

# “The TRIDEC Virtual Tsunami Atlas” - customized value-added simulation data products for Tsunami Early Warning generated on compute clusters

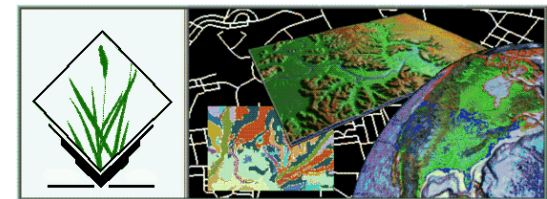
**Peter Löwe, Martin Hammitzsch, Andrey Babeyko  
(GFZ Potsdam)**



**EGU 2012 PSD Session / TRIDEC Midterm Conference**

# Motivation and Infrastructure

- Tsunami Simulation: **modelling of spatio-temporal spreading** of tsunami waves.
- Simulation results must be **trustworthy**.
- **Visual verification** of temporal and spatial spreading characteristics for each simulation.
- Convenient, **human-accessible mapping** of each simulation needed.
- Automated approach for frequent iterations.

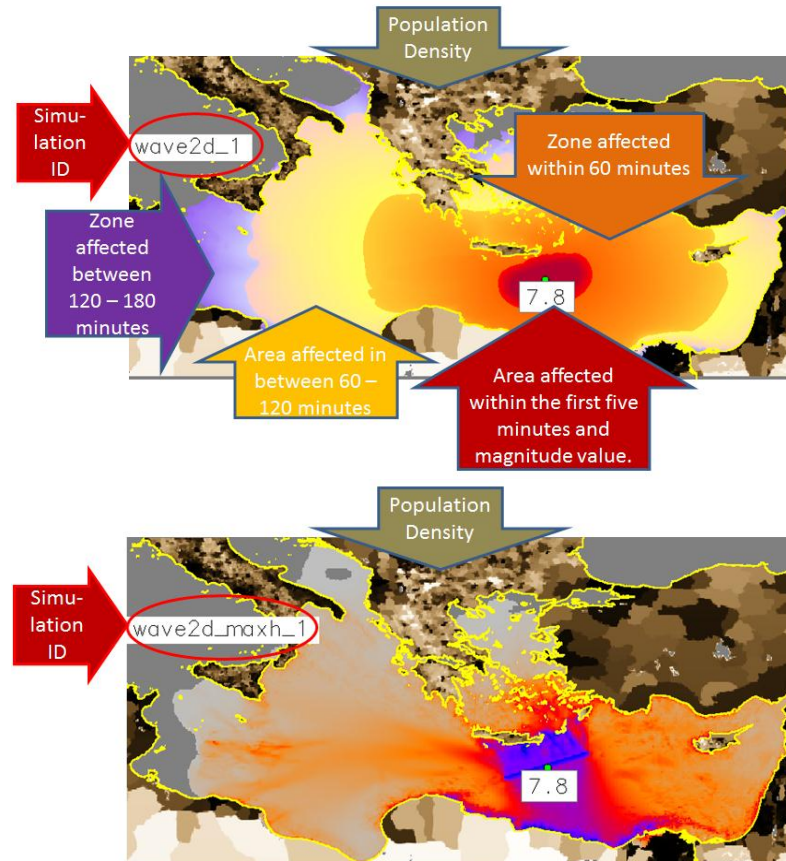


GFZ GRASS GIS Compute Server

# Thematic Preview Maps

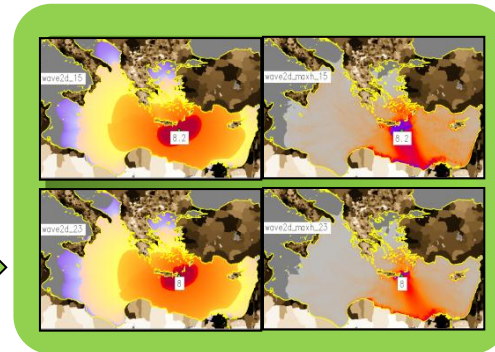
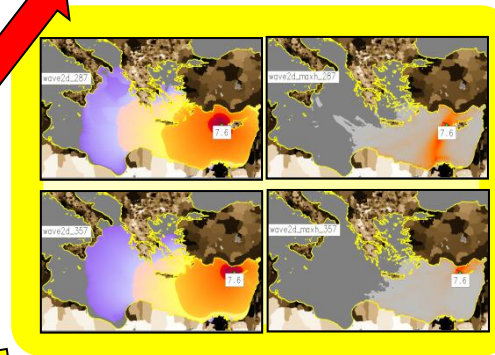
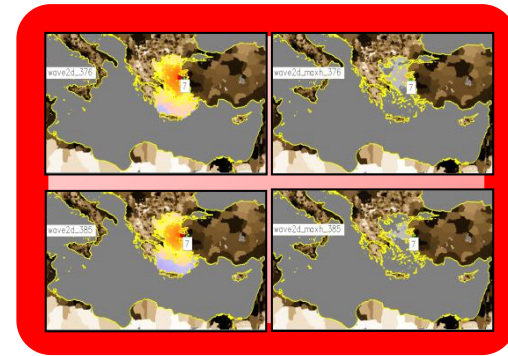
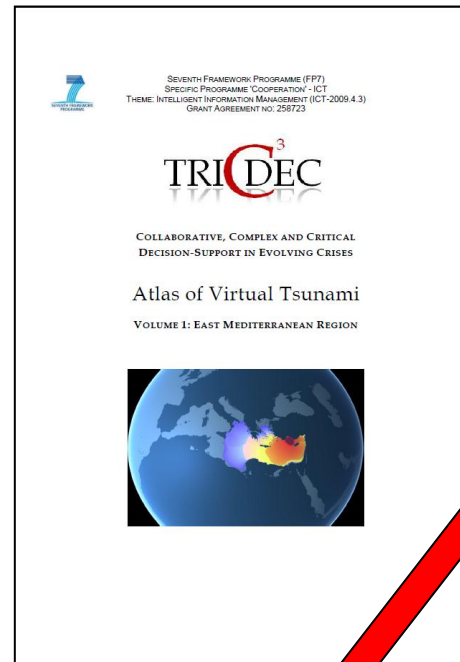
## Map Features:

- TRIDEC Simulation ID
- Color-coded isochrone map
- False-color maxheight map
- Context Information:
  - Shorelines
  - Population density
  - Points of interest
- Production: GFZ cluster



# Application: Virtual Tsunami Atlas

- 3 TRIDEDEC simulation grids
  - Anatolyia: 27 Szenarios
  - Crete: 280 Szenarios
  - Cyprus: 84 Szenarios
- Multiple parameter sets
  - Magnitude, depth, strike, dip, rake
- Benefits:
  - Visual quality assessment
  - Custom color schemes for data ranges
  - Assessment of impact magnitude





# Acknowledgements



The presented work is done in collaboration with consortium of the TRIDEC project which is supported by the European Commission under the 7th Framework Programme

(ICT-2009.4.3 Intelligent Information Management Project Reference: 258723)



INSTITUTO DE METEOROLOGIA, IP  
PORTUGAL

