Bundesministerium
für Verkehr, Bau
und Stadtentwicklung

Baltic Sea Region
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Energy Efficient and Integrated
Urban Development Action

URB Energy

Urban development, climate protection and climate change - an integrated approach using examples from research

Prof. Dr. János Brenner, Building Director,
Federal Ministry of Transport, Building and Urban Affairs, R SW 23

21/10/2010 International Conference Urb.Energy Berlin - Brandenburg

I.

Objectives and political bases

National climate protection targets

- Reduction of greenhouse gas (vs. 1990) to 40% by 2020 and by at least 80% until 2050
- Increasing the share of renewable energies in the heating market to 14%

Core sector:

Buildings (heating of buildings and hot water account for 40% of the energy consumption)

Political bases

- **Coalition agreement:** "The principle of sustainability shall characterize our policy. (...) Climate protection is the world's outstanding environmental challenge of our time. It means to take care for long-term sustainable economic and environmental development. "

- Climate **protection** measures are already part of local politics, whereas dealing with climate **change** issues is not yet!

II.

Examples for climate protection: Energetic rehabilitation of large housing estates

Energetic rehabilitation of large housing estates

- 2009 competition focussing on future opportunities and development needs for large housing estates
- Preparation of ***integrated district-development plans*** for major housing estates starting from approx. 1,000 units
- Integration of energy issues, urban development, social, financial and housing aspects
- 34 concepts out of more than 70 applications were awarded
- In-process evaluation for implementing the winning concepts over a period of 5 years as well as intensive academic support for 8 representative model projects
- New momentum and image campaign for large housing developments by competition

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Energetic rehabilitation of large housing estates

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Energetische Sanierung
von Großwohnsiedlungen

One of the gold medalists
Is from Berlin:

GESOBAU AG
for the concept of
Märkisches Viertel

Zusammenfassung der 34 Gewinner des Wettbewerbes

Goldmedaillen-Gewinner

GESOBAU AG für das Konzeptgebiet Märkisches Viertel in Berlin

(15.138 Wohneinheiten)

Das von der GESOBAU für das Gebiet Märkisches Viertel in Berlin vorgelegte Konzept überzeugte die Jury durch schlüssige Lösungsvorschläge für alle sechs Teilkonzepte. Besonders bemerkenswert ist das in sich runde Energiekonzept, welches beispielsweise die Installation von intelligenten Stromzählern in rund 10.000 Wohnungen im Märkischen Viertel vorsieht. Das Konzept der GESOBAU besticht darüber hinaus besonders durch seinen umfassenden Beteiligungsansatz, der mit der energetischen Sanierung um eine zukunftsfähige Komponente erweitert wird. Der Beteiligungsansatz wird geprägt durch Integrationsprojekte wie die Nachbarschaftsetage, die ein breites soziales Angebot zur Verfügung stellt, die Infobox im Märkischen Viertel, die Bewohner und Bewohnerinnen über geplante Sanierungsmaßnahmen informiert, sowie durch vielfältige Netzwerke der sozialen und bürgerschaftlichen Akteure im Viertel. Der Wettbewerbsbeitrag der GESOBAU dokumentiert, wie in einer Großwohnsiedlung mit einer großen Bandbreite wohnungswirtschaftlicher Herausforderungen Klimaschutz und zukunftsfähige Quartiersentwicklung effizient und innovativ betrieben werden können.

III.

Examples for climate protection: ExWoSt research field Energetic urban renewal in the states of Brandenburg and Saxony-Anhalt

ExWoSt Energetic Urban Renewal

Pilot projects targeting three ***objectives at the same time***

- Energy saving,
- Increase of energy efficiency,
- Production and use of renewable energies

Practical test consists of ***two stages****:*

- the follow-up of the ***integrated urban development plan (ISEK)*** developed under the program of urban redevelopment in the East which now deals with the energy issue in the context of the other issues of urban development and urban planning,
- the ***implementation of practical measures*** derived from the concept and the results of which are measurable

ExWoSt Energetic Urban Renewal

Cities involved in the research project added as a reference projects from the „old“ federal states: Marburg on the Lahn

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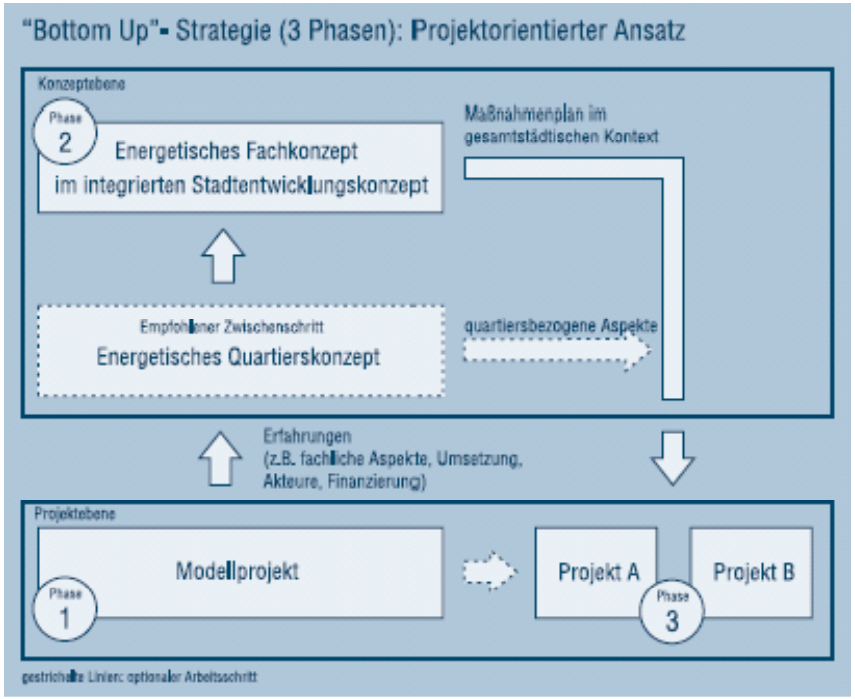
ExWoSt Energetic Urban Renewal

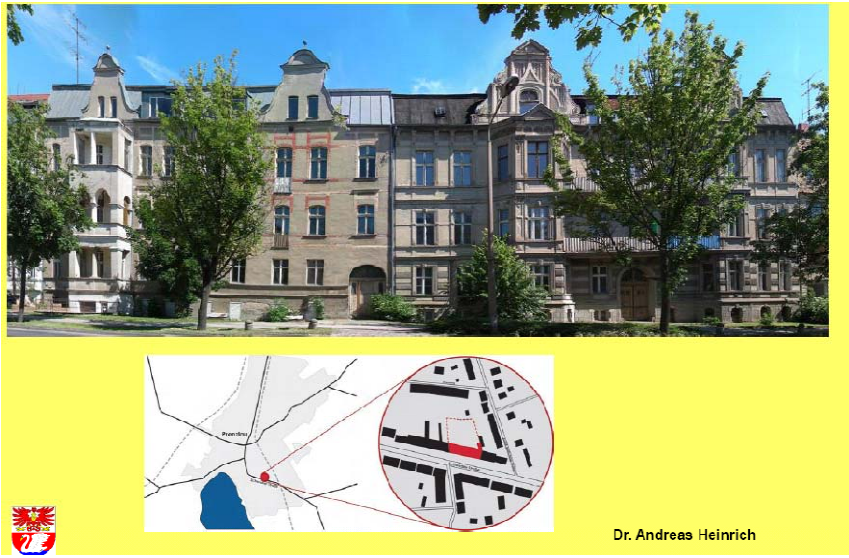
Possible strategic approaches: "Top down" and "bottom up"

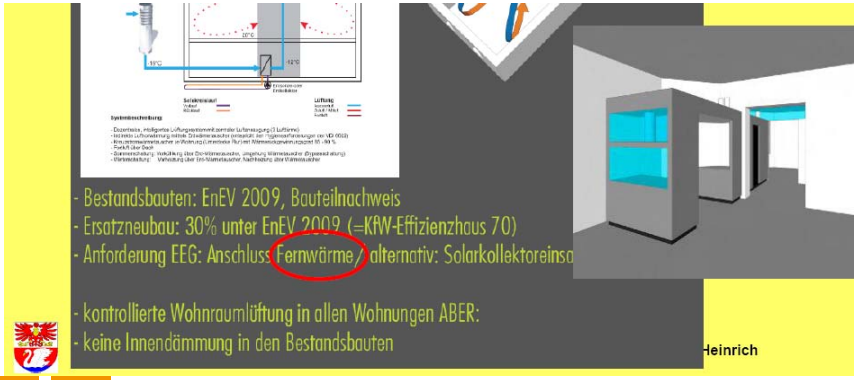


ExWoSt Energetic Urban Renewal

Example: Prenzlau, rehabilitation of Schwedter Str. 25-29

(Source: City Building Council, Dr. Andreas Heinrich, Prenzlau)





IV.

Adaptation to the impacts of climate change

Addressing Climate Change - Adaptation to Climate Change Impacts (Adaptation)

German Adaptation Strategy (DAS):

- Reduce vulnerability to climate change consequences
- Maintain and/or increase the adaptability of natural, economic and social systems
- Use potential opportunities
- Adaptation Action Plan (Spring 2011; 'living document')

Integrated approach - Joint action by all stakeholders:

- Identify risks /detect needs for action
- Define goals
- Identify and resolve target conflicts / use synergies
- Develop and implement adaptation measures

Integrated Concepts- Exchange and Co-ordination

Internal and cross-functional networking / consideration:

- Change processes (e.g. climate change, demographic change, social segregation, etc.)
- Geographic levels (region, town, neighbourhood, building)
- Sectors (e.g. water management, nature conservation, land use / urban planning)
- Stakeholders (from research, politics, business, local government, etc.)

⇨ Involvement of citizens (particularly of private owners)

⇨ Keyword: Public Relations

Practical Research (ExWoSt) - Urban Strategies on Climate Change

Research Priority 1:

Municipality / region

- Planning area, city, neighbourhood
- Ensure infrastructure
- Services of general interest / health
- Water supply / w. w. disposal

Research Priority 2:

Real estate and housing industry

- Tailored project development and real estate management
- Integration of regional, urban & district planning
- Value conservation / value increase (real estates)

- Economic efficiency / financing
- Infrastructure and real estate risk management
- Co-operation / networking with other stakeholders

Insights ⇨ further development of the German adaptation strategy

Practical Research (ExWoSt) - Urban Strategies on Climate Change

- Objective: Obtain knowledge from developing and testing integrated mitigation and adaptation approaches
- Accompaniment of 5 to 8 pilot projects (spring 2010 to spring 2012)
- Main topics include
  - Risk management
  - Impact on the real estate investment cycle (cost/income calculation for an average cycle of 30 years)
  - Impact on property valuation (when applying or not applying adjustment measures)
  - Investor-user dilemma (transferability of costs to users)
  - Requirements for procedural law / incentive design (challenge and support)

Practical Research (ExWoSt) - Urban Strategies on Climate Change

Municipal strategies and potentials - Selection criteria for pilot projects, duration

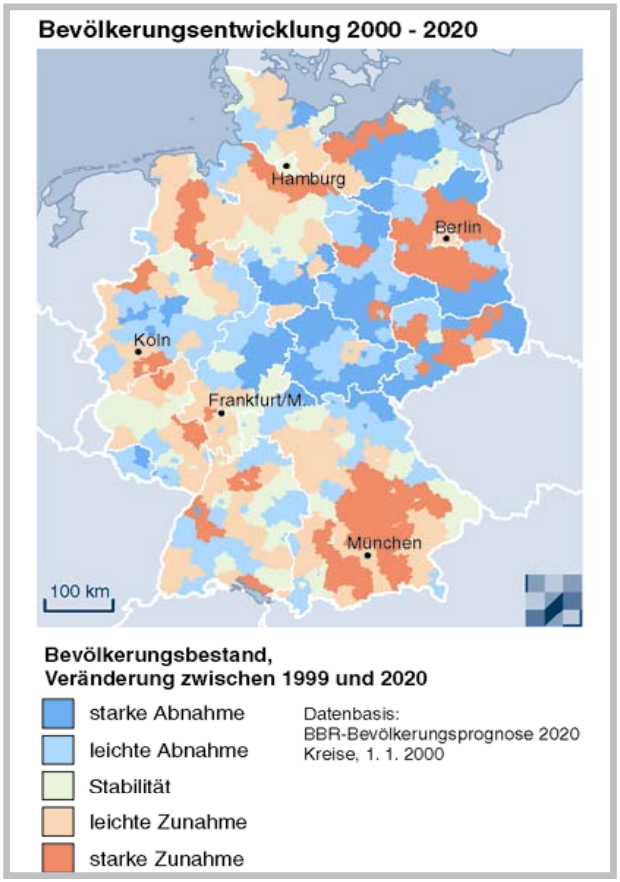
Criteria include:

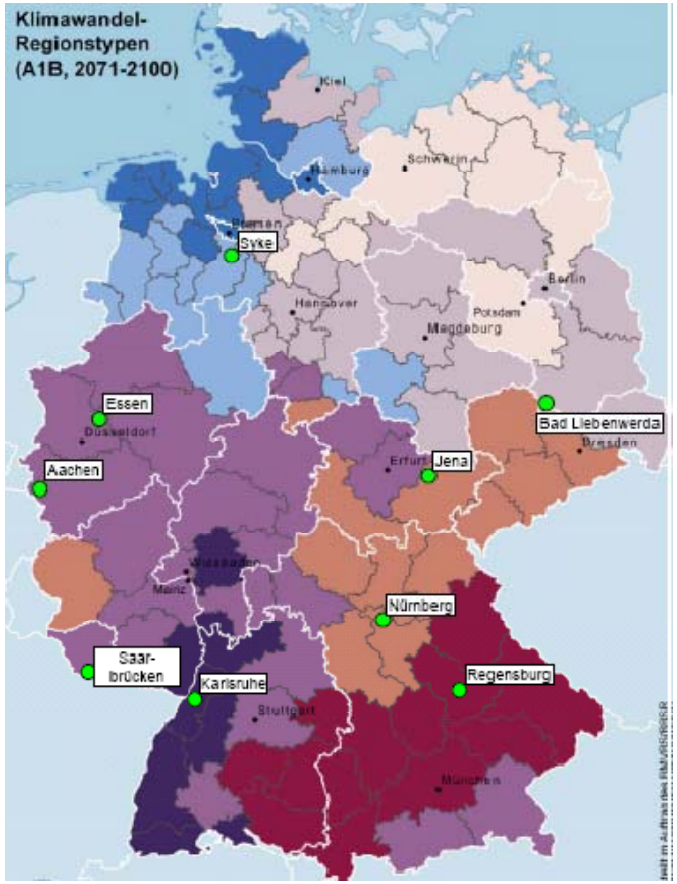
- the integration of climatic adaptation into the overall urban / regional development strategy
- intensive involvement of stakeholders,
- the application and further development of the support instrument DSS

Duration of pilot projects: December 2009 to spring 2012

Regional Trends and Challenges

Figure sources: BBSR



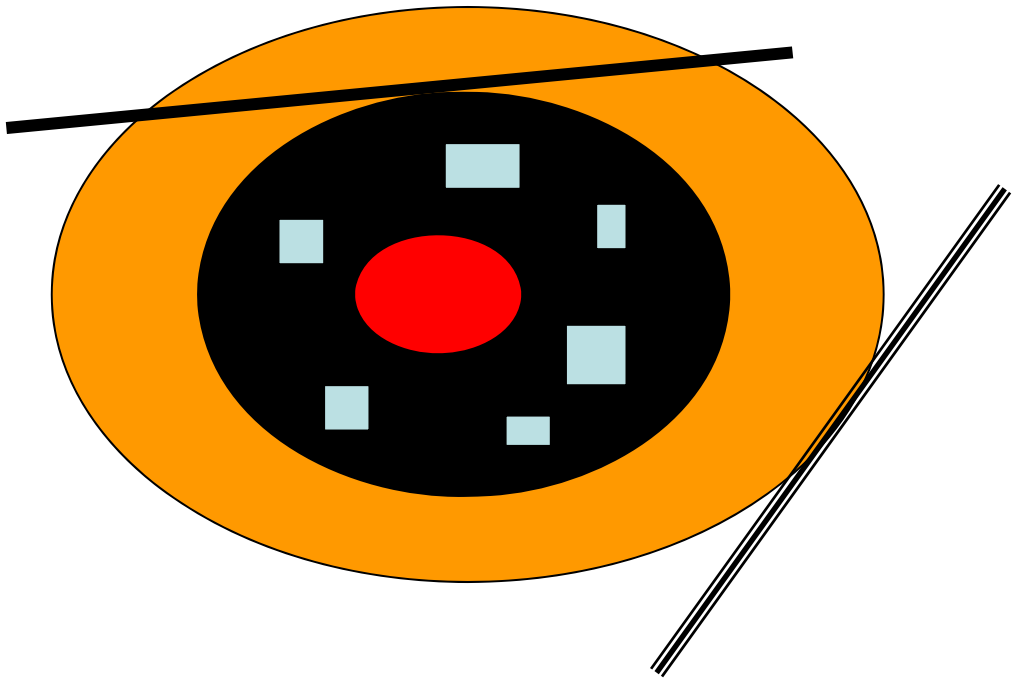


Regions of active growth are generally more affected by climate change than shrinking regions!

Model Discussion: The Compact City

Approach to the problem of climate change in the light of Experience gained from urban redevelopment: if nothing is done, we will face the following threats:

- Risk of fragmentation of urban structures
- jeopardizing of neighbourhoods developed at the beginning of last century



Model Discussion: The Compact City

- Dismantling in urban redevelopment opens up new opportunities in urban development to recover urban qualities, e.g. by creating new green areas which might also serve as cold air corridors or cold air generation areas
- Conceptual misunderstandings: this is **not a "perforated city"!**

Model Discussion: The Compact City

- The term **"perforated city"** in the context of urban redevelopment is understood as the phenomenon, where old buildings are dismantled prematurely due to incidental vacancy, often resulting in hasty redevelopment projects, where little consideration is given to consequences for the micro-climate, e.g. by using those areas as (sealed) parking space.
- A forward-looking municipal urban development policy in such cases aims at temporary uses (cf. „Wächterhäuser" in Leipzig)
- Not only in conditions of shrinking urban development politics should also provide opportunities for more quality by landscaping, redeveloping courtyards etc.

Model Discussion: The Compact City

A compact European city and a climate-friendly city are not a contradiction, but **two sides of a coin**!