

DFG-Forschergruppe 1736 "*Urban Climate and Heat Stress in mid-latitude cities in view of climate change (UCaHS)*"



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The heat adapted city? A Constellation Analysis of urban governance and planning to tackle heat stress risks in mid-latitude cities

Research gaps

Creating the heat - proof city in mid-latitudes with moderate climate

Urban planning perceptions, instruments and practices

Coordination challenges and strategies

Research questions

How are heat risk policies being integrated into urban planning processes in cities with moderate climate? What are challenges and opportunities?

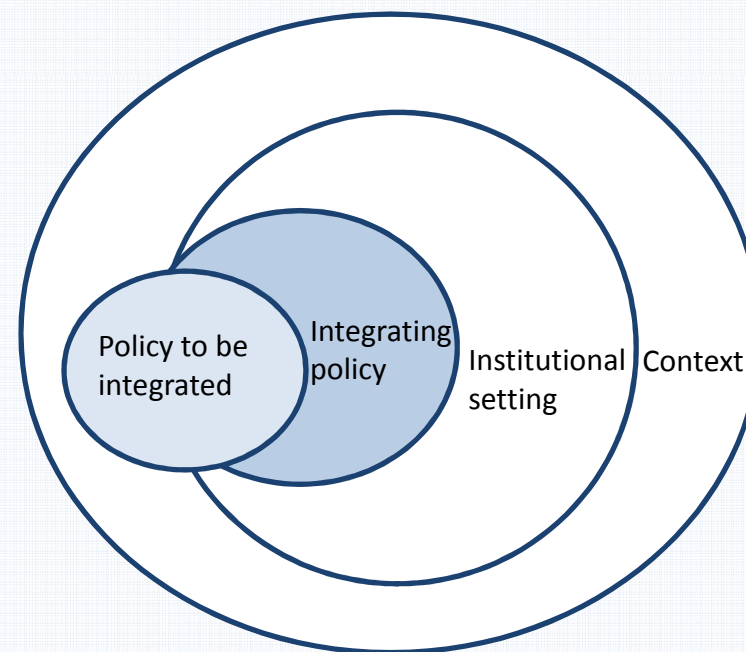
Analytical perspective

Policy integration

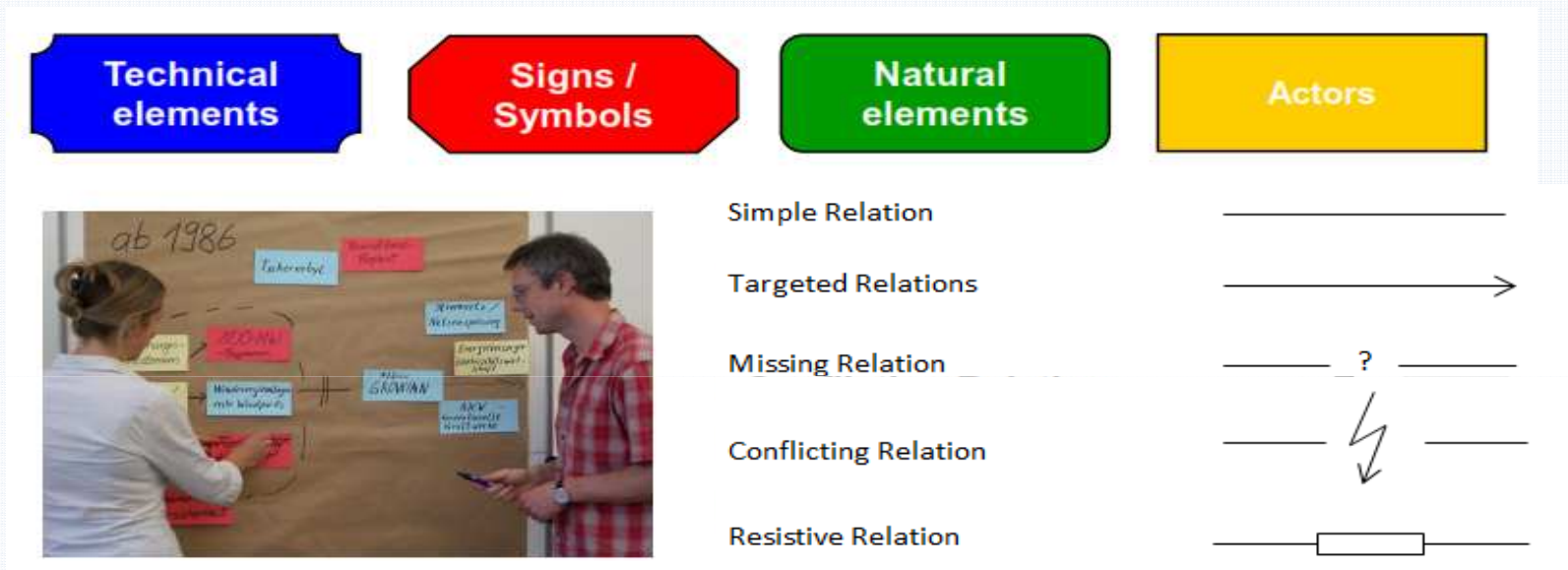
Forming relationships between single, potentially complex areas of political problem solving (integrated policy) with comprehensive, more or less coherent policy-arrangements (integrated policy).

Bornemann (2013)

- Empirical matters and modes of integration and non-integration
- Material manifestations symbolic expressions



Research approach and methods: Constellation Analysis



Methods

Interdisciplinary workshops with scientists

Expert interviews with administrative staff

Participating observation Berlin official government workshops

Document analysis (District and city-wide protocols of official meetings, official strategic documents)

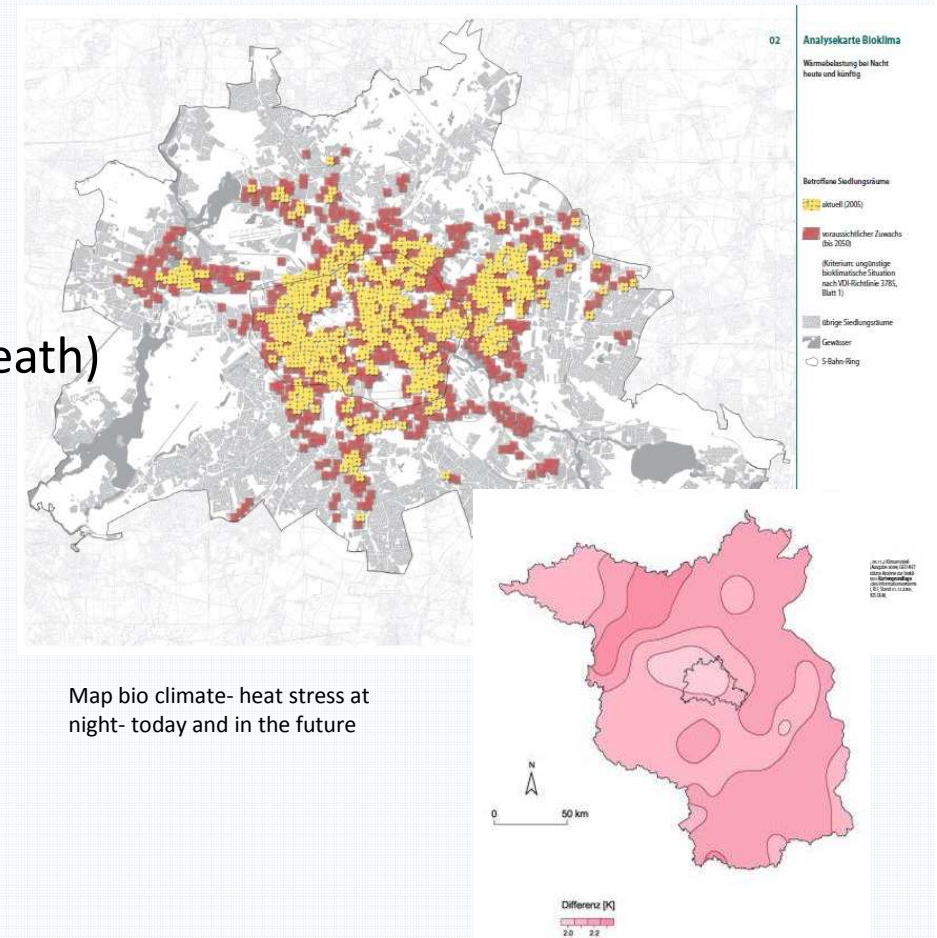
Case study Berlin

humid continental mid-latitude climate,
warm summers and cold winters

Curr. 1600 excess deaths (app. 5% annual death)
due to urban heat (Scherer et al. 2014)

Climate change projections

- 2.5°C rise by 2050
- more extreme weather events

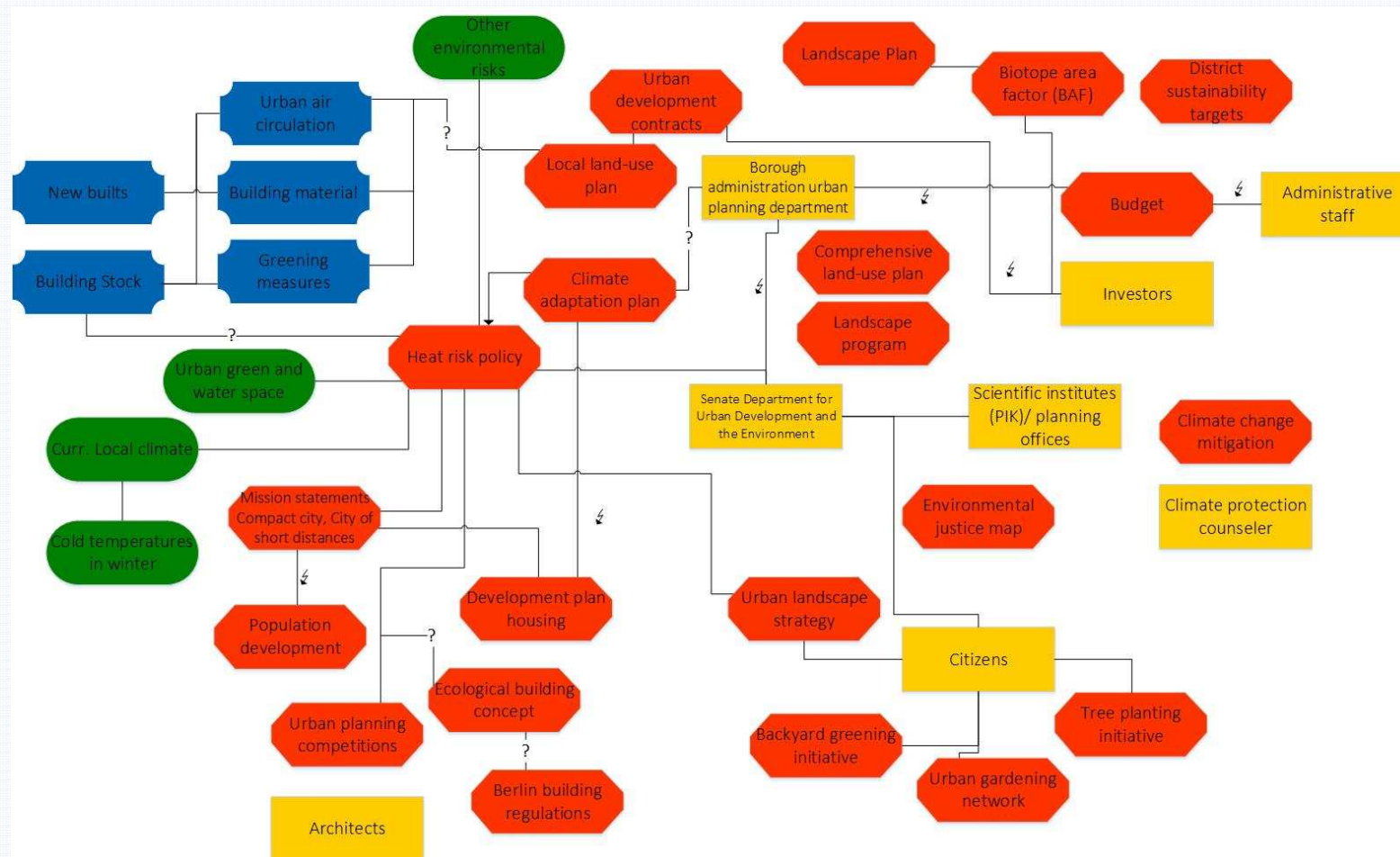


Map bio climate- heat stress at night- today and in the future

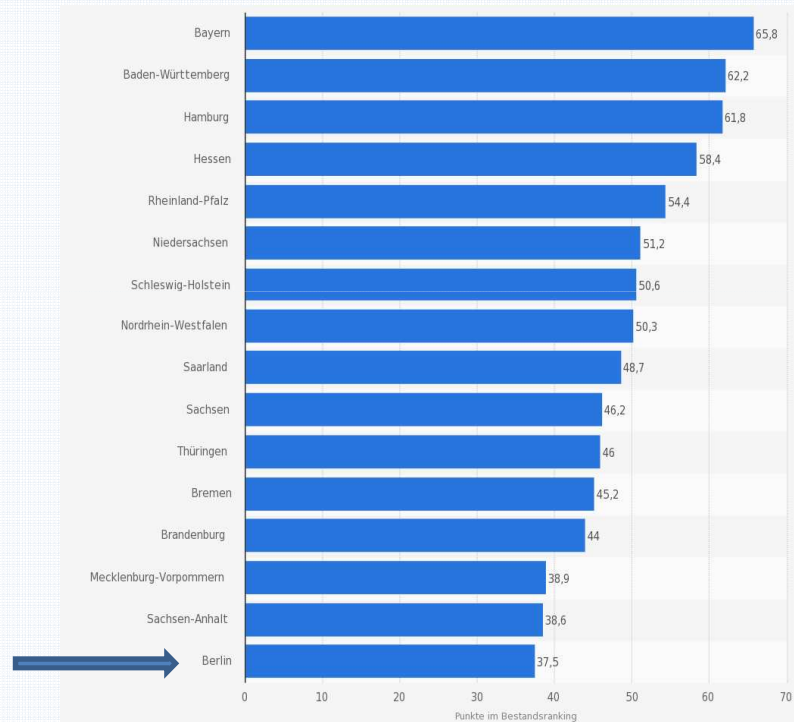
Change of temperature 2046/2055 in comparison with 1951/2000

Berlin policy integration constellation

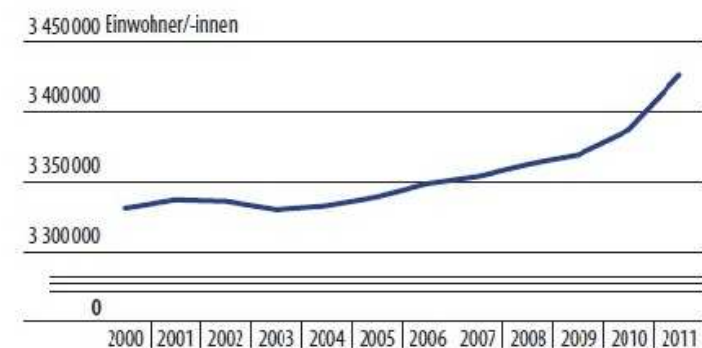
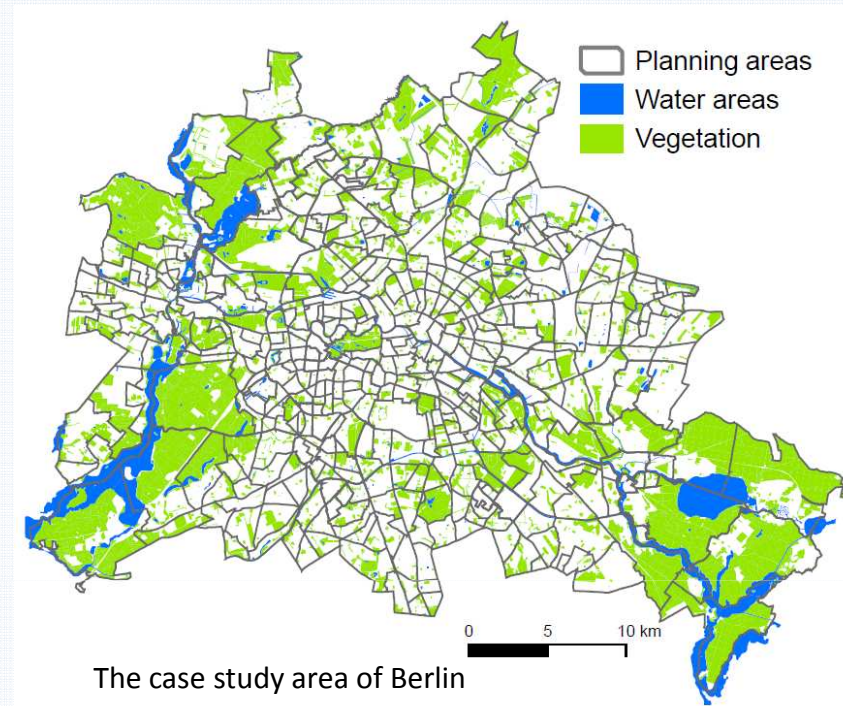
Heat risk and urban development policy and planning



Contextual factors



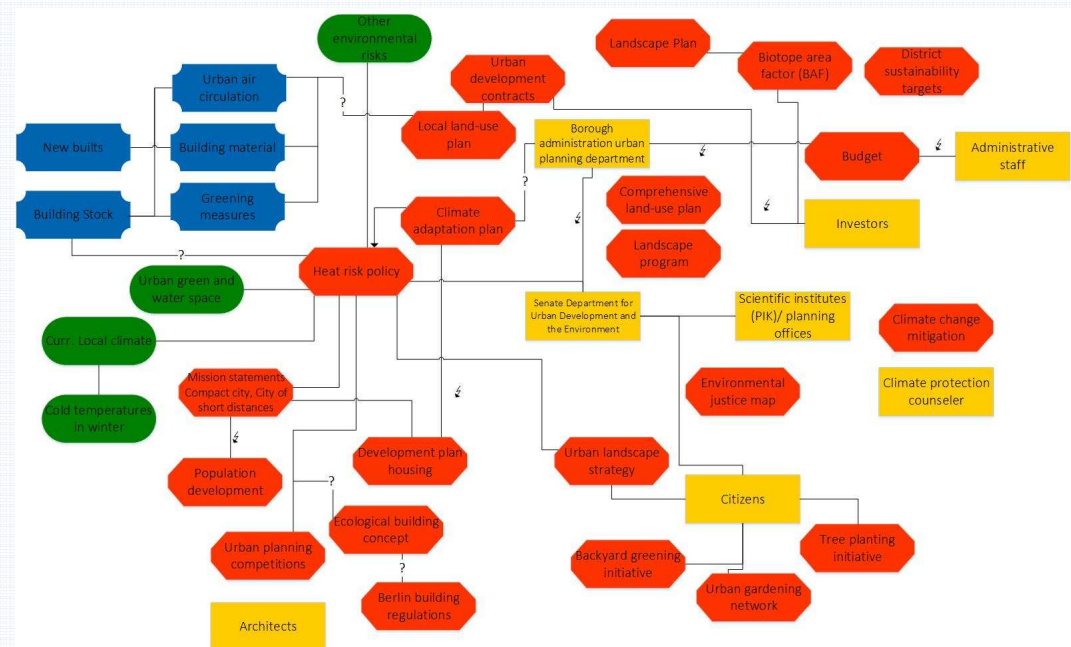
Ranking of German federal states: economic power in 2012



Population Growth 2000-2011

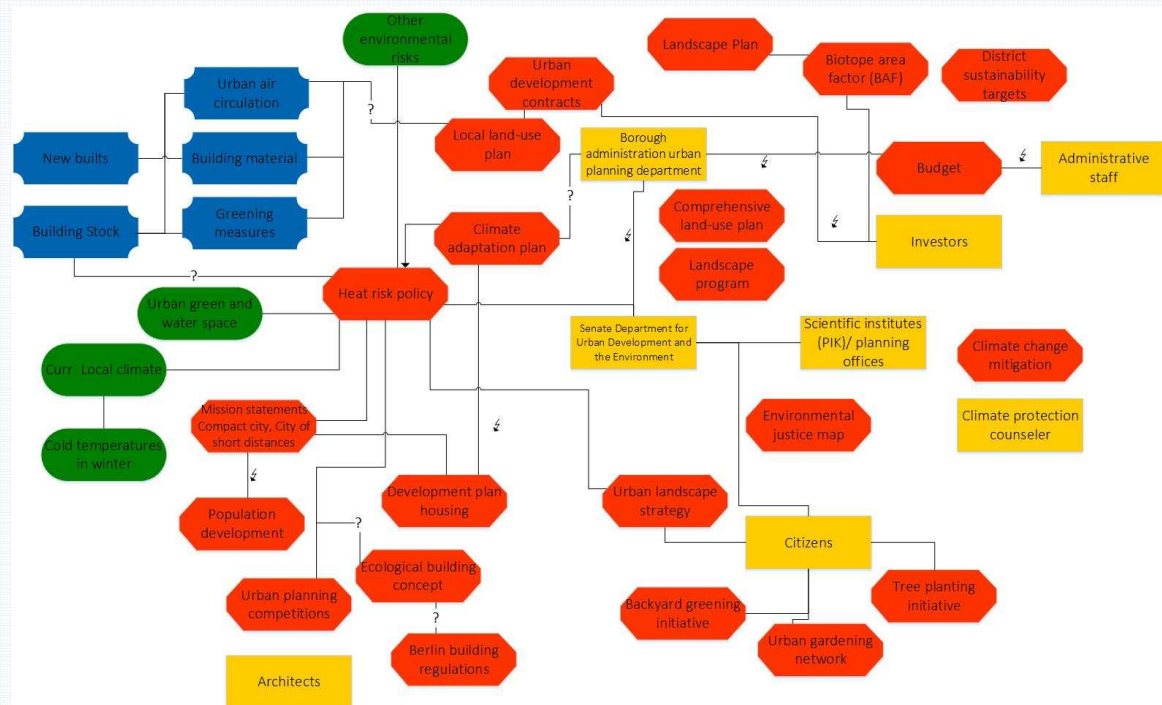
Policy to be integrated: ‘what and how’ of heat risk policy

- Time perspective
- Interplay with other risks
- Complexity of problem
- Problem focus
- Preferred strategies



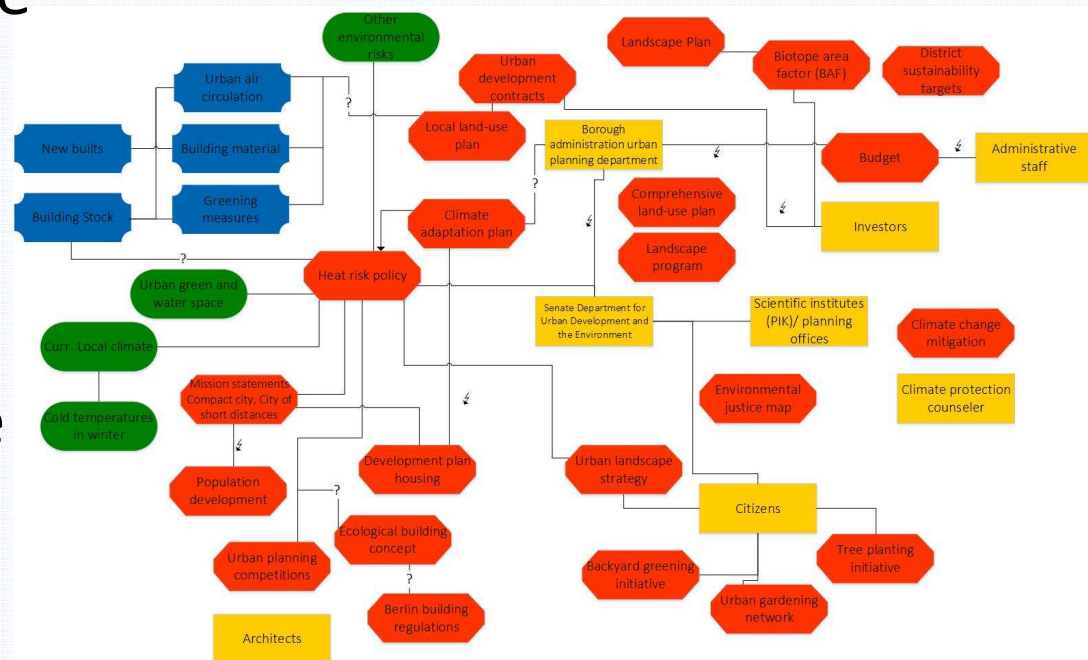
Integrating policy : urban planning

- Planning instruments
- Risk analysis
- Planning logics
- Scope
- Aims



Responsivity of the institutional setting

- Knowledge exchange over governance levels
- Attribution of responsibility
- Local political culture
- Staff
- Budget
- Inclusion of scientific knowledge



Urban planning with heat risks – a tricky challenge

- Formal policy and planning instruments with stronger target specificity
- Clear responsibilities between local tiers of governance
- Linking competing local policies and political discourses
- Science-policy interface on *all* governance levels
- Building sustainable institutional structures

Tackling barriers?

- Environmental justice map
- Enhancing the resolution of risk maps
- District sustainability targets
- Informal preparation strategies
- Climate protection coordinators

Thank you!

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<http://www.ucahs.org/>