approach

- Dealing with uncertainty
  - Guidelines for resilient spatial structures
  - Flexibility
    - Flexible land uses
    - Szenarios

- Risk governance approach
  - Integration of risk assessment (in general made by experts) and
  - Risk management (in general made by adminisrative units) in a
  - Communication and participation process.

Knowledge and information gaps: Further aspects (1)

- Which opportunities exist?
  - Sectors (tourism, farming…)
  - Innovations („Necessity is the mother of invention!“)
  - Flexibility in institutional behaviour

- Integration of mitigation and adaptation
  - Division of mitigation and adaptation often seen as purely academic
  - Integration by economic instruments (burden sharing), but methodological problems:
    - Which assessment criteria?
    - Burden sharing versus effectivity (Relevance of „mitigation hot spots“ and „adaptation hot spots“).

Knowledge and information gaps: Further aspects (2)

- Interactions and goal incongruences
  - Interactions with other Global Change developments (demographic change, Global Change) often not clear, Existance of potentials.
  - Dealing with goal incongruences: e.g. high urban density (avoiding further land use demand) versus ventilation potential (Improvement of urban climate).

Conclusion: Potentials and limits of spatial/urban planning (1)

- Climate change mitigation and adaptation:
  - Spatial planning is only one of many actors
  - Sectoral planning often more important in this field (water bodies, waste management, landscape planning, emergency management)

- Formal planning instruments:
  - Limits especially in built-up areas.
  - Extension by new instruments/integration into formal instruments

- Informal planning instruments
  - Might fill this gap
  - But are also limited (if no win-win situation exists)

Conclusion: Potentials and limits of spatial/urban planning (2)

- Connecting urban planning measures with
  - Approaches of economic control/management (compensation, burden sharing) and
  - Sectoral development policies.

- Communication and cooperation:
  - Relevant actors communicate and cooperate for more successful coping with complexity and uncertainty (risk governance).
  - Improvement of implementation.

- Role of best practices:
  - Vital aspect of urban policies and research.
  - Key element for overcoming implementation hinderances.
  - Has to accompanied by research.

What might be gained through an international exchange of ideas?

- to be added…

Thank you for your attention!

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