

Alpine Spring Festival

**WATER CHANGE IN CLIMATE CHANGE:
THREAT OR OPPORTUNITY?
CHANGING BUSINESS IN A CHANGING CLIMATE**



Vista GmbH Remote Sensing in Geosciences
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Dr. Heike Bach (CEO)

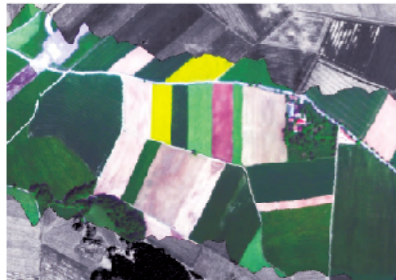
Round Table Discussion

some impulses to start with....

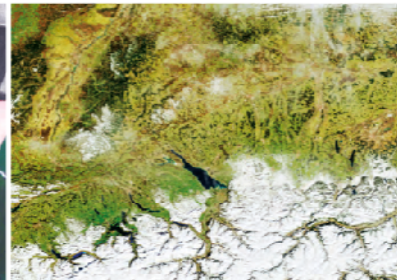
VISTA as a 'typical' SME from the Northern Alps

- Private company founded in 1995 with the goal to bridge the gap between science and application
- Business Area: Remote Sensing Applications in

AGRICULTURE



HYDROLOGY



ENVIRONMENT

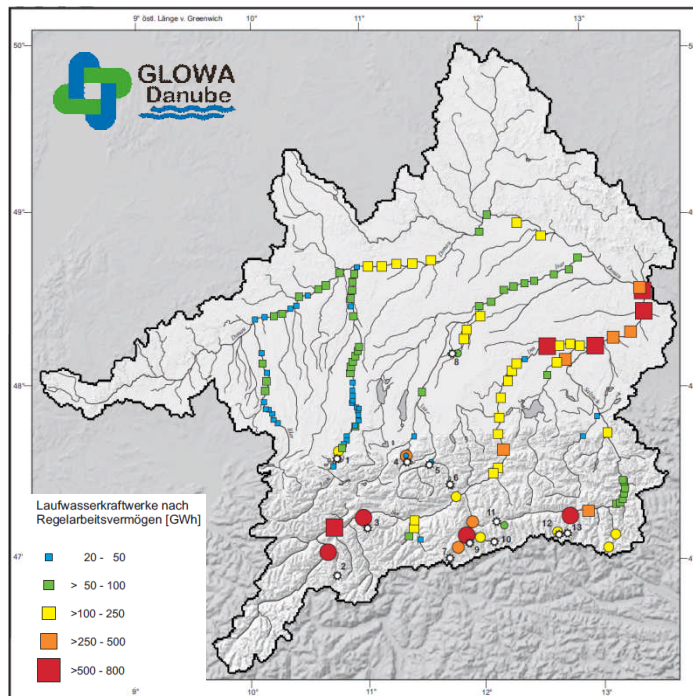


- Since 2005 partner in the ESA's GMES project Polar View responsible for snow products for the Alps
- R&T activity in FP7 project CLIMB on impacts on climate change on hydrology / water availability

WATER CHANGE IN CLIMATE CHANGE: CHANGING BUSINESS IN A CHANGING CLIMATE

OPPORTUNITIES as seen by VISTA:

- Many research activities are ongoing in the field of climate change
- ➔ Learn from research activities and bring it into practice



e.g. GLOWA Danube – German funded integrative research project on the impact of climate change on the hydrology of the Upper Danube catchment coordinated by the University of Munich

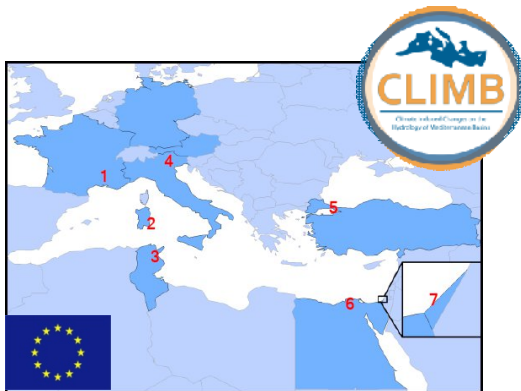


➔ VISTA integrated runoff simulations and hydro power module and that allows to study how hydro power will change in a changing climate.

WATER CHANGE IN CLIMATE CHANGE: CHANGING BUSINESS IN A CHANGING CLIMATE

OPPORTUNITIES as seen by VISTA:

- Make use of EU funding that specifically supports SMEs



e.g. CLIMB (EU FP7)

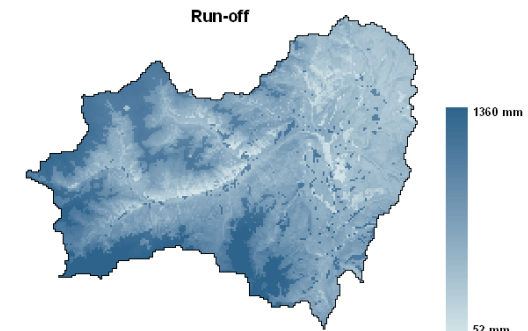
“Climate induced changes on the Hydrology of the Mediterranean Basins”
coordinated by the University of Munich



Goals

- reduce uncertainty
- quantify risks of climate change
- provide a tool to develop adaption strategies

➔ VISTA simulates the impact of climate change on the water regime and hydro power production in Mediterranean catchments including the Southern Alps (Noce)

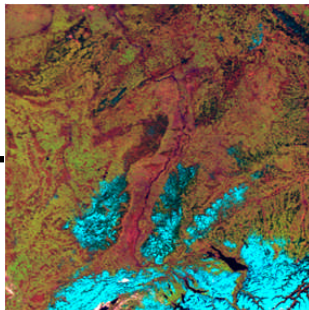


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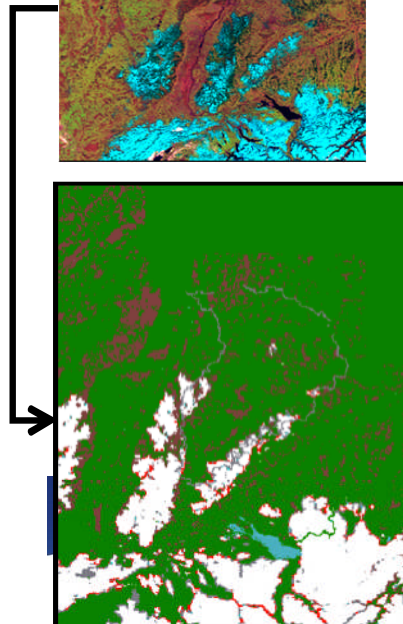
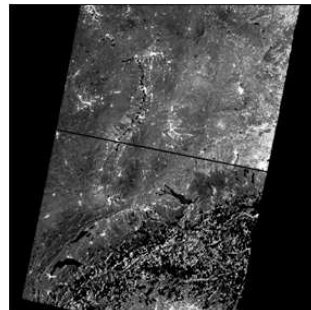
OPPORTUNITIES as seen by VISTA:

- new remote sensing sensors - especially Sentinel 1 and 2 - due to their high spatial resolution and their free availability

Optic (Sentinel 2)



SAR (Sentinel1)



Snow infos
from satellite



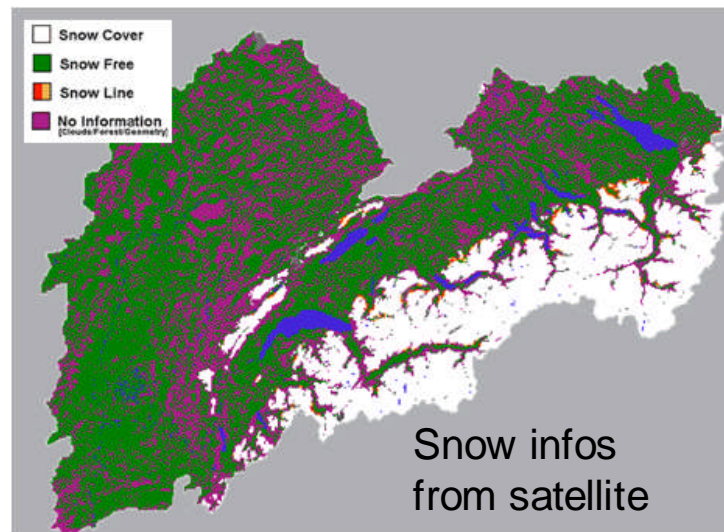
- Use new dissemination platforms



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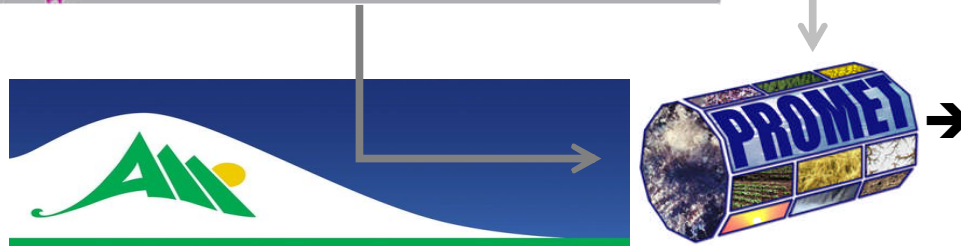
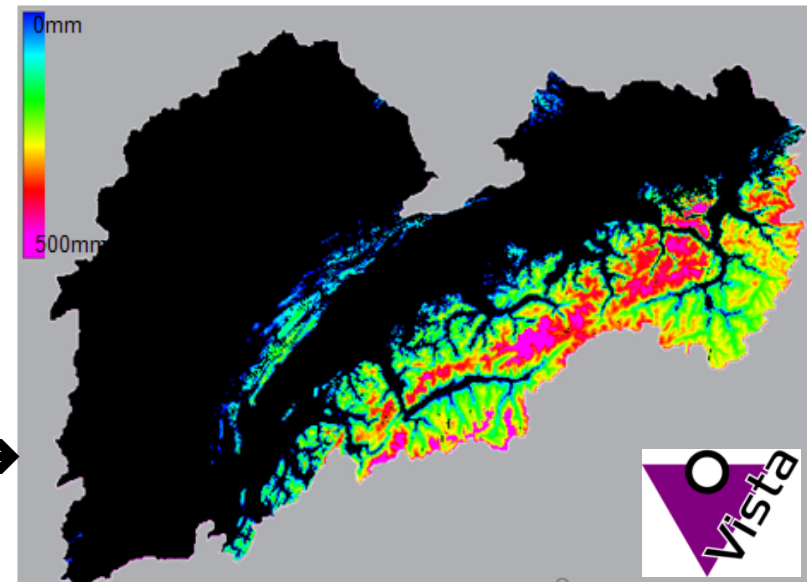
OPPORTUNITIES as seen by VISTA:

- software and computer power improvements (e.g. Cloud computing) that allow complex modeling (high computing demands) for data assimilation e.g. with PROMET for Snow Modeling of the Alps



Meteo
Data

Continuous Snow Water
Equivalent Maps



WATER CHANGE IN CLIMATE CHANGE: BUSINESS OPPORTUNITIES

- Learn from research activities and bring it into practice
- Make use of EU funding that specifically supports SMEs
- New remote sensing sensors - specially Sentinel 1 and 2 - due to their high spatial resolution and their free availability
- Use new dissemination platforms + chances by linked, open data
- Software and computer power improvements (e.g. Cloud computing) that allows complex modeling (high computing demands) for data assimilation
- New communication technologies (satcom) in far-distance areas
- Greater attention on environmental issues by tourism
- Increased awareness of public administration on natural hazards
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WATER CHANGE IN CLIMATE CHANGE: BUSINESS THREATS

- Restricted access and availability to input data e.g. meteo data
- Climate simulations in Alpine environment still a challenge
 - ➔ need for improvements
- Legislation as main business engine (too few clients)
- Payments timing of Public Administrations harmful to SMEs
- Challenge of SMEs to keep up in R&D
 - ➔ collaborations with research of special relevance for SMEs
 - ➔ this requires clear IPR rules and business agreements
- competition from research organizations that are publically funded, but nevertheless target the market
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