

Objectives of Work Packages

WP1: **Thermal convection**

Coordinator: **O. Cadek**

- To enhance multidisciplinary studies in regions with a good coverage of seismological data by predicting tectonic stresses through models of mantle convection, including complex mineralogical, rheological and geochemical information
- To deepen co-operation with meteorologists and environmental modellers in the field of theory of chaotic convecting systems
- To intensify communication between convection modellers and researchers dealing with postglacial rebound and global climate change
- To study binary fluid systems with practical (environmental) applications

WP2: **Viscoelastic response of the Earth**

Coordinator: **O. Cadek**

- To develop a network of European researchers dealing with viscoelastic modelling in complex 3D media
- To support interdisciplinary applications of viscoelastic modelling with a special emphasis on environmental problems (climate change and seismic activity)
- To initiate new geophysical observations that would enable discrimination between different physical models of the Earth's mantle
- To integrate geodynamic studies of the Centre into the European seismological projects running in the Gulf of Corinth

WP3: **Temporal changes of the gravitational field**

Coordinator: **Z. Martinec**

- To develop new theory and codes for interpretation of the satellite gravity records in terms of land gravitational field (gradiometric boundary-value problems)
- To promote multidisciplinary studies of temporal changes of external gravitational field from the satellite gradiometric observations and repeated GPS observations, and the sea-level change, with the aim to study viscoelastic relaxation beneath Fennoscandia

WP4: **Seismic waves: Theory**

Coordinator: **L. Klimes**

- To contribute to the European co-ordination of the theory of seismic waves
- To promote practical application of the latest theoretical developments

WP5: **Seismic waves: Observations**

Coordinator: **J. Zahradnik**

- To integrate the existing seismic stations of the Charles University in Greece into the European framework
- To provide the Centre with high-quality regional and local seismic data

WP6: **Earthquakes**

Coordinator: **J. Zahradnik**

- To develop the so-called integrated earthquake modelling by combining diversified European experience in forward and inverse problems of the finite-extent sources
- To support multidisciplinary studies and validation experiments for understanding strong ground motions during earthquakes in Europe

WP7: Climate systemCoordinator: **T. Halenka**

- To contribute to European scientific networking in the field of climate system modelling with emphasis on the models of intermediate complexity
- To improve possibilities of climate system modelling for study of local impact of the climate change on the quality of life, mainly in the Czech Republic, and the other European countries

WP8: Air qualityCoordinator: **J. Brechler**

- To improve European scientific networking in the field of numerical atmospheric modelling with emphasis on the local air-pollution assessment in the urban environment
- To study the solar radiation impact on the atmospheric chemistry, and the corresponding health consequences in the Czech Republic and the other European countries

WP9: Research and technical managementCoordinator: **C. Matyska**

- To manage synchronisation among work packages
- To harmonise the specific measures (networking activities) with the everyday life of the Centre
- To manage web pages of the Centre (presentation and reporting) and the computer network
- To co-ordinate scientific work between the Centre and the national and international end-users
- To co-ordinate management tasks, mobility, reporting and presentation