



Area Wide Risk Assessment

a good practice example in the Province of the Tyrol

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▲ alpS – Who We Are

R&D centre and consultancy based in Innsbruck/Austria

Topics: natural hazard research and risk management

Focus on climate change adaptation

100+ employees at three locations

100+ partners

20 countries

Official risk management partner of the
State and National Government

ORTIS Risk Management Solutions were
developed and are maintained by alpS



▲ The Tyrol: Facts & Numbers

- ▲ 720.000 inhabitants
- ▲ 279 municipalities
 - ▲ From 60 (Gramais) to 130.000 (Innsbruck) inhabitants
- ▲ 43.000.000 overnight stays
- ▲ 12.648 km²
- ▲ 13% settled area (1645 km²)
- ▲ Located in the Eastern Alps at the important Brenner Pass
- ▲ Lowest Point: 465m
- ▲ Highest Point: 3798m (Großglockner)
- ▲ Strong volunteer system
 - ▲ 32.500 volunteer fire-fighters
 - ▲ 4.200 volunteer red-cross volunteers
 - ▲ 4.100 volunteer mountain-rescue members
 - ▲ 3.000 volunteer water-rescue members



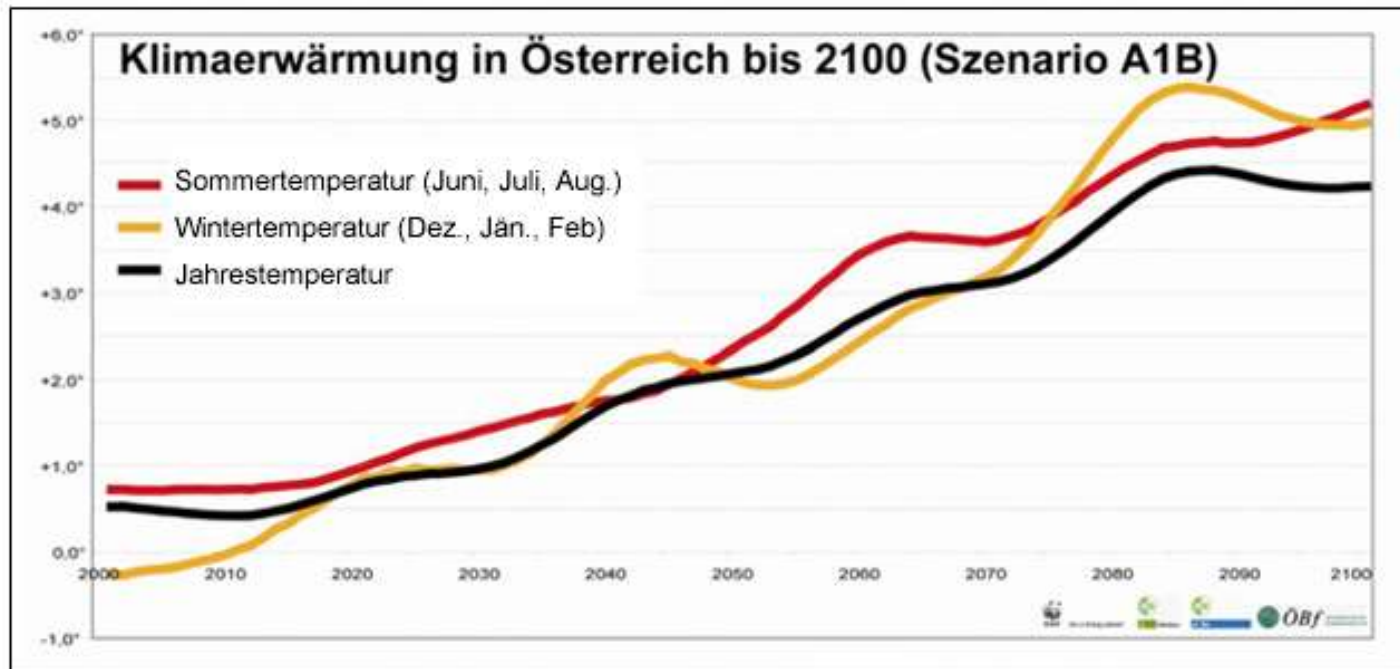
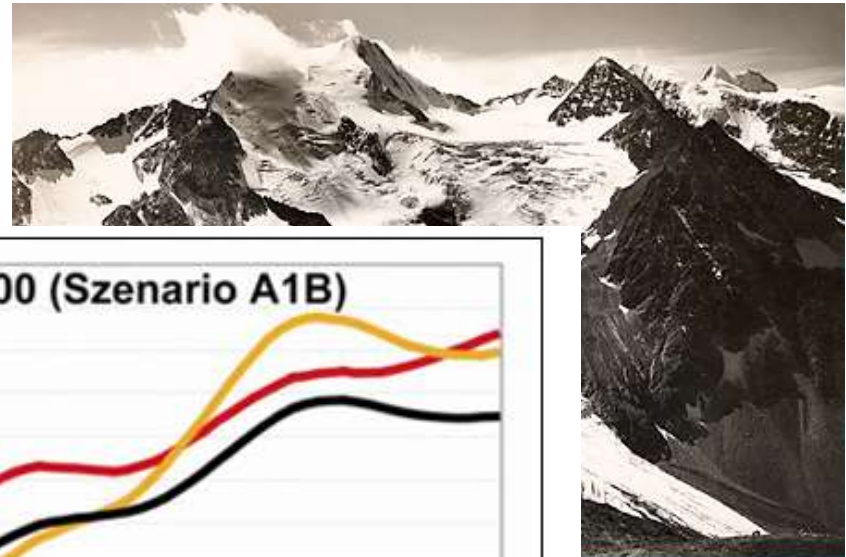
tirol
Unser Land

▲ Main Factors of DRR in the Tyrol (1)

- ▲ More events that can not be handled by emergency units alone
 - ▲ Strong involvement of local emergency management teams
- ▲ Tourism has to be considered in community-based DRR in the Tyrol
 - ▲ Small municipalities -> medium sized cities
 - ▲ Events (Air & Style, Hahnenkamm, Euro 2008,...)
- ▲ Many risks are related to mountains
- ▲ Increasing dependency on technologies
- ▲ Trend to a more risky behavior of local people and tourists

▲ Main Factors of DRR in the Tyrol (2)

▲ Climate Change



Klimaerwärmung in Österreich bis 2100 (basierend auf dem SRES-Emissionsszenario A1B), Institut für Meteorologie, Universität für Bodenkultur Wien



2007

▲ Main Factors of DRR in the Tyrol (3)

Climate Change

▲ Increasing number of events

- ▲ Rock falls
- ▲ Landslides
- ▲ Debris Flows
- ▲ Flooding
- ▲ Thunderstorms/Hailstorms

▲ New risks

- ▲ Drought
- ▲ Fresh Water Supply Disruption
- ▲ Wild Fires
- ▲ Long Term Blackout
- ▲ Extreme Cold Waves

Climate Change as a Challenge in DRR work

- ▲ Downscaling of Climate Models
- ▲ Awareness raising
- ▲ Weather vs. Climate
- ▲ Communication
- ▲ People forget years like 1999

▲ Risk Assessment in the Province of the Tyrol (Austria)

▲ Project “RiMaComm”:

Risk Management for Communities

▲ Initiated by the Provincial Early Warning and Emergency Management Centre

▲ Project Goals

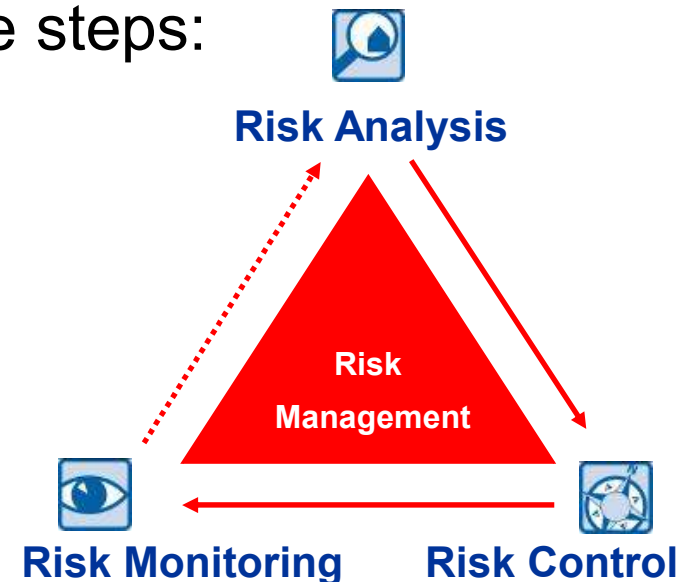
- High quality community-based risk assessment in all 279 municipalities
- Provide tools and services
- Fulfill legal requirements
- Initiate a long-lasting risk management process



▲ Risk Assessment in the Province of the Tyrol (Austria)

Application of the ORTIS approach...

- ▲ Blend of expert- and community-based approaches
- ▲ Cost- and time efficient
- ▲ Multi-risk
- ▲ Local participation
- ▲ Following three simple and applicable steps:



▲ ORTIS Risk Management Tool & Services

▲ The ORTIS software tool

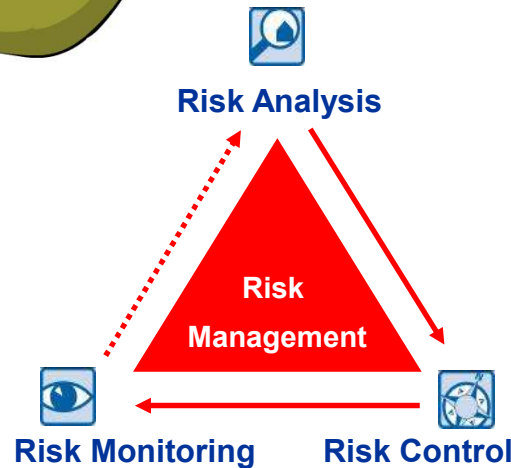
- Developed to **support** the risk management process
- A clearly **structured** guideline and **assists** municipalities
- User-friendly, web-based tool and a **dynamic knowledge repository**
- Offers illustration, visualization and reporting functions



▲ The ORTIS services...

- Workshops
- Cartographic processing and back office
- Personal support throughout the process
- Access to the latest scientific know-how and network of experts
- Access to the results of and international projects

▲ RiMaComm Municipality Workshops

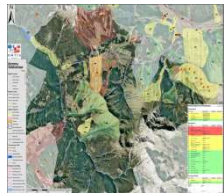
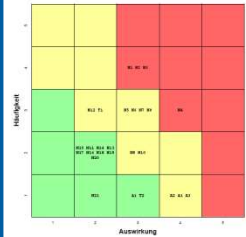


- ▲ Prepared, conducted and moderated by alpS
- ▲ Driven by the municipality
- ▲ Local participation
- ▲ Local experts as knowledge source
- ▲ Implement the necessary tools and routines
- ▲ Create a sense of ownership
- ▲ Cost- and time-efficient

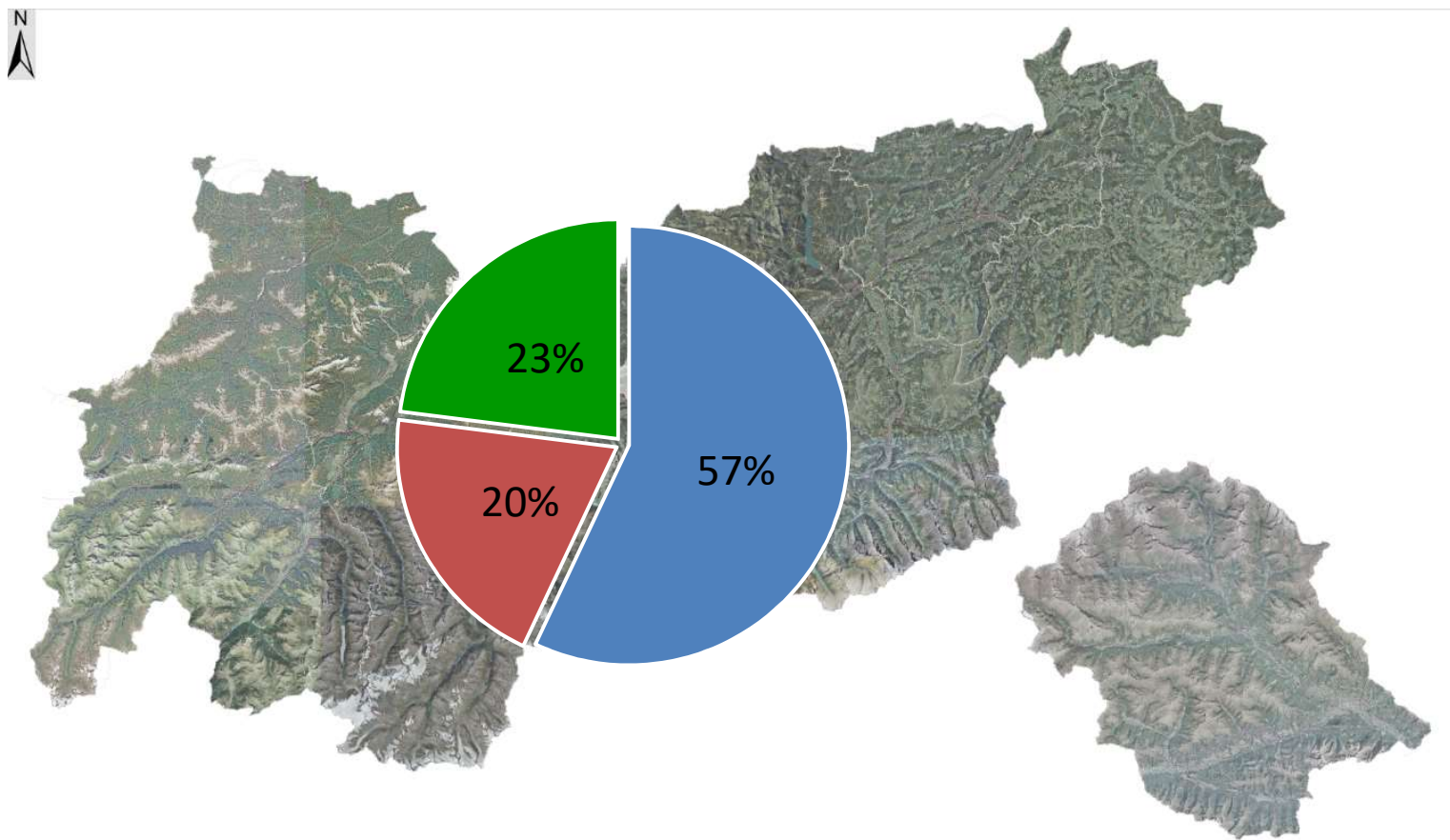
ORTIS
mind your risk

▲ Risk Assessments in the Tyrol

ADR - Name	Kategorie	Wichtigkeit	Assessierung
ADR 1
ADR 2
ADR 3
ADR 4
ADR 5
ADR 6
ADR 7
ADR 8
ADR 9
ADR 10
ADR 11
ADR 12
ADR 13
ADR 14
ADR 15
ADR 16
ADR 17
ADR 18
ADR 19
ADR 20
ADR 21
ADR 22
ADR 23
ADR 24
ADR 25
ADR 26
ADR 27
ADR 28
ADR 29
ADR 30



Local DRR Team



- ▲ 1700+ local participants
- ▲ 1500+ members of emergency units
- ▲ 300+ Political leaders
- ▲ 300+ Experts for critical infrastructure

279 Local Emergency Management Teams with 3500+ members

▲ Some Numbers

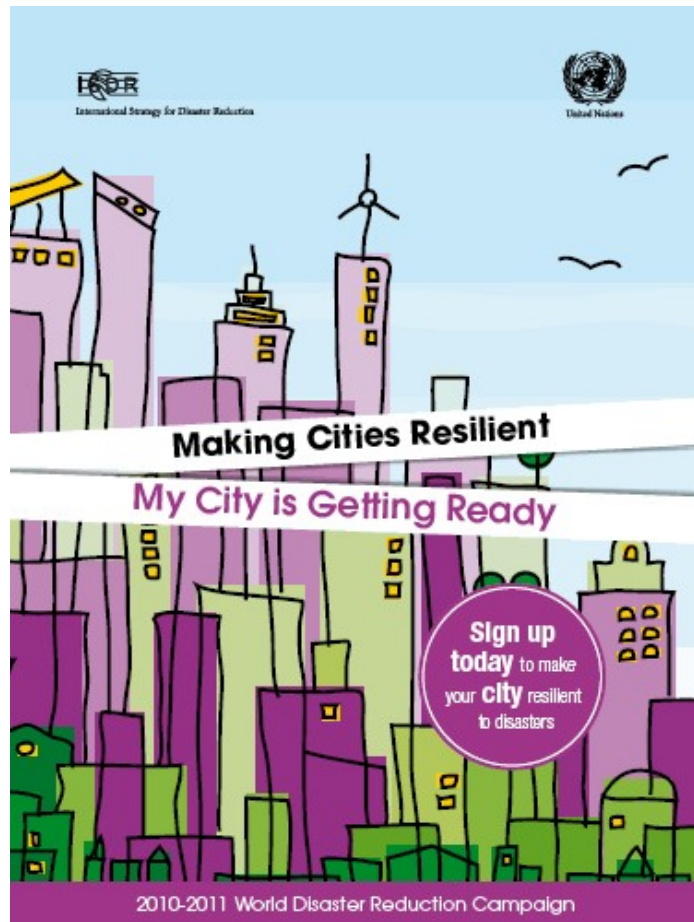
- ▲ **10** alpS and state government risk management experts
- ▲ **300+** workshops in municipalities
- ▲ **279** municipalities completed
- ▲ **6500** risks identified
 - 52 % Geological and Hydrometrological Risks
 - 26 % Technical Risks
 - 22 % Other Man Made Risks
- ▲ **1900+** members of local communities
- ▲ **50** external risk experts involved

▲ Next steps

- ▲ **Implement** and **educate** local emergency management teams
- ▲ Develop and implement **technical, structural and organizational measures** (prevention & preparedness)
- ▲ **Train** local emergency management teams through map exercises
- ▲ Further increase **climate sensitivity** of risk assessments on a local level
- ▲ Expand the comprehension of stakeholders - **self protection**



▲ alpS/Tyrol and the “Making Cities Resilient” Campaign



All **279 Tyrolean municipalities** and the Province of the Tyrol/Austria join the campaign in January 2011



Launch at the international conference "**Managing Alpine Future II**" in November 2011, Innsbruck



Province of the Tyrol/alpS and City of Lienz: "**Role models** for community-based risk assessment, management and reduction"

▲ Further application examples

▲ Public authorities worldwide

- Province Alto Adige (Italy)
- Province Yogyakarta (Indonesia)
- Several Cities (Germany, Switzerland, China, Algeria,...)

▲ Infrastructure Operators

- State hospitals, Austria
- Power authorities, Austria
- National Railway Company (ÖBB), Austria

▲ Scientific Cooperation and Application

- Universities all over Europe
- Gadjah Mada University, Indonesia
- CONICET, Argentina

▲ Expert Exchanges and Twinning

- Sweden – Austria exchange on community based risk assessment
- D-A-CH exchange on National Risk Analysis



▲ Outlook



**Sign up
today** to make
your **city** resilient
to disasters

- ▲ Risk management indispensable for **sustainable urban planning/development**
- ▲ Disaster Risk Reduction at the municipal level key to pro-actively **adapt to our changing climate**
- ▲ Methodology **adaptable and transferable** to other cities
- ▲ **Mutual learning** and knowledge sharing beneficial
- ▲ **UNISDR: key role** in motivating & facilitating local stakeholders



Questions & Discussion

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