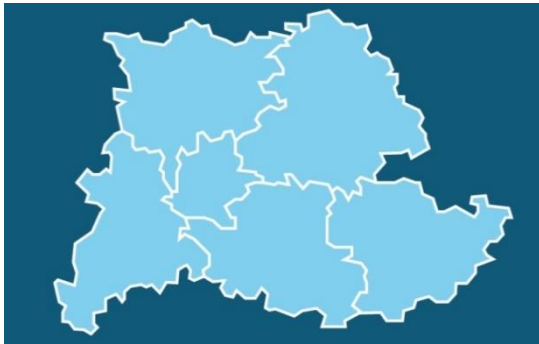

IURC – Technical Meeting # 1 - 19 JAN 2022

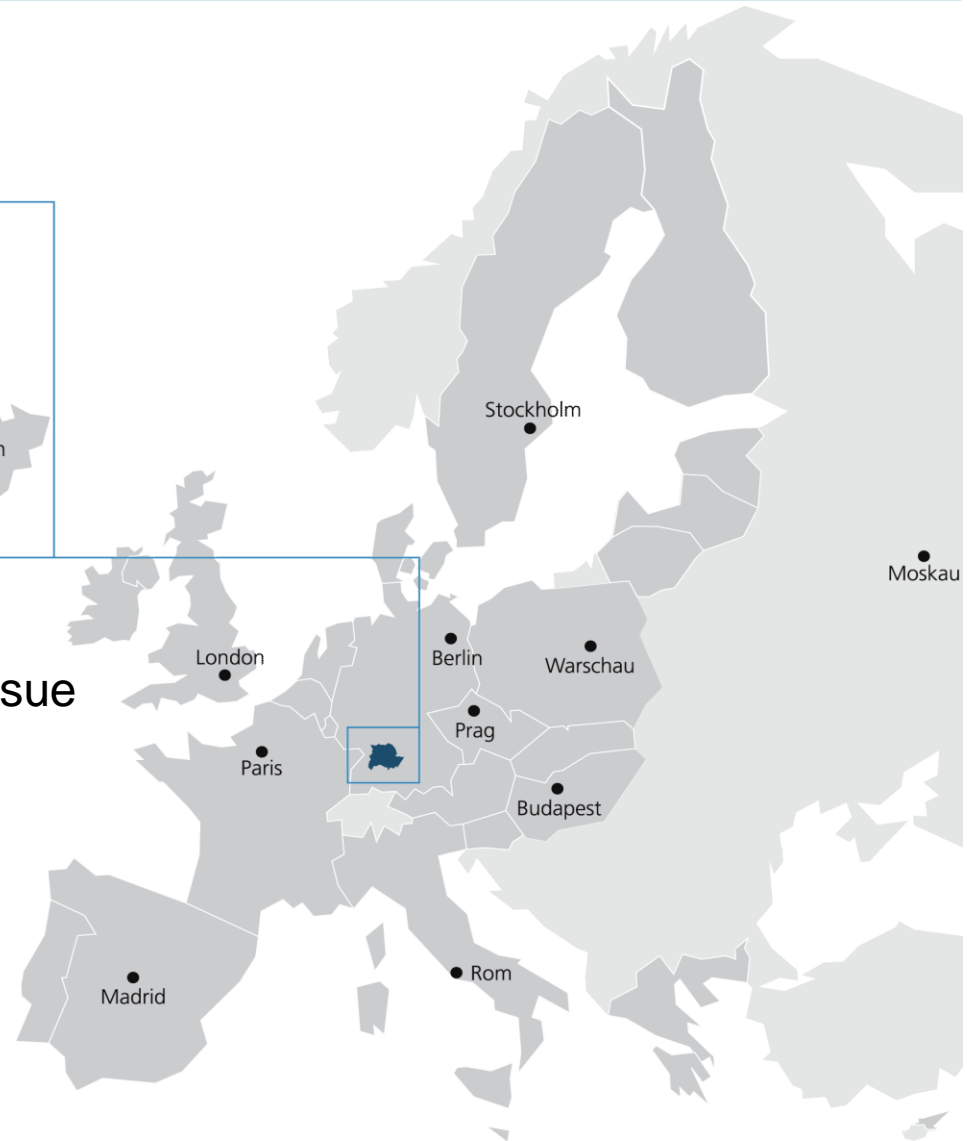
Climate Change – Adaptation in Stuttgart Region



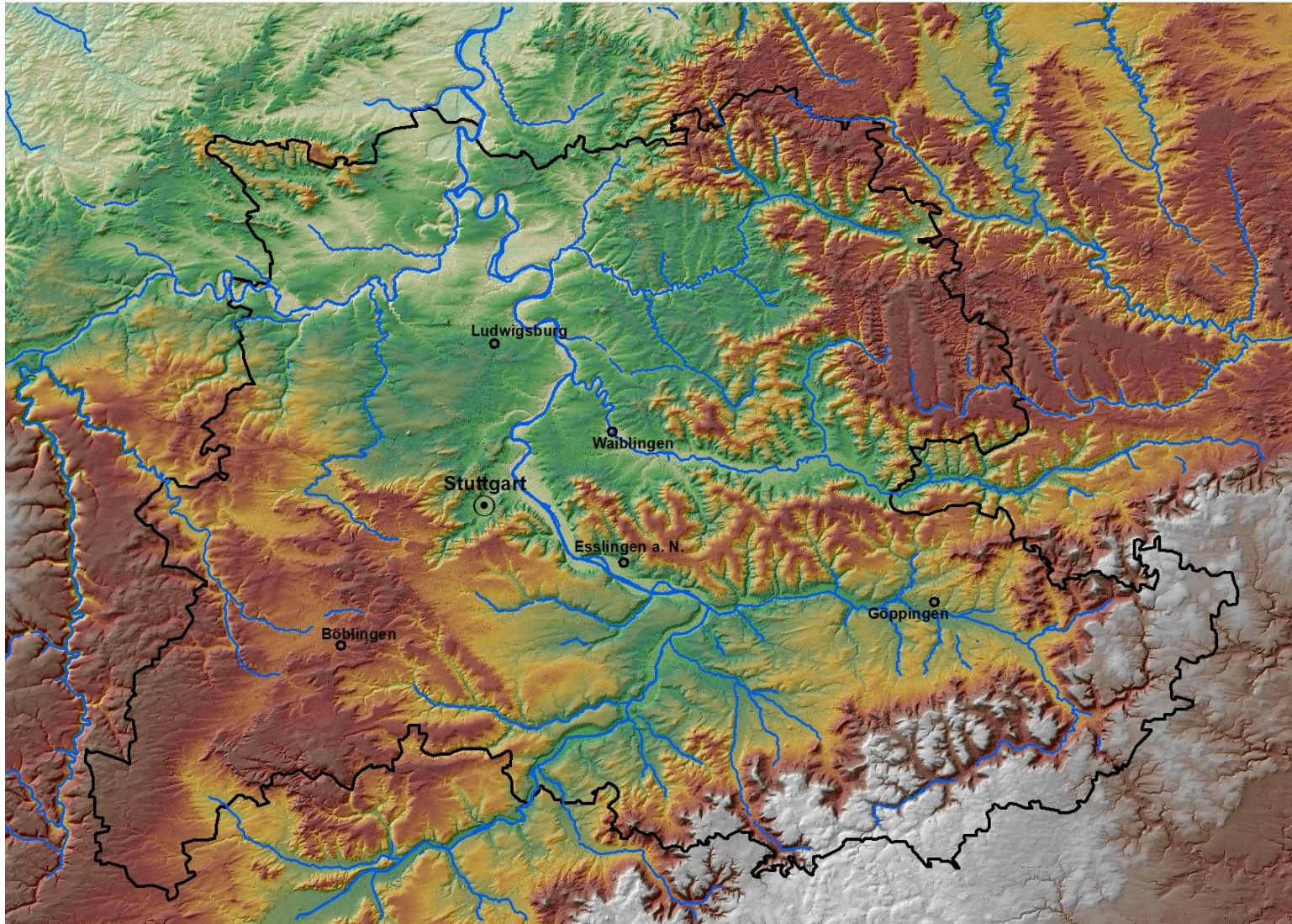
Stuttgart Region: Land-locked but not safe



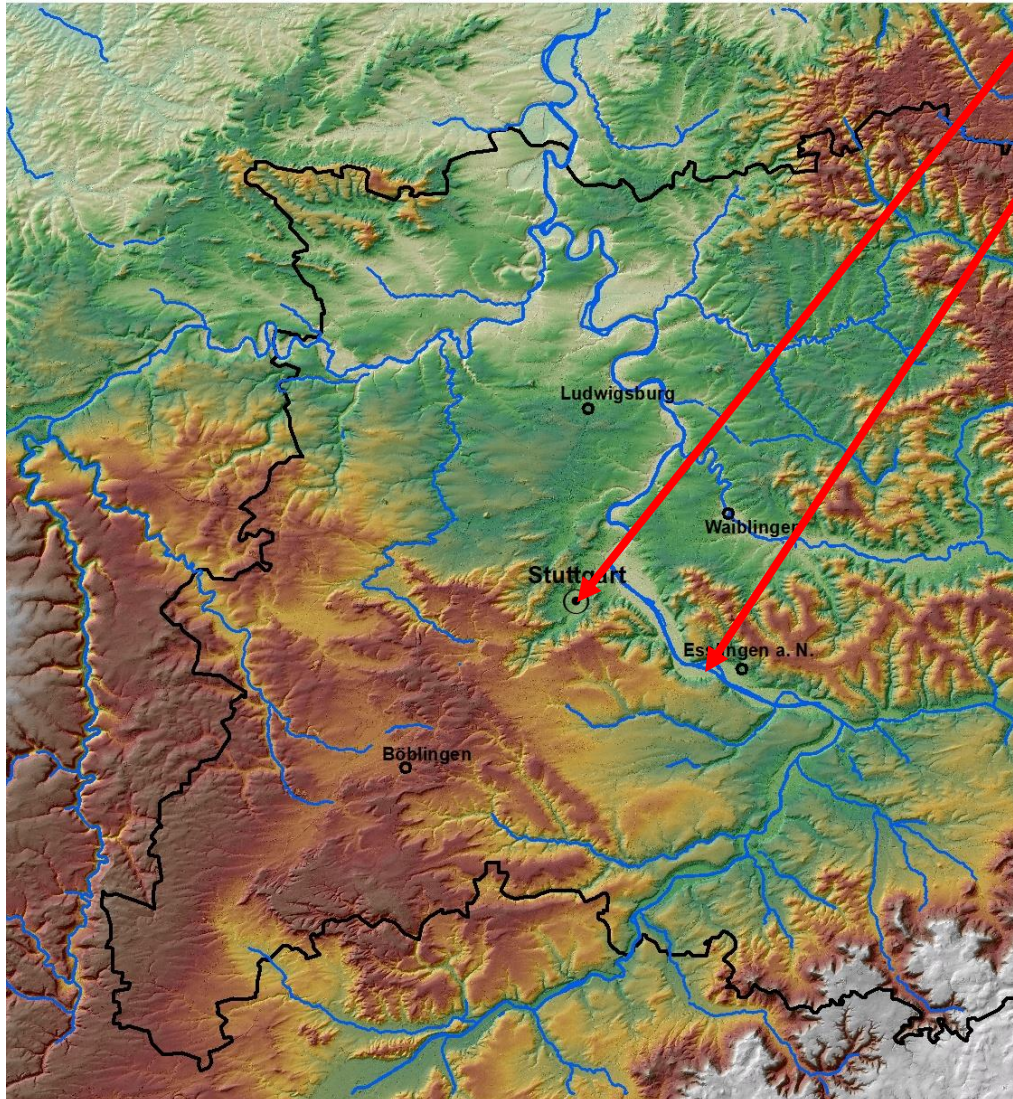
- » Rising sea-level no immediate issue
- » More rain
- » Higher temperature
- » More extremes:
Heavy rain, heat waves



Risks by topography



Risks by topography – floods and flas-floods

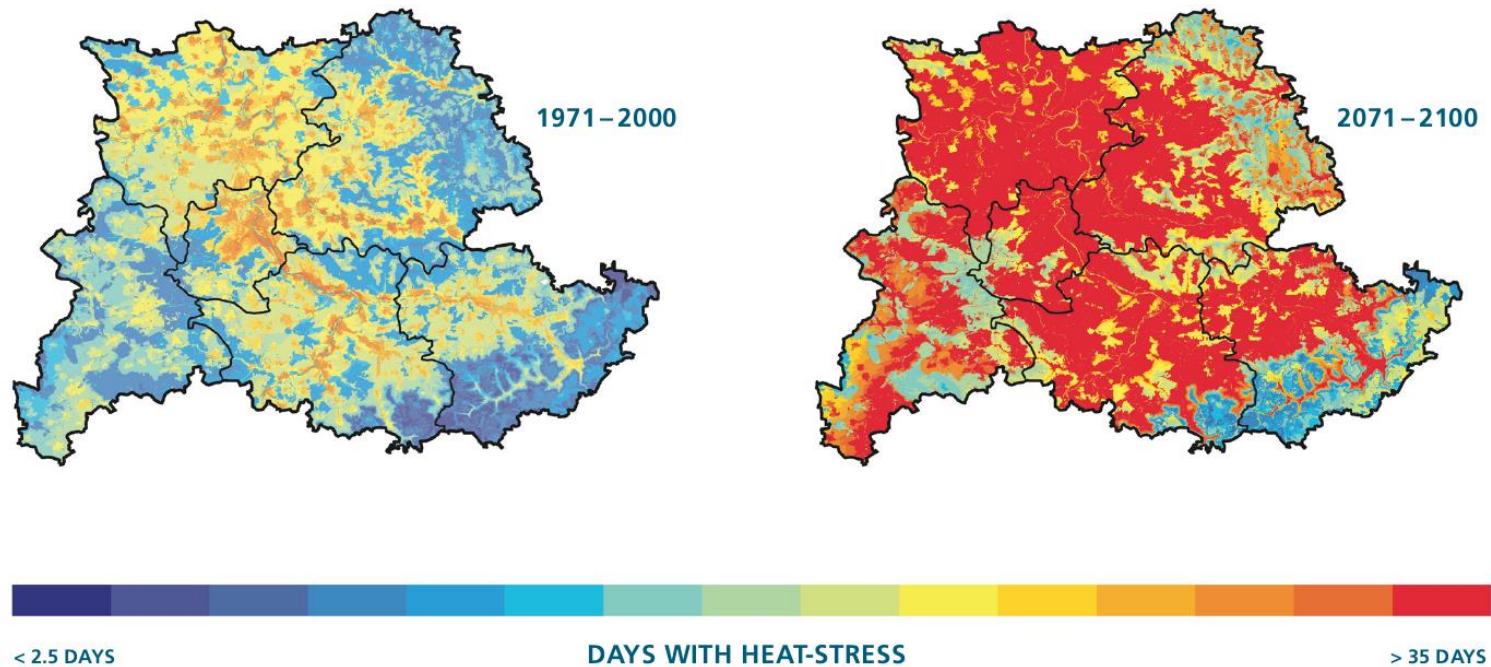


- » Urban core in caldera (“bowl”)
- » Main infrastructure along rivers – prone to flooding
- » Many industrial facilities close to rivers (historical use of hydro-power)

2 types of hazards

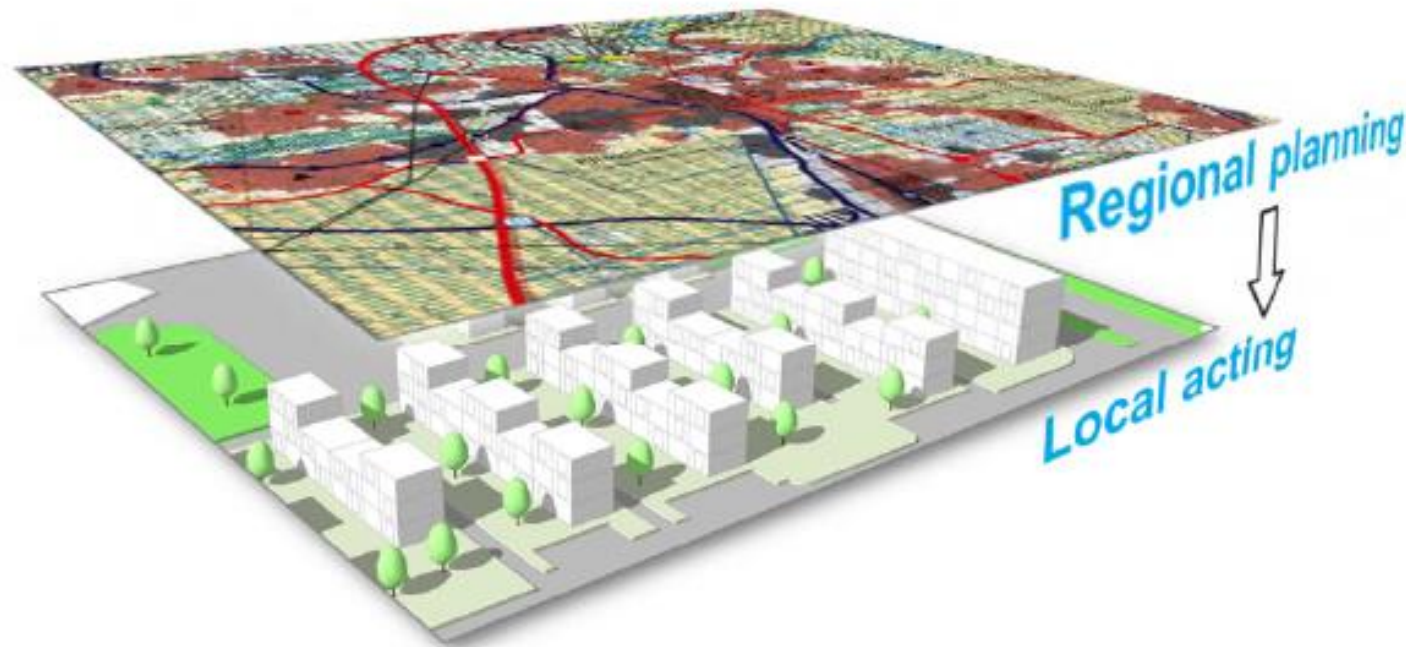
- » Flooding along rivers
- » Flash-floods caused by heavy rain + high density / sealed soil + topography
- » Safety, functionality, economy at risk

Heat waves as a challenge



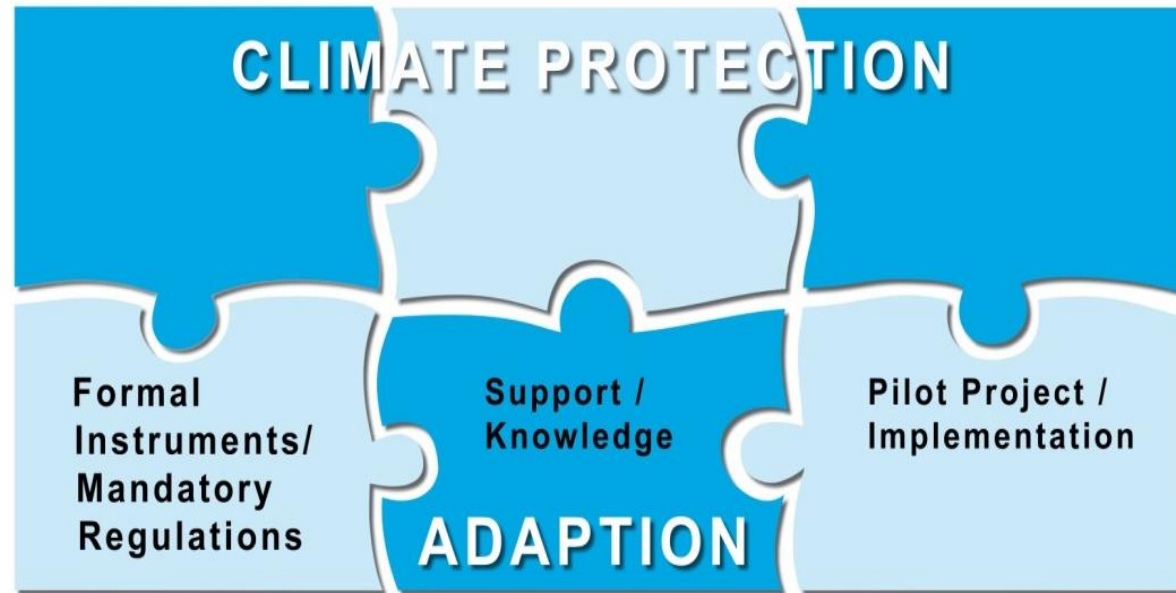
- » More day with heat –stress
- » Air – flow restricted by topography
- » Urban design for moderate climate – cities not capable
- » Comfort, quality of life, health issues – locational factor / image

Coordinating local action



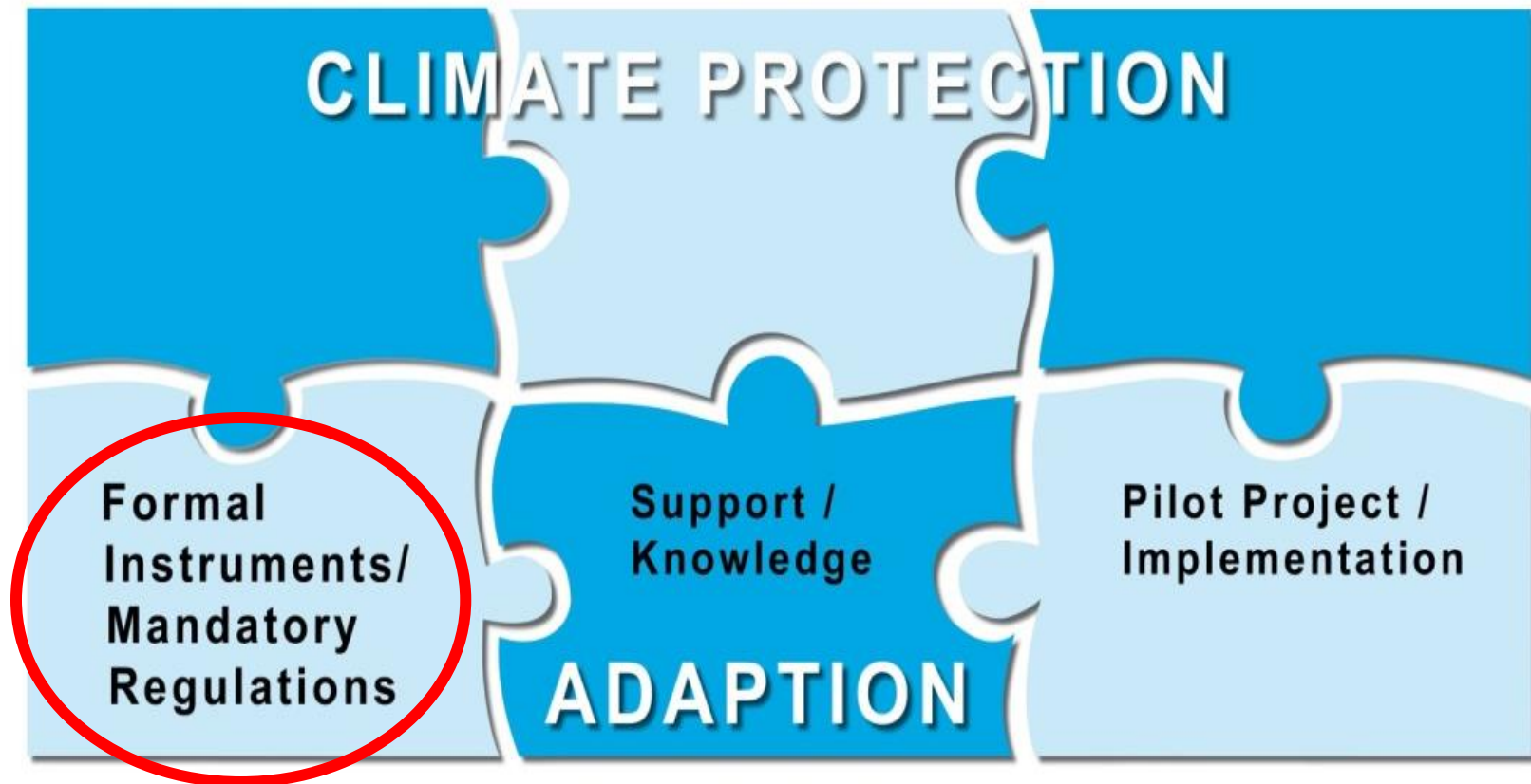
- » Water, air, climate: independent from administrative borders
- » 179 Municipalities –with a strong home rule
- » Land-use planning and zoning is local
- » Coordination is important for sustainable development

Stuttgart Region's adaptation strategy: Joining forces between administrative levels

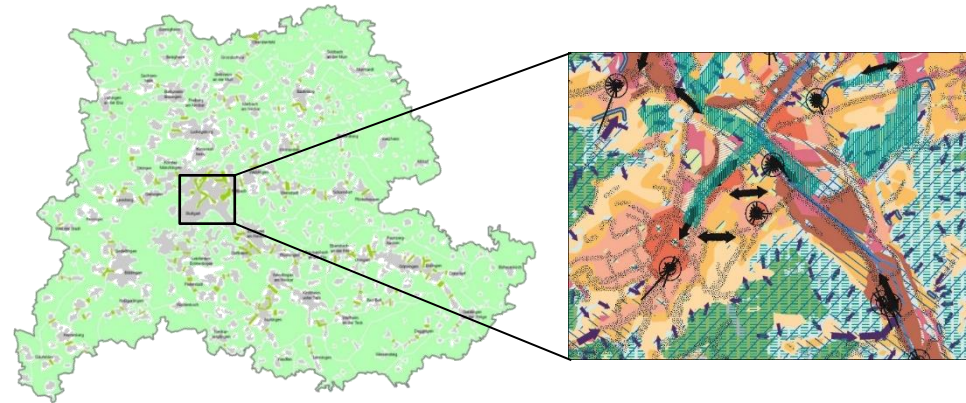


- » Climate protection + adaptation: both trigger actions
- » Use of all instruments / competences available
- » From legally binding to support and incentives
- » Bridging the gap between regional and local level
- » 3 instruments:

1: Formal (Planning-)Instruments

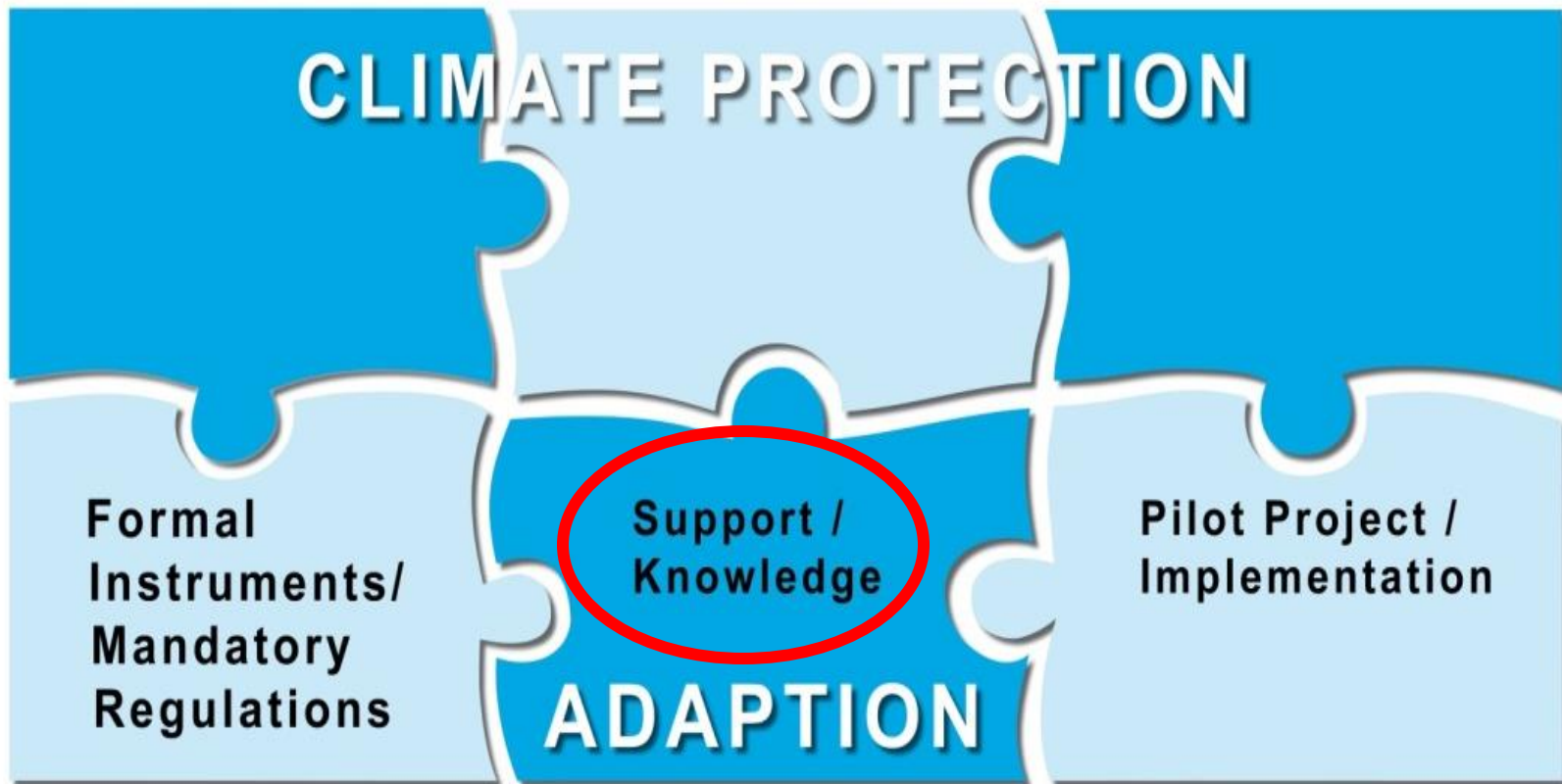


Planning and mandatory regulations



- » Protection of areas prone to flooding
- » Protection of areas relevant for cooling air or air flow
- » Concentration of urban development along transit axes
- » Binding for local land-use plans
- » Protected areas: No zoning/buildings - strictly enforced - few exceptions
- » Vice versa: areas for safe development

2: Information / Knowledge



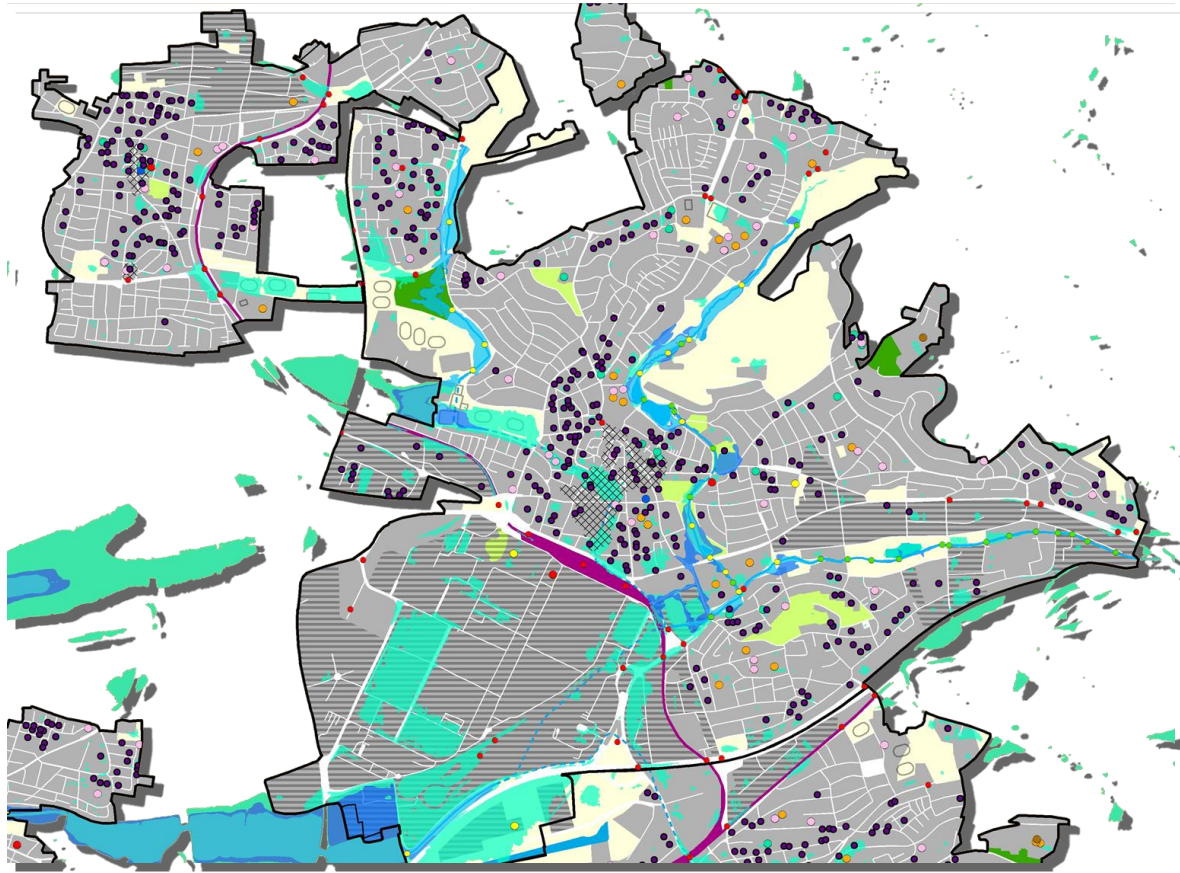
Information for all levels (planning and action)



- » Climate atlas as crucial document and reliable database - introduced in 2008
 - » Base for awareness and policy consultancy
 - » Most relevant questions: What to expect? What to do?
 - » Regional scale – but sufficient for local land-use-planning
 - » Free of charge – easy to integrate in planning procedures – more efficient
-

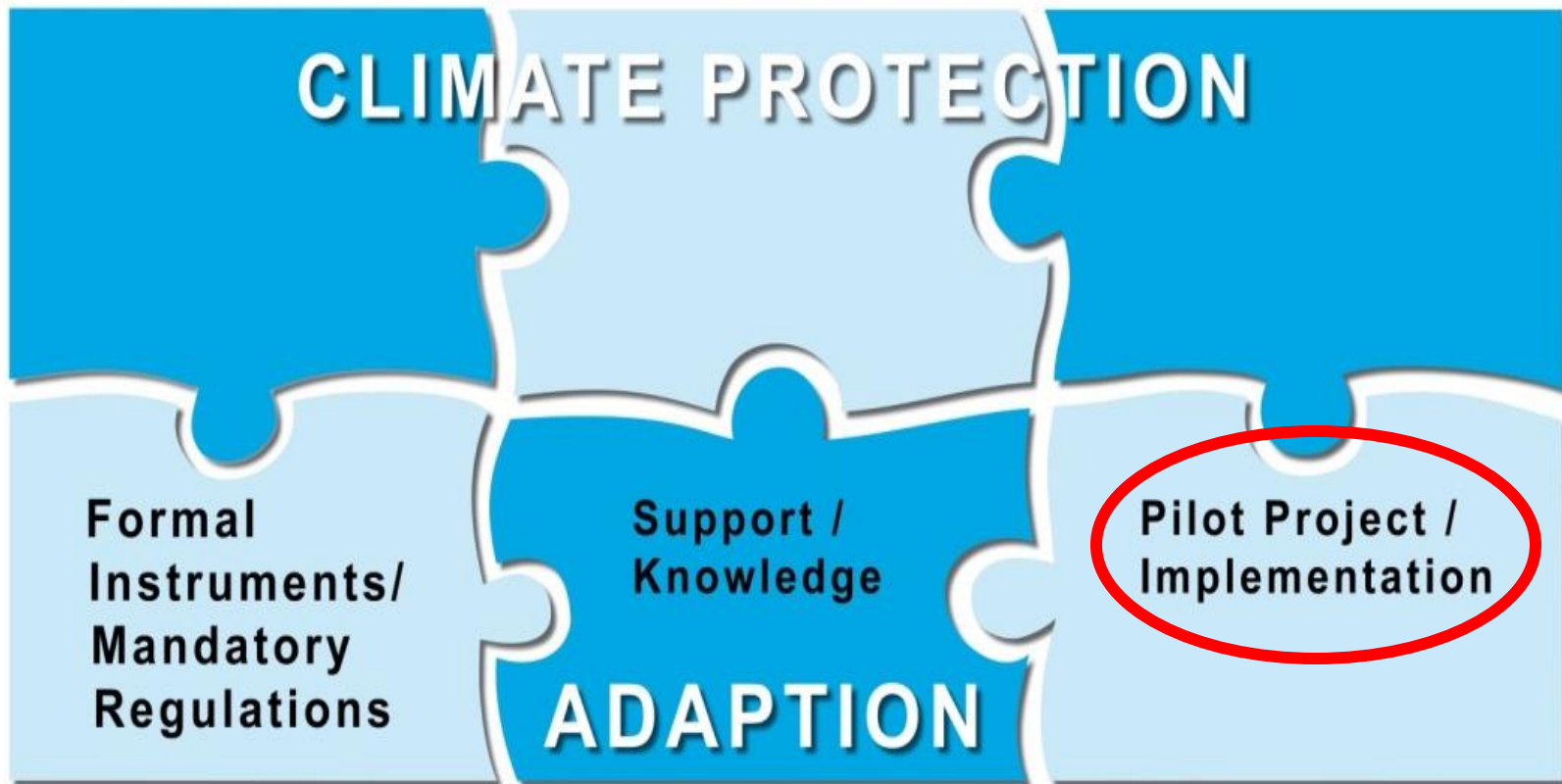
Support for municipalities

Stuttgart

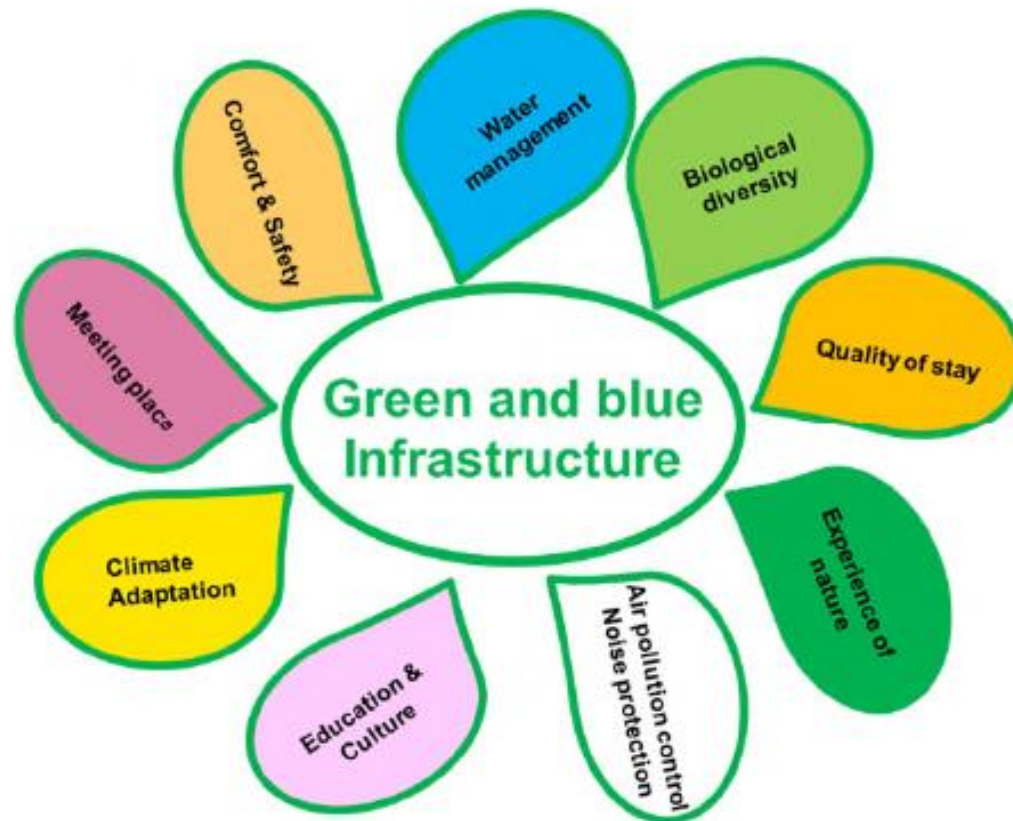


- » Common approach together with counties / municipalities
 - » Close cooperation to integrate local issues
-

2: Information / Knowledge



Climate adaptations – as part of integrated open space development



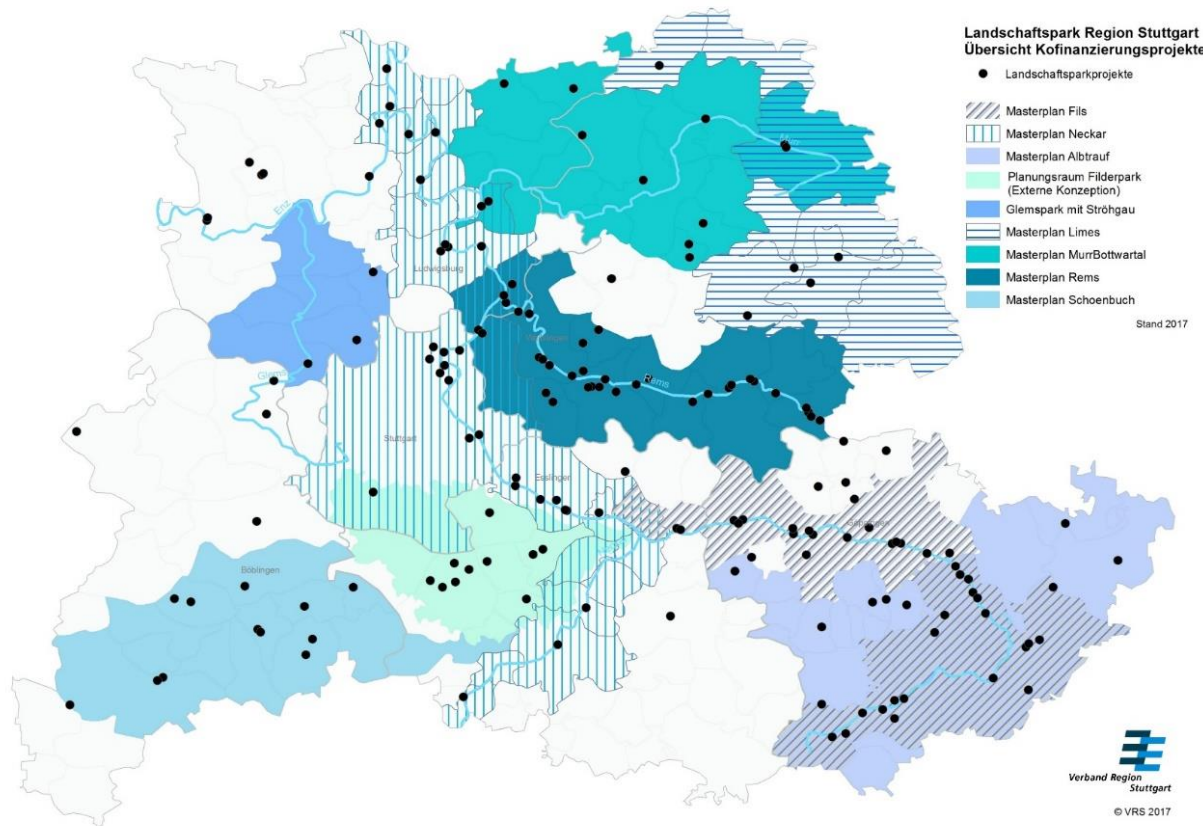
- » Limited options for open space development in metropolitan areas
- » Multi-functional approach for adaptation

Multifunctionality: water retention, recreation, ecological enhancement



- » e.g. Wetlands for flood control + biodiversity + recreation
- » Efficient use of land + financial resources

Implementation through Green infrastructure: Stuttgart Region Landscape Park



- » Master-plans for green infrastructure – planning together with municipalities
- » Co-financing of multi-functional green infrastructure projects:
Financial support for municipalities

Small scale solutions: „Green living room“ vs. Urban heat island effect

- » EU-funded pilot project in cooperation with City of Ludwigsburg: Implementation of an “urban comfort zone”
- » Example for retrofitting of dense urban zones
- » Experimental self-supporting structure
- » Scientific support and monitoring
- » Open for public use – highly accepted



Climate Planning approach in a nutshell

- » Metropolitan areas are drivers for the economy
adaption secures the quality of life and has to be integrated in actions that strengthen the competitiveness of a region
- » Climate adaption has to be part of an integrated development strategy
– on all administrative levels but coordinated on regional level!

Crucial components:

- » Decision-making with democratic legitimation - agenda setting is important
 - » Utilising full potential of competences
 - » Coordinating with mandatory instruments
 - » Providing data and counselling to raise awareness and to capacitate municipalities
 - » Supporting implementation by funding / fund-raising assistance
-