

WORKSHOP – round table 1

Management of water issues in the adaption plans

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Watermanagement

Positioning of Styria in Austria

Two climates:

North: Alpine climate

South-East:
Pannonic influence

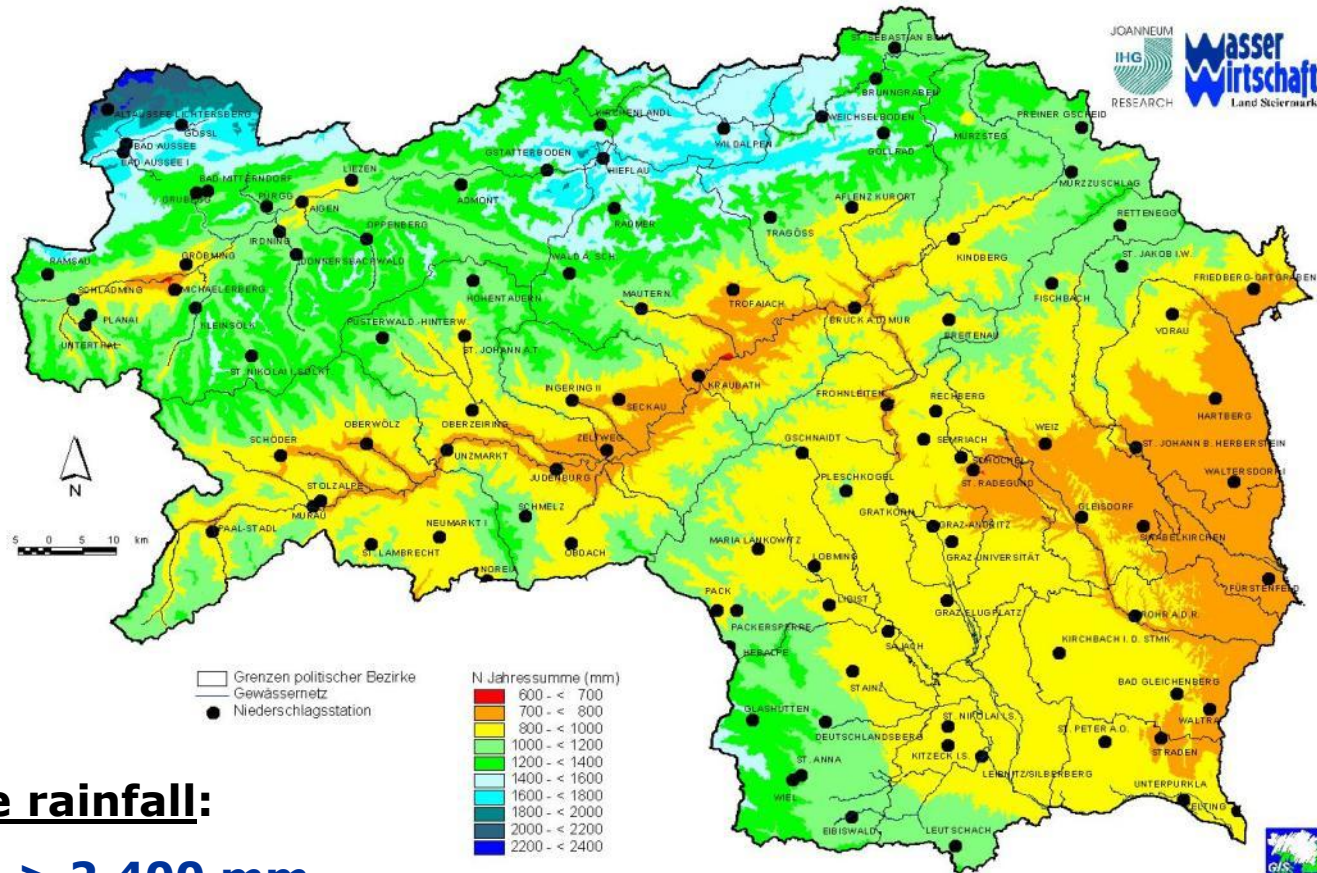


Inhabitants: 1,2 Mio. (A: 8,3 mio. – 1,7 % of EU)
Surface (km²): 16.392 km² (A: 83.871 km²)



Das Land
Steiermark

Rainfall map for Steiermark (different distribution)



Average rainfall:

- North: > 2.400 mm

- South: < 700 mm

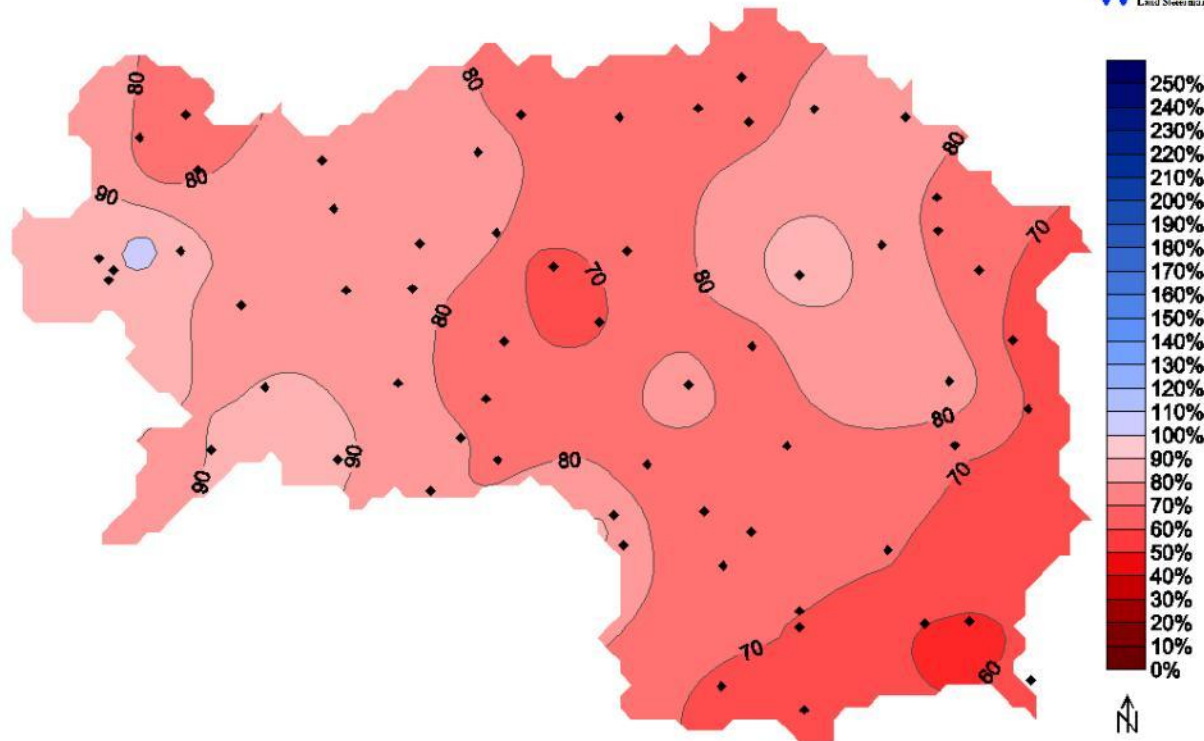
Mittl. Jahresniederschlag 1971-1995 (Wasserversorgungsplan Steiermark)



Das Land Steiermark

Situation 2003

Relative Niederschlagsmenge im Jahr 2003



(prozentueller Anteil am Normalwert 1951-1995)

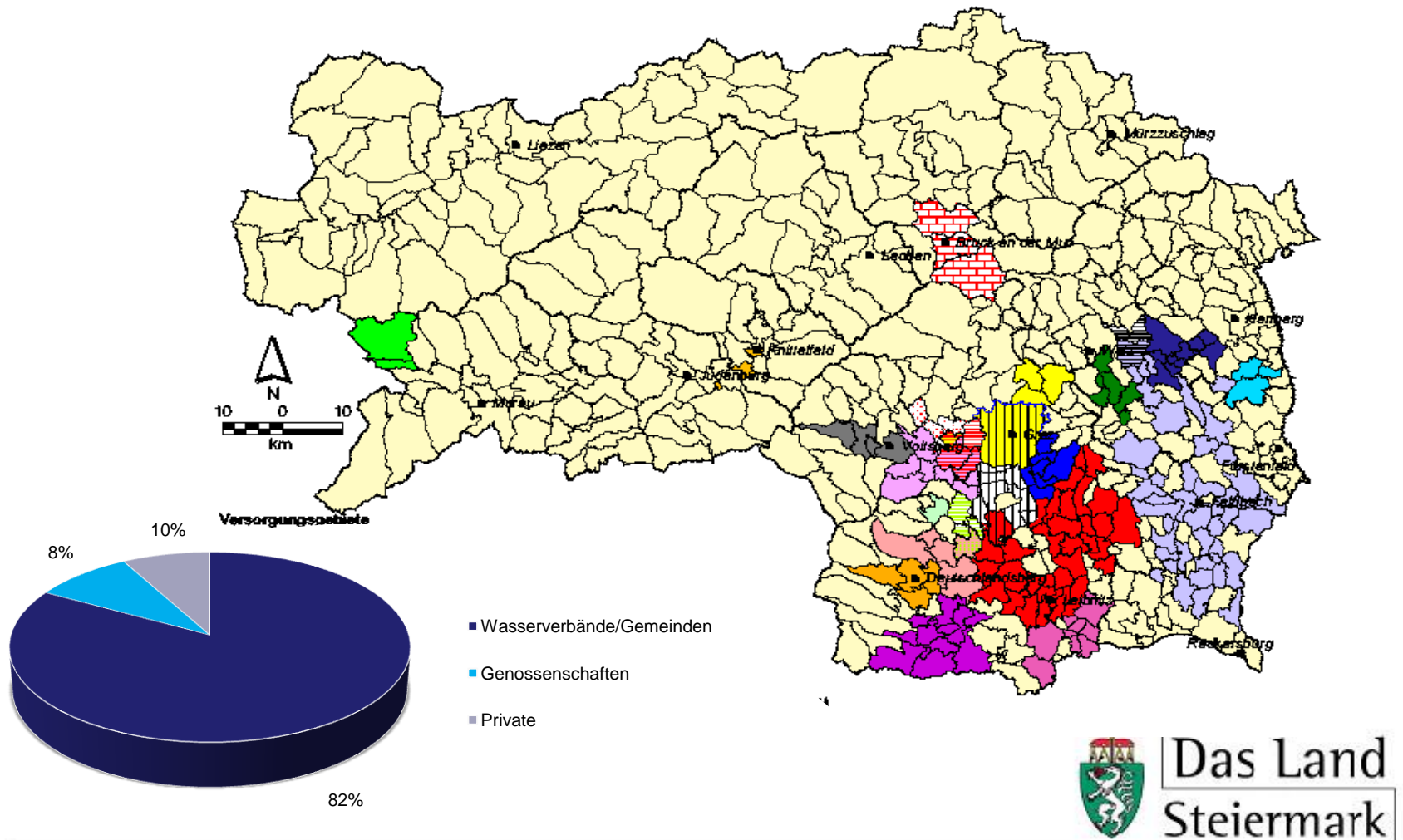
Grundlegenden z.T. noch unkorrigiert

Hydrografischer Dienst Steiermark



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Organisation of water supply in Styria



Drinking water supply in Styria

Climate Change – adaption strategie

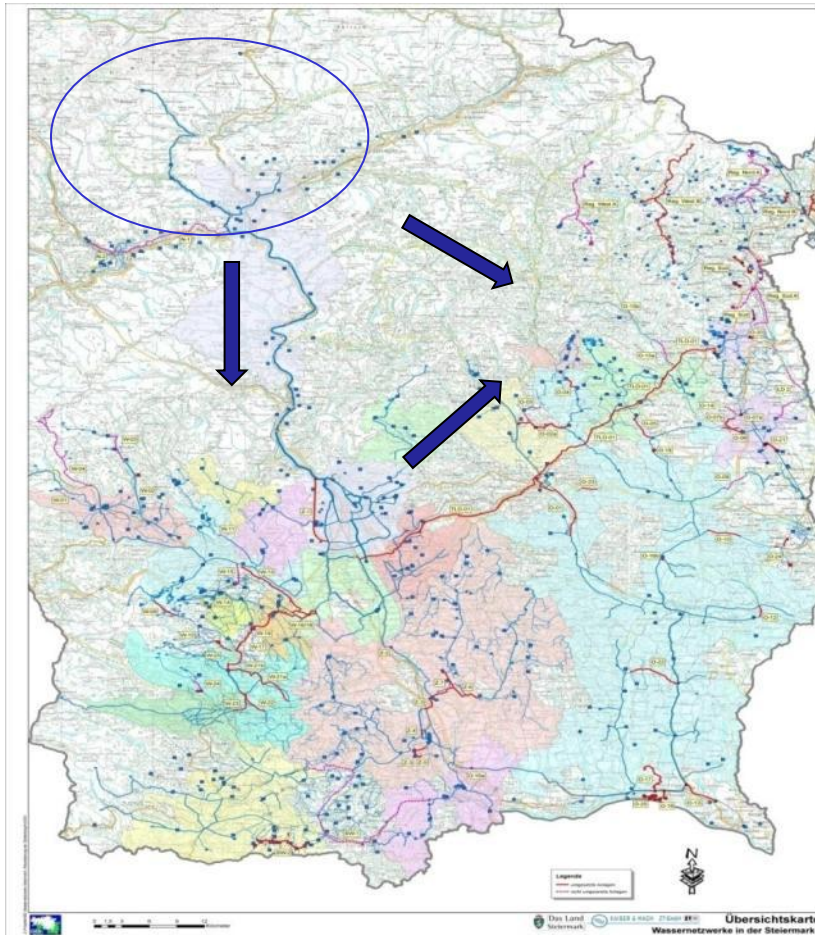
- Balance between watery and arid regions (waternetwerk Styria)
- Safeguarding of resources – measures against depletion (e.g. groundwater protection)
- Improvement of groundwater regeneration (e.g. utilisation and management of rain water)
- Retention of water for agricultural use (irrigation)

Water network Styria as prevention



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Waternetwork Styria



rd. 58 particular measures

- Connection lines
- Transport lines
- buildings

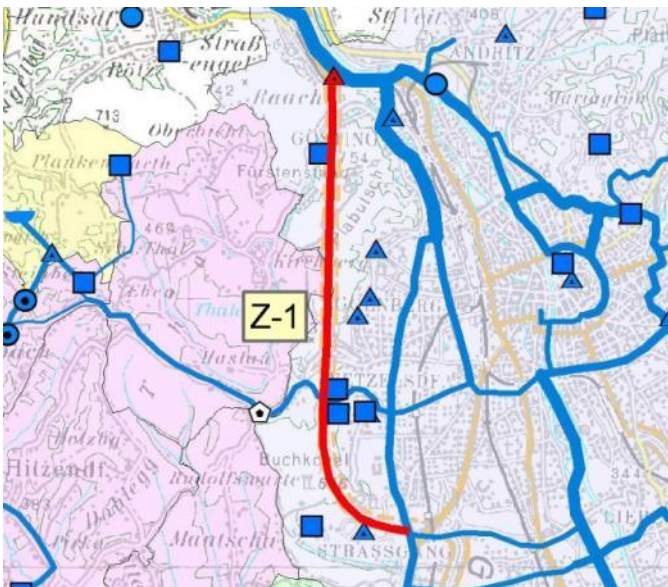
Total investment:
about € 60 Mio.



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Plabutschleitung

- construction: about 10 km transport line through the highway tunnel in Graz
- discharge: 200 l/sec
- cost: € 3.000.000,00



Flood protection Styria

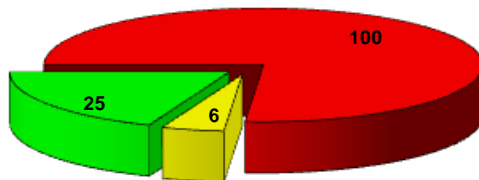
Climate Change – adaption strategie

- At the moment no additional data due to CC by the design of flood protection measures (no climate factor)
- Planning bearing in mind all actual available data
- Transposition of the FD (including CC aspects)
- Strategy: strengthen water retention
 - active: retention basins
 - passive: room for the rivers

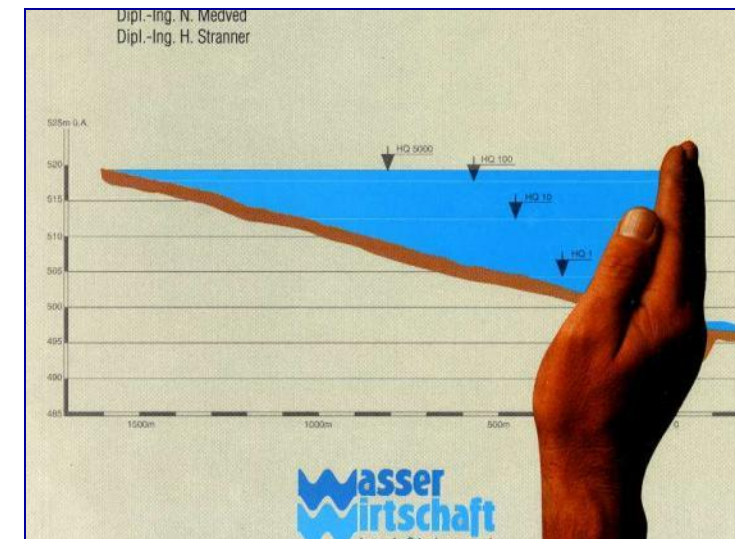
Flood Retention Basins at present:

- 108 basins are in use (+ 30 in torrential areas)
- 6 basins are under construction
- 25 basins are in their planing phase

Rückhaltebecken 2010

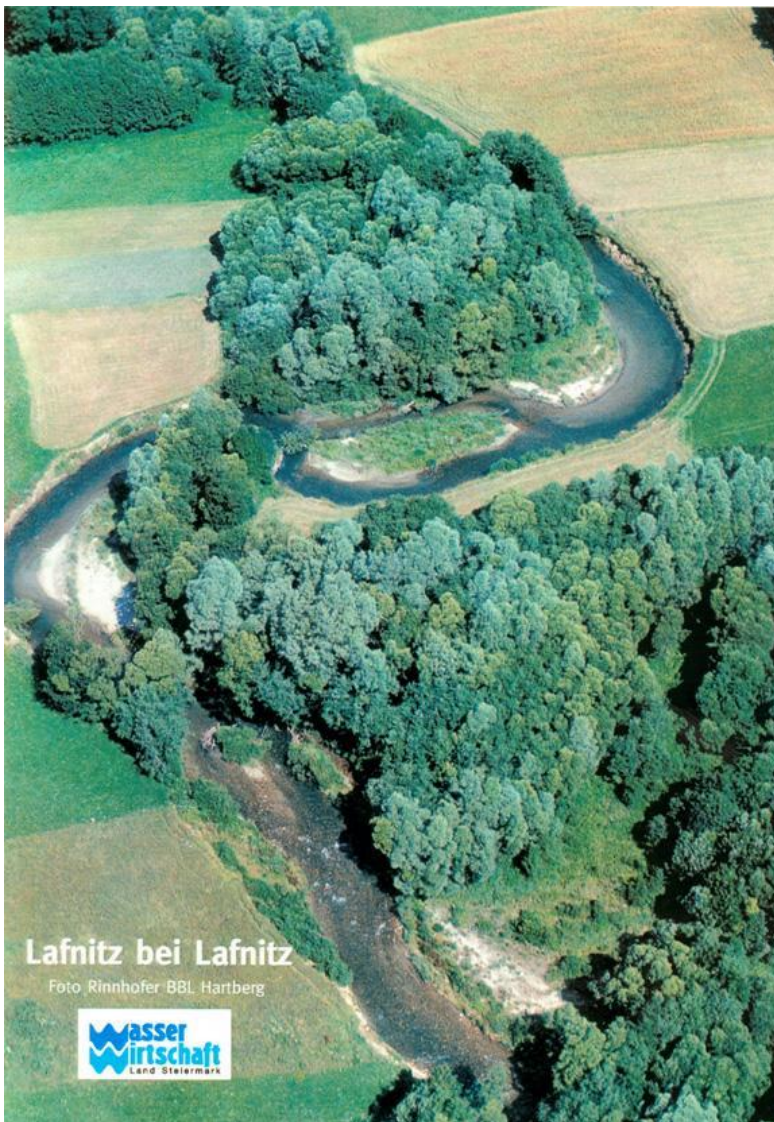


■ in use
 ■ under construction
 ■ planing



1990: 24 RB - Retentionvol. rd. 4,4 Mio m³
1999: 70 RB - Retentionvol. rd. 9,0 Mio m³
2009: 84 RB - Retentionvol. rd. 15,0 Mio m³

Capacity of the largest basin: 1,7 Mio m³



Room for the rivers

Ecological and
structural aspects

Protection of
retention areas



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Climate Chance

To have a good visibility
it is sometimes sufficient
to change the viewing
direction

Monitoring

Public relations to raise
awareness for water

Considering the national
Austrian strategy



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