

FIRST CALL

QUO VADITIS

agriculture, forestry and society under Global Change?

INTERNATIONAL CONFERENCE

2ND–4TH OCTOBER 2017



On behalf of the Organizing Committee let us invite you to the international conference titled
“Quo vaditis agriculture, forestry and society under Global Change?”

organized by the Global Change Research Institute CAS, v.v.i. - CzechGlobe

and held on **2ND–4TH OCTOBER 2017** at the Horal Hotel (Valachy Resort, www.valachy.cz)

in Velke Karlovice in the Beskid Mountains (Czech Republic).

This year, the Global Change Research Institute CAS – CzechGlobe is marking the 20th anniversary of intensive research into the concerns regarding global change, carbon cycle and ecophysiology of production processes in plants. This research began to develop at the former Institute of Landscape Ecology and later at the Institute of Systems Biology and Ecology. Since 2010, when the center of excellence CzechGlobe was established through the OP RDI, the global change research has expanded to the research into the climate development and climate modeling as well as research into the impacts of global change on the development and behavior of society.

Since the very beginning, most GCRI research activities have been linked to the participation in international projects of framework programs, thanks to which we managed to participate in the solution of the current and urgent issues related to the impending global change. Thanks to the participation in a project of 5th Framework

Programme in 1997, we were able to officially put into the operation the cultivation lamellar mini-domes at the experimental station Bily Kriz. At that time they were the world's unique device enabling the cultivation of a part of a forest stand in the atmosphere of doubled CO₂ concentrations and thus simulate the conditions expected, according to the forecasts on the climate development, in about 50 years. Opening the lamellar mini-domes not only was one of the impulses towards the start of a political debate in the Czech Republic about the very existence of global change and the human share in it, but it also helped to gain awareness of the issues among the general public.

In connection with this significant anniversary, we decided to organize an international scientific conference titled “Quo vaditis agriculture, forestry and society under global change?”

CONFERENCE PROFESSIONAL SECTIONS:

1/ GLOBAL CHANGE AND AGRICULTURE,

2/ GLOBAL CHANGE AND FORESTRY,

3/ HUMAN DIMENSION OF GLOBAL CHANGE IMPACTS

GLOBAL CHANGE AND AGRICULTURE

Today's agriculture is facing probably the biggest challenge ever, represented by a combination of negative impacts of the ongoing climate change with the need to feed a growing population, requiring the increase of food production by 70% in 2050. In addition, climate change together with agricultural management are to a large extent threatening the non-production functions of agriculture such as carbon sequestration and reduction of greenhouse gas emissions, water retention in landscape, biodiversity conservation, nutrient cycling etc. Both production and non-production ecosystem services provided by agriculture are potentially compromised not only by long-term trends in climatic conditions, but also by their increased variability accompanied with higher frequency of weather extremes such as drought episodes, heat waves or flash floods. Therefore, this section will be primarily focused on climate change impacts on different scales from molecular or plant level to the region. Besides the evaluation of impacts, we also expect contributions focusing on adaptation measures ensuring sustainable production under climate change.

GLOBAL CHANGE AND FORESTRY

Global change triggers the simultaneous and rapid alteration of key environmental conditions that control the dynamics of a forest ecosystem. Consideration of climate, land use, and biological diversity are the key components to understanding the forest's response to global change. This section is expected to cover various scientific topics including: forest ecosystem response to changes in CO₂ concentration, temperature and nutrient availability; ability of different forest ecosystem types to store atmospheric carbon, quantitative remote sensing monitoring of forest biochemical parameters; monitoring of forest health indicators, forest biodiversity changes; global change alternation and degradation of forest ecosystem services

HUMAN DIMENSION OF THE GLOBAL CHANGE IMPACT

The centre point of the potential global change mitigations is full understanding of human and natural process interactions boosting or diminishing the impacts of global change. Consequently, this section focuses on exploration of causes and consequences of how human activities and interactions within the social systems are influencing and are being influenced by global change events. The section is expected to cover, but is not purely limited to, the following areas: human driving forces (population change, wealth/poverty level, economic structure and technology), regionally relevant climate change assessment and predictions, land use/land cover dynamics and human migration, potential human responses to global change impacts, ecosystem function/service mapping and modelling.

The conference sections are mirroring the fundamental research directions of the Global Change Research Institute, which provide a strong basis for local, regional, and international scientific cooperation. In our understanding, the global change involves a wide range of biophysical, ecosystem and socio-economic components of the biosphere that alter the functioning of the Earth system on a planetary scale. This change has a strong impact on Earth's ability to support life (from www.czechglobe.cz).

Focuses of individual sections:

MORE INFORMATION WILL BE AVAILABLE SOON

in the second notification, and on the website www.czechglobe.cz

We are looking forward to your participation.
Conference Organizing Committee.