# Global Change Research Centre of the CAS, v. v. i. - CzechGlobe

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#### Overview

The basic objective of CzechGlobe is deep technical knowledge of the problem of global change, adaptation to its effects and development of processes to reduce its impacts on ecosystems and human society. Using advanced techniques and instrumentation, the research focuses on three main segments of global change effects - ATMOSPHERE - evolution of climate and its modeling, ECOSYSTEMS - carbon cycle, impacts of global change on biodiversity and SOCIO-ECONOMIC SYSTEMS - impacts on development and behavior of the society. Activities leading to development of innovative technological processes, draft measures for adaptation and educational activities are integral part of CzechGlobe.

# Organizational structure

"CzechGlobe - Global Change Research Centre" is part of the scientific institute Global Change Research Centre of the CAS, v.v.i. Depending on its focus, it is divided into: Climate analysis and modeling section, Ecosystem analysis section, Impact studies and physiological analyses section, Human dimensions of global impact changes section and Innovation and adaptation techniques section.

# Projects and grants

The core project of the CzechGlobe is the structural funds project OP R&DI "CzechGlobe - Center for the Study of the Impact of Global Climate Change." The main objective of the project is to build a "center of excellence", attracting leading experts and cutting edge instrumentation for research on the impact of global change on the atmosphere, terrestrial ecosystems and human society, including understanding the processes of adaptation and development of methods to mitigate these impacts. The second key project of the center is a project of National research infrastructures "Cze-COS/ICOS - National Infrastructure for Carbon Monitoring", which aims at helping to develop and maintain long-term infrastructure for monitoring carbon fluxes in ecosystems and to ensure experiments aimed to research the impact of elevated CO2 on ecosystems. CzechGlobe also participates in a number of basic research projects supported mainly by the Grant Agency of the Czech Republic and by the Ministry of Education, Youth and Sports (COST projects, KONTAKT, etc.), mainly aiming at a deeper understanding of the impact of environmental conditions on ecosystems. A significant part of the CzechGlobe activities is also devoted to applied research, which is supported primarily by the Czech Technology Agency and the National Agency for Agricultural Research. Projects supported by these agencies focus on effective cooperation with the practice in the areas of development of technology and instruments, primarily for monitoring and mitigating the impacts of global change.

### International cooperation

CzechGlobe participates in a number of international projects and is a partner in several European research networks. CzechGlobe is a key partner of the ICOS (ESFRI) infrastructure project focused on research of carbon fluxes between ecosystems and the atmosphere. CzechGlobe is also a founding member of the ESFRI project ANAEE, whose goal is to create experimental and analytical networks for research of ecosystems at the European level. Furthermore, CzechGlobe is actively involved in international structures, such as ECRA (European Climate Research Alliance), INTERFACE (Integrated Network for Terrestrial Ecostats Research on Feedbacks to the Atmosphere and Climate) or ESF program CLIMMANI (Climate Change - Manipulation experiments in terrestrial ecosystems). It is also part of a European network for phenotyping of plants EPPN (FP7). In the field of remote Earth sensing, CzechGlobe works on the ESFRI project EUFAR. Cooperation on specific research problems takes place through several bilateral projects.

## Cooperation with universities

CzechGlobe has extended accreditation for several doctoral programs at the Mendel University in Brno and the University of South Bohemia in České Budějovice (Applied and Landscape Ecology, Forest Ecology, Biophysics) and the staff supervise dissertations within these study programs. The CzechGlobe staffers guarantee or provide instruction in the bachelor's and master's degree programs at the Mendel University in Brno, the University of South Bohemia in České Budějovice and the University of Ostrava.

### Public services

CzechGlobe organizes awareness-raising lectures, excursions and exhibitions for the public with a focus on global change research. CzechGlobe carries out research for the public administration (e.g. Ministry of Environment), which provides objective information for decision making and policy

proposals. CzechGlobe also coordinates the activities of the Regional Contact Organization, which informs about the possibilities of getting financial support from EU projects.

