

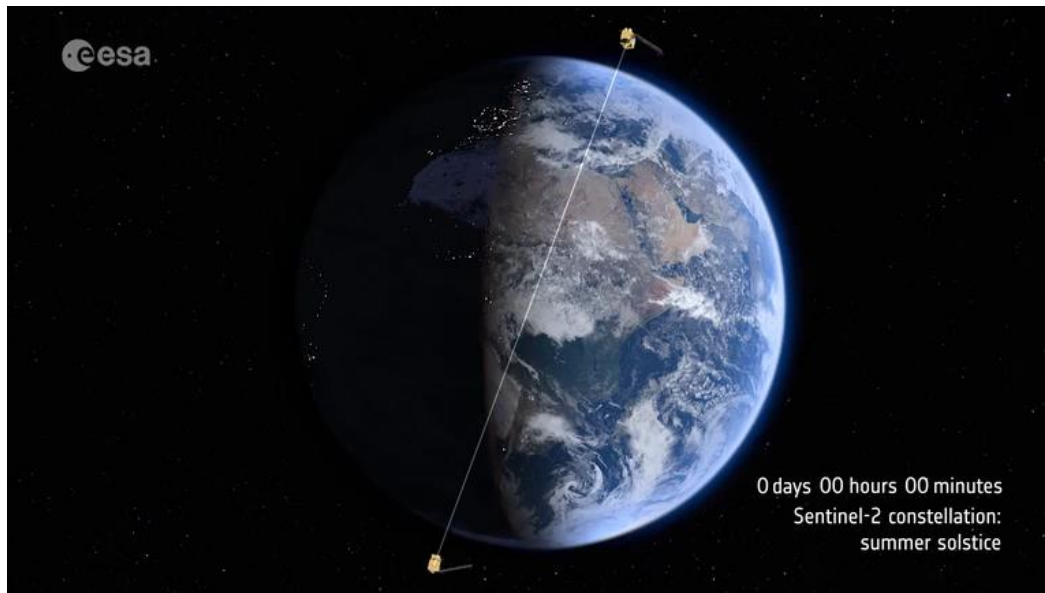


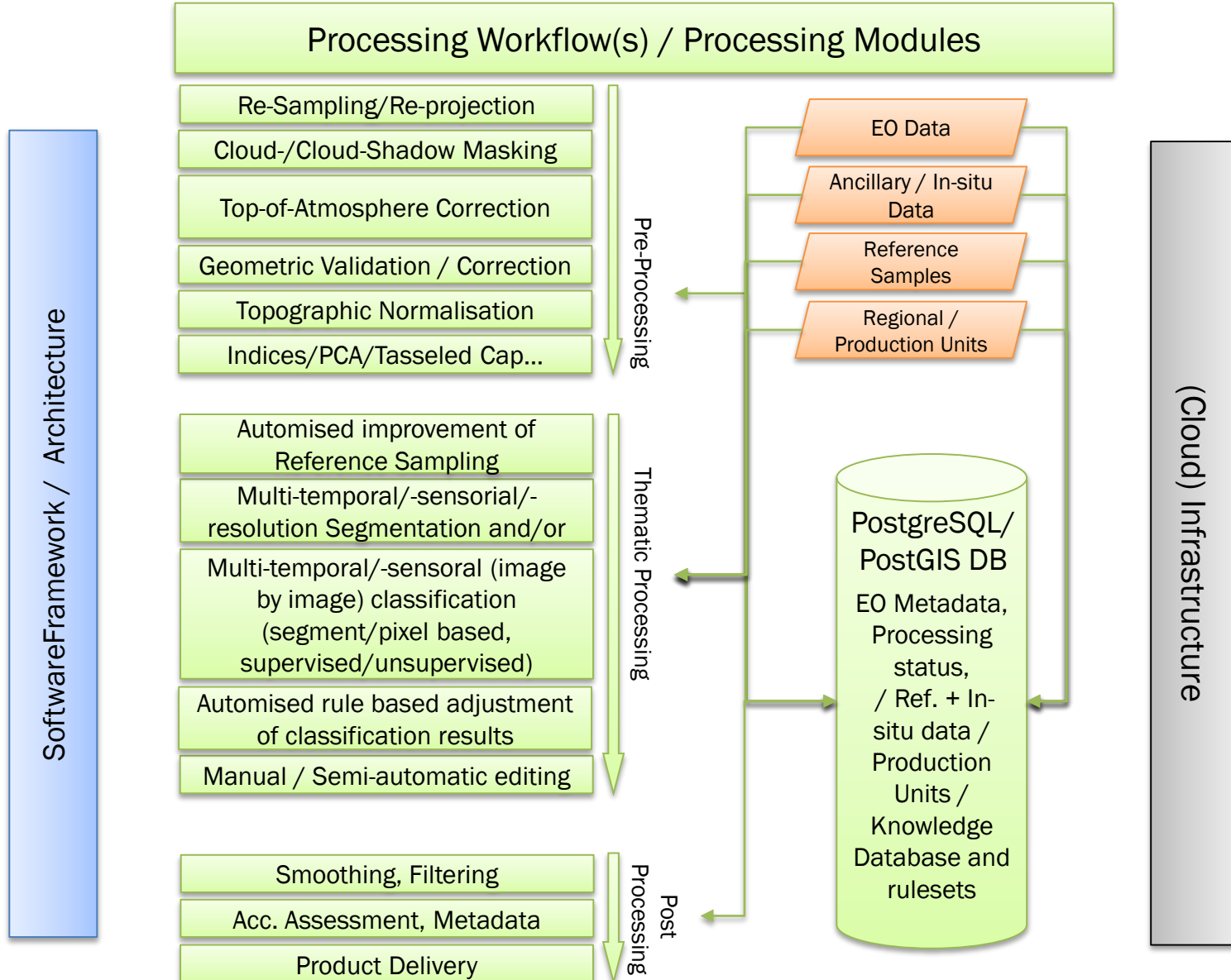
Dr. Axel Relin, GAF AG

07 – 09 November 2017 – Lima, Peru

The potential is obvious:

- independent data from space ...
- covering huge areas – everyday
- partly free of charge (e.g. Landsat and Sentinel, MODIS, ...)







2016-05-05

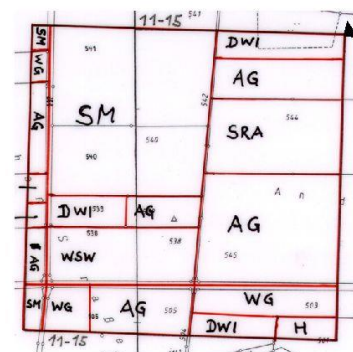
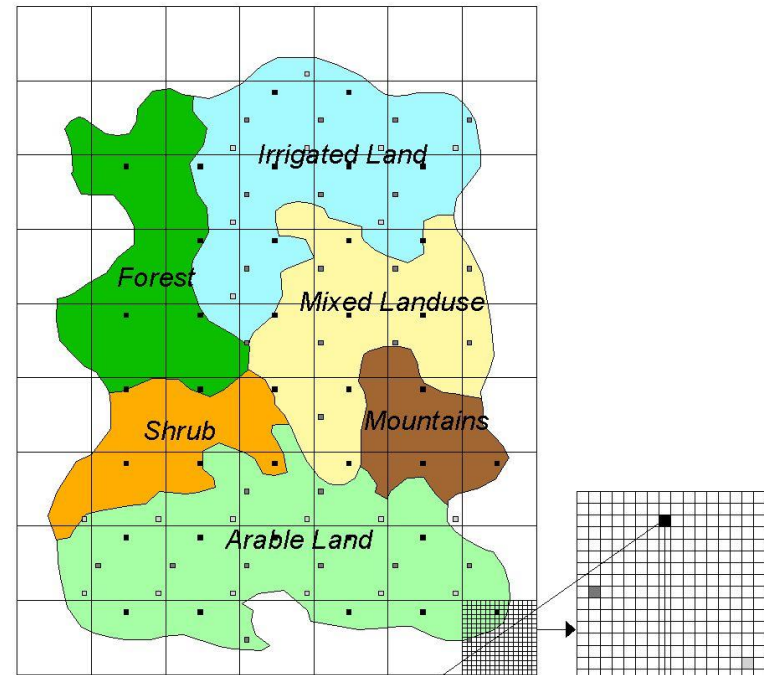
Sentinel-2

10 m



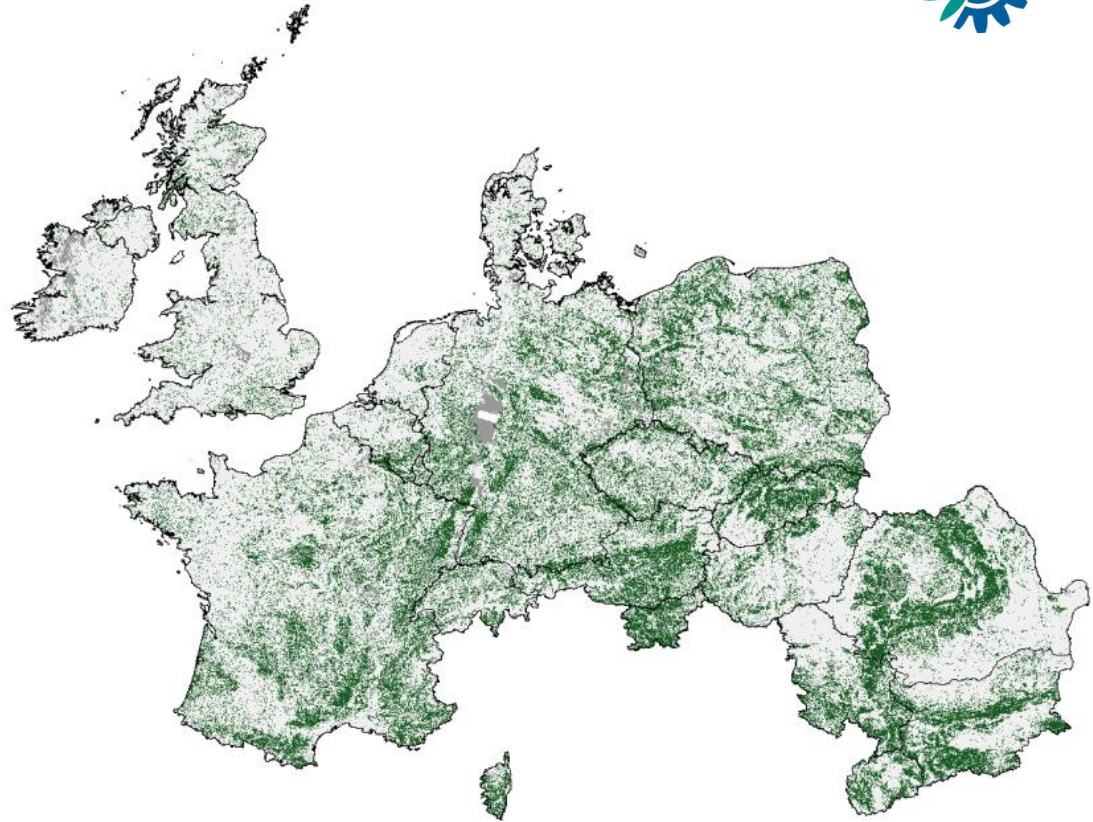
## National Production Data – Analysis & Improvement

- Probabilistic Methods
- Qualified Informants
- Census
- Administrative Records





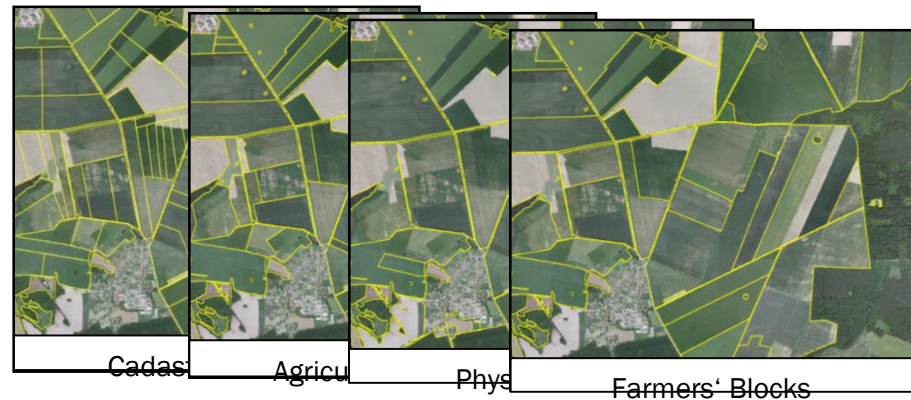
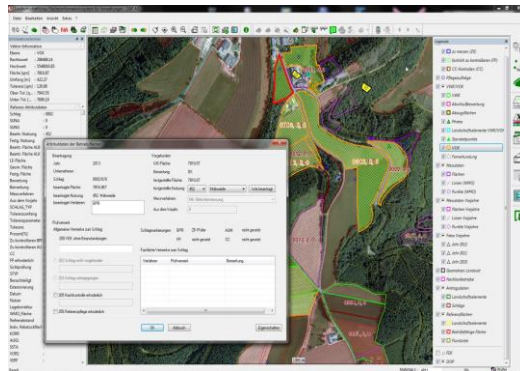
- Consortium led by GAF
- 2011 - 2018.
- 39 countries
- High Resolution (20m)
- Forest, Grassland, Water & Wetlands, Small Woody Features, Sealed Areas



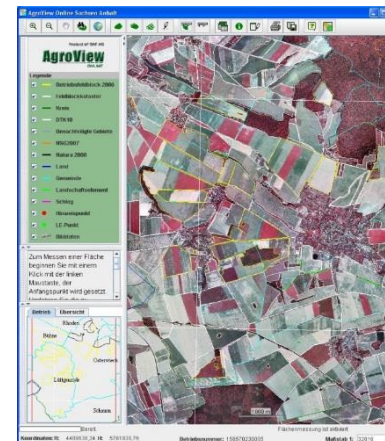
*HR Layer Forest: Tree density*



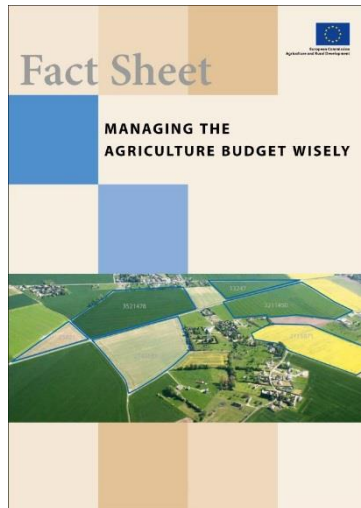
- Administrations
  - Implementation & Update of Agricultural Reference Systems
  - GeoSpatial Cross-Checks, Risk Analysis, Controls – Classical / CwRS
  - Payments



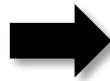
- Farmers – GeoSpatial Aid Application



# EU – Control of Subsidy Declarations



Source: [http://ec.europa.eu/agriculture/publi/fact/clear/2007\\_en.pdf](http://ec.europa.eu/agriculture/publi/fact/clear/2007_en.pdf)



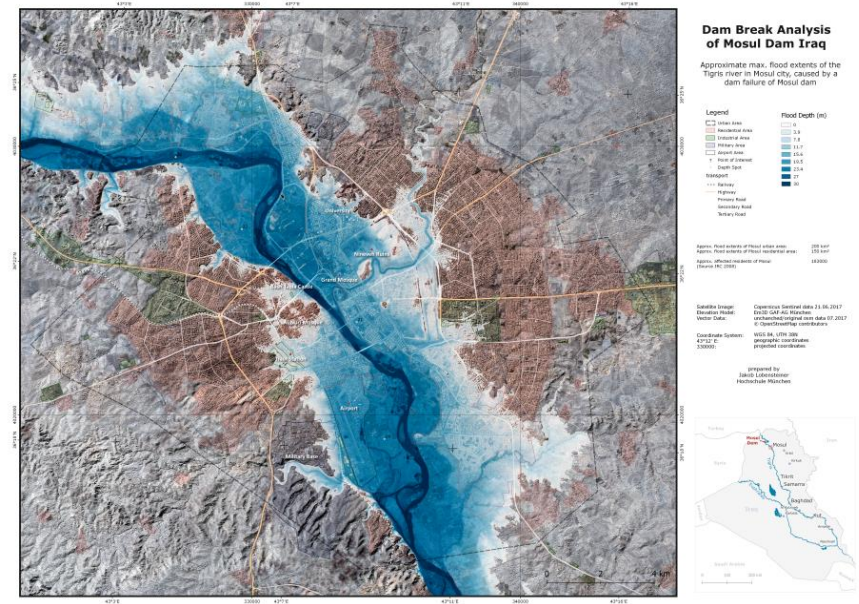


- 3D Product
- Fully Operational
- VHR or HR data
- 0,3m – 5m
- 125 cities  
(expanding)
- 5 Mio km<sup>2</sup>  
(expanding)



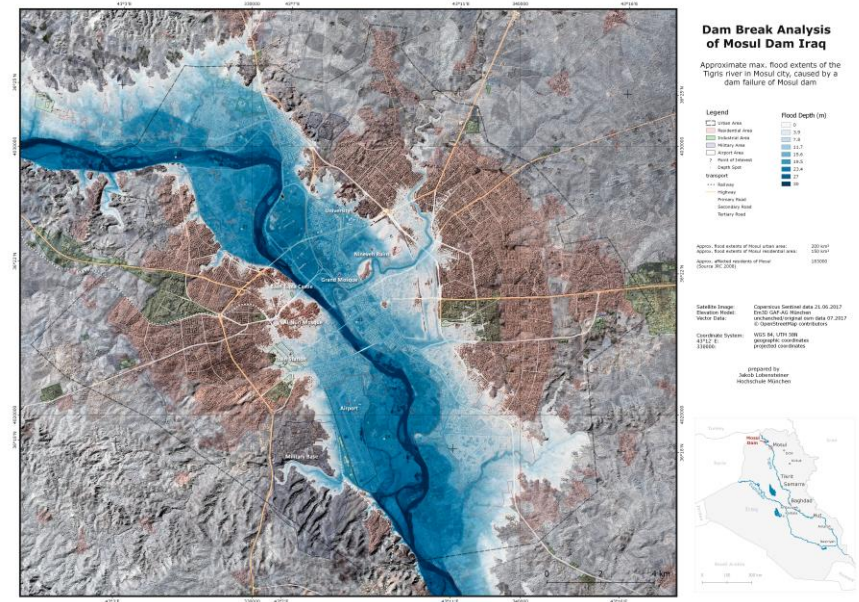
*Tri-Stereo DSM Example Cape Town*

## Flooding of Mosul (water spread & depth)





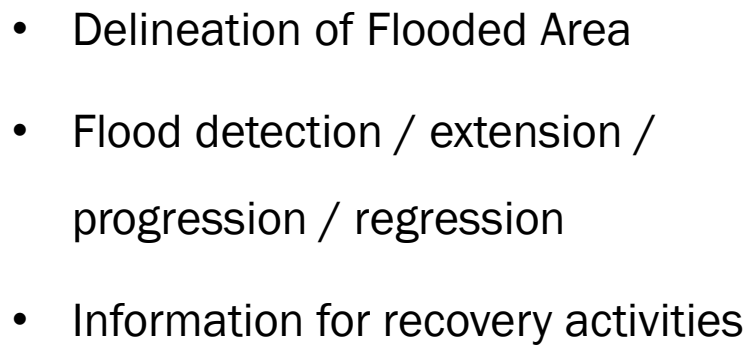
## Flooding of Mosul (water spread & depth)





- 



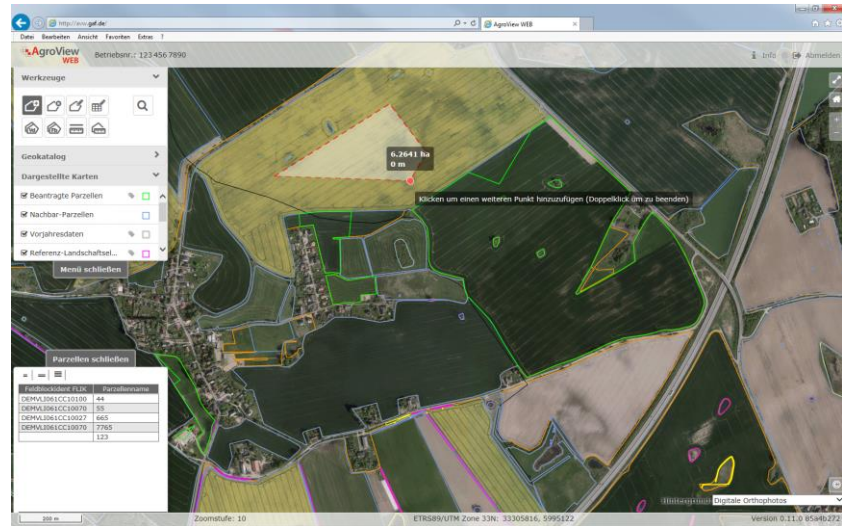




- Automated Risk Assessment



- Geo-Enabled Loss Adjusters





- Registration & Verification

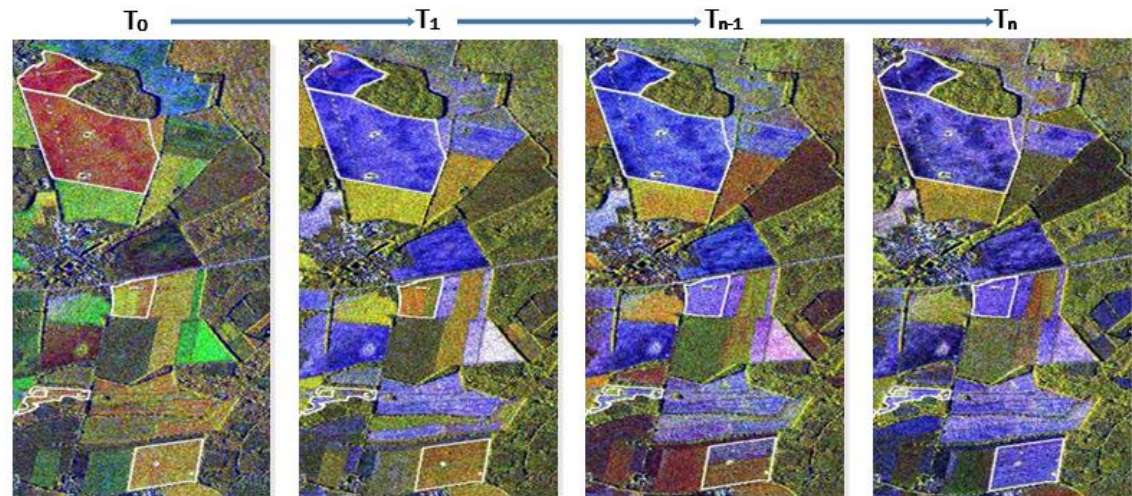


Cadastral Parcels



Agricultural Parcels

- Automated Crop Monitoring





Thank you very much  
for your attention!

**Contact:**

Dr. Axel Relin

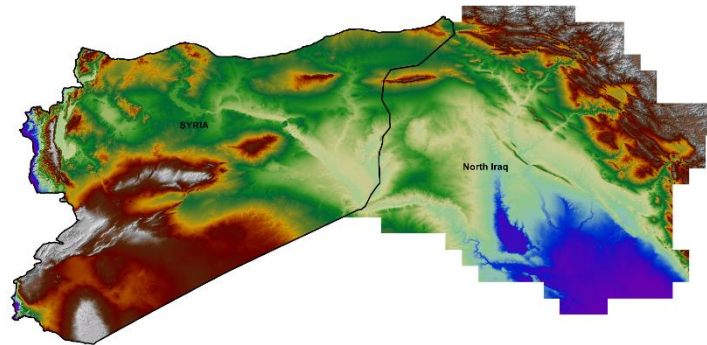
Email: [axel.relin@gaf.de](mailto:axel.relin@gaf.de)

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<http://www.gaf.de>, [info@gaf.de](mailto:info@gaf.de)

⇒ Improving established workflows:

- Risk assessment in case that claim history is not available
- Stratification of risk exposure based on geographical parameters
- Claim management





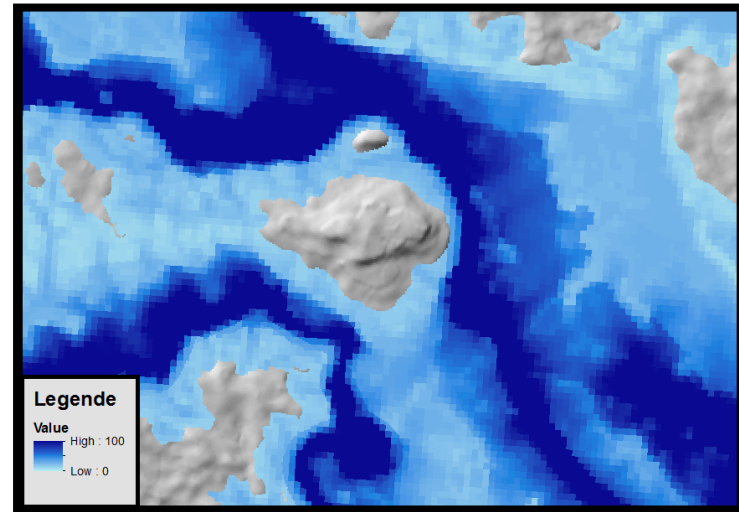
## Input Data

Multisource  
Stereo  
VHR/HR  
Satellite Data

Further Data on  
Land-Use  
Soil  
etc.



## Potential Frost Zonation - Regional



## Potential Frost Zonation - Local

