

How to Adapt to Climate Change

Overview of Strategies and Instruments

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Overview



- What are the impacts of climate change?
 - Who is affected by climate change?
 - What can be done?
- ≡ What adaptation options are already implemented or discussed?
 - ≡ Background
 - ≡ Various examples for adaptation options
 - ≡ What can we learn from examples?

Study background and objectives



≡ Background from other Studies within ASTRA

- Little is done (for exceptions: see other presentations)
- Climate change is a secondary issue
- Mitigation has more focus than adaptation
- Stakeholder framing hinders structuring adaptation needs
- Expressed need for training, awareness raising and knowledge transfer

≡ Objectives

- What's going on somewhere else in the world?
- How can we systematize it?
- What can be transferred to the BSR?

Climate alliance

- ≡ Bottom-up network of ca. 1400 mainly European cities and associated members
- ≡ Forum and voice of cities: Campaigns, exchange of project ideas and links, conferences and workshops
- ≡ Small central office (10-20 persons), yearly assemblies; financed by members
- ≡ Mitigation focus, but adaptation increasingly discussed; one consultant for adaptation in central office

≡ www.klimabuendnis.org

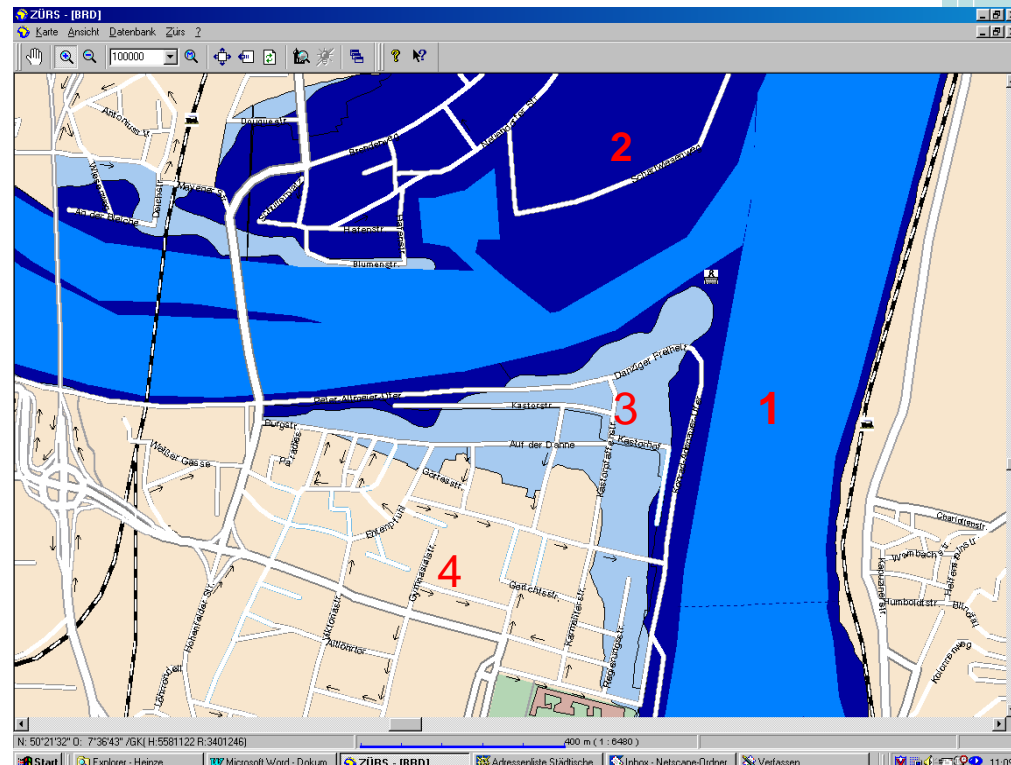


ZÜRS



- ≡ Zoning system for flooding insurance
- ≡ Developed by Gesamtverband der Deutschen Versicherungswirtschaft (Association of German Insurances)
- ≡ Zone 4: HQ10
- ≡ Zone 3: HQ10 – HQ50
- ≡ Zone 2: HQ50 – HQ200
- ≡ Zone 1: rest
- ≡ Base for insurance rates

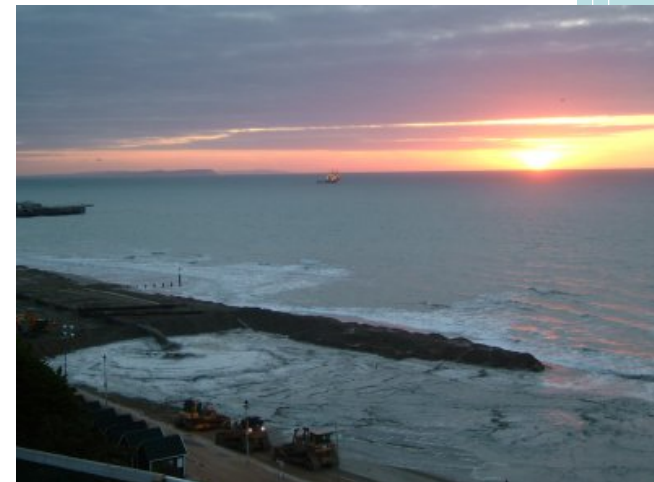
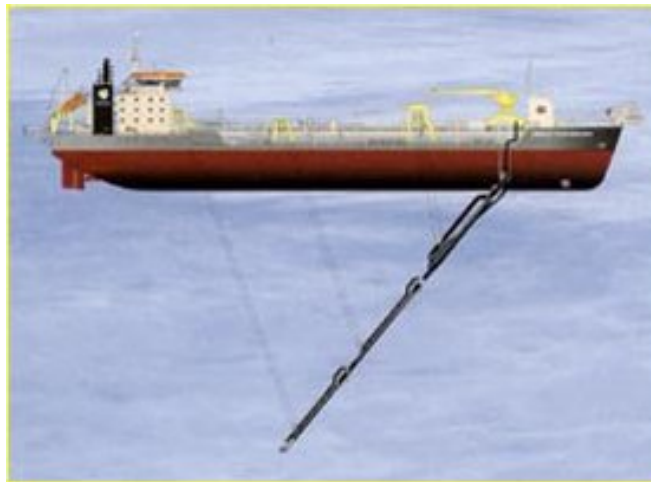
≡ www.gdv.de



Poole Bay beach replenishment



- ≡ Community-based action in Poole (South England)
- ≡ Greater rainfall in winter and rising sea level may lead to more sediment in river/harbour, whilst beaches suffer from erosion
- ≡ Material dredged from harbour is used to replenish different beaches; performed by a commercial dredger
- ≡ <http://www.poolebay.net/>
- ≡ <http://www.boskalis.co.uk/>

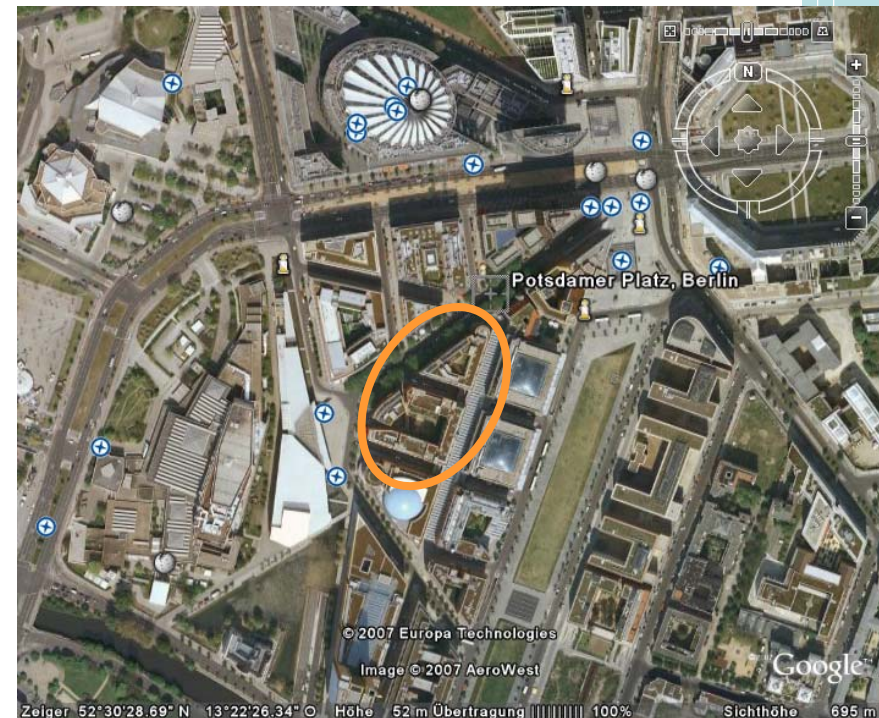


Rooftop greening

- ≡ Urban adaptation towards growing heat stress (urban heat islands) due to climate change: green roofs as a natural air conditioning
- ≡ City council of Tokyo guidelines on urban construction obliges to build roof gardens on new houses

≡ Technology Review online 5/2007

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ASSCUE Adaptation Strategies...



- ≡ ... for the Urban Environment
- ≡ Ongoing UKCIP study with case studies in Greater Manchester and Lewes
- ≡ Buildings, urban greenspace, human comfort
- ≡ Developing and testing tools for vulnerability assessment
- ≡ Strategic planning and urban design



≡ www.ukcip.org.uk

Norfolk floodproof houses



- ≡ Prototype house shows how residents in flood-risk areas can reduce, resist and recover from flooding
- ≡ Realized by Norfolk County Council within a research project in cooperation with a private company
- ≡ Flood guards at the door / Main appliances raised on plinths / Perishable materials replaced with ceramic tiles / New kitchen sockets and telephone and TV points raised above possible water levels / flood alarm system / pump-and-sump system etc.

- ≡ www.floodresilienthome.co.uk

*Making your home flood resistant
and resilient*



**NORWICH
UNION**
an AVIVA company

A greener, greater New York



- ≡ PlaNYC launched by Mayor Bloomberg, embedded in general sustainability initiative
- ≡ Creation of an intergovernmental task force to protect the city's infrastructure against climate change impacts
- ≡ Working with vulnerable neighbourhoods to develop site-specific strategies
- ≡ Launch a citywide strategic planning process
- ≡ Funding about 100 Mio. \$ (San Francisco ca. 20 Mio. \$)

- ≡ [/www.nyc.gov/html/planyc2030/](http://www.nyc.gov/html/planyc2030/)

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The Plan



Focusing on the five key dimensions of the city's environment — land, air, water, energy, and transportation — we have developed a plan that can become a model for cities in the 21st century

Queensland Government portal for climate change



- ≡ Provision of information on climate change
- ≡ Initiation of public discussion
- ≡ Development of policy criteria
 - Sharing knowledge
 - Manage risks
 - Deal with uncertainties
 - Policy consistency
 - Collaborative partnership
 - Enabling action
 - Monitoring of progress

- ≡ <http://www.epa.qld.gov.au/>

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Women protect the climate...



- ≡ ... - women demand climate protection. "Our message to politicians".
- ≡ Photo campaign launched by a German NGO
- ≡ High attention by the media is currently emerging
- ≡ www.genanet.de

Frauen schützen das Klima – Frauen fordern Klima
Foto-Aktion am Internationalen Frauentag, 8. März, 11:30 – 14:30 Uhr
Unsere Botschaft an die Politik
Berlin-Mitte, 11.30 – 14.30 Uhr



- ≡ So, you've seen some examples for adaptation...
- ≡ ... but there are much more, ...
- ≡ ... and they are very diverse.

- ≡ But what shall we do
 - not loose overview,
 - to select what fits best,
 - and to design own options?

Adaptation as (collective) action



≡ Who acts?

- Individual / local / regional / national / European / global
- Private / public / civil society

≡ Acting upon/with what?

- Other actors (distinctions as above)
- Physical objects or processes
- Areas or environments

≡ With which normative orientation?

- e.g. profit / public responsibility / policy success / security

Intention and means of adaptation options



≡ With which means?

- Physical / legal / administrative / financial / communicative / educational / participative / other options

≡ With what intentions?

- Direct: change damage costs or resilience directly at the exposure unit
- Enabling: setting conditions for direct action or damage cost distribution (e.g. planning regulations, insurance)
- Operational: concurrent or permanent procedures (e.g. monitoring, information services)
- Preparative: setting the stage, preparing or planning other actions (e.g. awareness raising, setting long-term targets)
- Harmonizing: comprehensive strategies and interfaces with other policy sectors

Conclusions

- ≡ Good news: there is a broad variety of existing or potential adaptation options
- ≡ Bad news:
 - it is nearly impossible to get a complete overview
 - particularities hinder a simple transfer
- ≡ “Collective action frame of reference” as toolbox
- ≡ Assessing the toolbox needs practical experience

Thank You for Your Attention!



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