



# AMICA – mitigation and adaptation in Upper Austria

## status quo and outlook

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# Cc-policy in Upper Austria

1991 member of Climate Alliance

1994 first climate alliance report of UA members; biannual reports

1994 regional organisation of Climate Alliance

1996 first climate report of Upper Austria

1997 co-ordinator for cc of all nine provinces

2000 commissioner for cc in UA; special biannual cc action programs (in addition to thematically concepts)

2002 flooding event: adaptation-work-groups

2004 annual climate reports in May and September in the provincial parliament

2004 political co-ordination fixed in the work-program of the provincial government for the period 2004-2009



# important responsibilities in respect of cc (mitigation and adaptation)

building codes (legal standards for energy demand and heating systems, support schemes for private people)

transportation (public transportation, cycling)

spatial planning (legal framework, controlling)

support schemes (advice services, grants, voluntary agreements) for different target groups



Status quo:

**Mitigation:**

industrialized region - high energy consumption per capita

high contributions of RES (hydro, biomass)

in total: 12 t CO<sub>2</sub>/ capita

**Adaptation:** comparable high vulnerability caused by Alps



| Region/<br>city                                | nature con-<br>servation | agriculture  | forestry   | tourism   | health                                     | Trans-<br>portation   | buildings   | energy<br>supply            | water<br>supply                         |
|--|--------------------------|--|--|---|--|---|---|-----------------------------|---|
| <b>Influence of<br/>climate<br/>parameters</b> | Temperature<br>raise (t) | Temperature<br>raise (t)<br>Hail (ha)<br>Flooding (fl)<br>Drought (dr) | Temperature<br>raise (t)<br>Storm (st)<br>Drought (dr)<br>Forest fires<br>(ff) | Temperature<br>raise (t)<br>Overheating<br>(ov) | Temperature<br>raise (t) -<br>new diseases | Flooding (fl)<br>Avalanches<br>(av)<br>Mud-slides<br>(ms)<br>Drought (dr) | Overheating<br>(ov)<br>Flooding (fl)<br>Sea level rise<br>(slr) | Storms (st)<br>Drought (dr) | Drought (dr)<br>Sea level rise<br>(slr) |
| Netherlands/<br>NL                             | L-L-L                    | L-L-L  | L-L-L  | L-L-L   | L-M-L                                      | L-L-L   | L-H-L   | L-L-L                       | L-M-L                                   |
| Lübeck/D                                       | L-L-L                    | L-L-L  | L-L-L  | L-L-L   | L-M-L                                      | L-L-L   | L-M-L   | L-L-L-                      | L-M-L                                   |
| Dresden/D                                      | L-M-M                    | M-H-M  | L-H-M  | L-M-L   | L-M-L                                      | L-H-M   | M-M-L   | L-M-L                       | M-H-L                                   |
| Stuttgard/D                                    | L-M-M                    | L-M-L  | L-M-L  | L--L-L  | L-M-L                                      | L-M-L   | L-M-L   | L-M-L                       | L-L-L                                   |
| Munich/D                                       | L-H-H                    | L-M-L  | L-H-M  | L-H-L   | L-M-L                                      | L-M-L   | M-M-L   | L-M-L                       | L-L-L                                   |
| Upper<br>Austria/A                             | M-H-H                    | L-M-L  | L-H-M  | L-H-L   | L-M-L                                      | L-H-L   | M-M-L   | L-H-L                       | L-L-L                                   |
| Lyon/F   | L-M-M                    | L-M-L  | L-H-M  | L-M-L   | L-H-L                                      | L-M-L   | M-H-L   | L-H-L                       | L-M-L                                   |
| Venice/I                                       | M-H-H                    | L-M-L  | L-M-L  | L-L-L   | L-H-L                                      | L-M-L   | L-H-L   | L-M-L                       | L-M-L                                   |
| Ferrara/I                                      | M-H-H                    | L-M-L  | L-M-L  | L-L-L   | L-H-L                                      | L-L-L   | L-H-L   | L-M-L                       | L-M-L                                   |

vulnerability actual, in future without and with adaptation measures; L=low, M=medium, H=high



## best practise - building support schemes for private people:

for new buildings: low energy reference number (2007: 50 kWh/m<sup>2</sup>) as minimum standard

retrofitting: coupled with minimum U-values

higher grants for lower energy reference numbers

energy advice service obligatory

grants for RES and district heating – 80% climate friendly installations in new private houses



## best practise-program “rescue the climate”:

umbrella program for soft policies

supports schemes (tools, folders, downloads, grants) for different target groups

pilot projects

networking by voluntary agreements

events, public relationship



# best practise – flooding adaptation program:

385 flood protection project; 60 projects "give the rivers more space"

modern warning systems at rivers

danger zone plans for municipalities

new catastrophe management

including long term measures (KRIMA)

enhanced legal standards (spatial planning, building codes)

folder about catastrophe management in households





## outlook:

gap between trend and target of greenhouse gas emissions in Austria (and Upper Austria) – additional actions necessary

EC building directive

additional RES both for heating and transportation

higher use of district heating and cooling based on wasted heat

a lot of actions have to be done national and international:

internalisation of external costs, taxation of energy

fuel consumption of cars and trucks