

## PROLOGUE

### Resilience within agro-ecosystems

Resilience in a trivial assessment, means the power or ability to return to the original form, position, etc., after being bent, compressed, or stretched. It is a sort of ability to recover readily from illness, depression, adversity, or the like. According to these statements this phenomenon can be described as elasticity and buoyancy in relation with the processes induced.

In the field of ecology, resilience is defined as "the capacity of an ecosystem to tolerate disturbance without collapsing into a qualitatively different state that is controlled by a different set of processes. A resilient ecosystem can withstand shocks and rebuild itself when necessary. Resilience in social systems has the added capacity of humans to anticipate and plan for the future." In both human and ecological systems, resilience is defined by an adaptive capacity

When a system can reorganize, that is, shift from one stability domain to another, a more relevant measure of ecosystem dynamics is ecological resilience. This is a measure of the amount of change or disruption that is required to transform a system from being maintained by one set of mutually reinforcing processes and structures to a different set of processes and structures.

It is the responsibility of scientific research to determine qualitative and quantitative characteristics of the threshold limits from which resilience can result in recovery, and conversely, beyond which there is no more chance for recovery. The identification of these threshold limits represent a "physiological doomsday" of various systems and processes in agri-environment. The present conference is dedicated to this peculiar scientific field. Key areas of the conference are as follows: water availability, soil characteristics and processes, plant growth and development, morbidity and mortality, bearing capacity in ecology and economy.

This conference is organized under the auspices of three committees of the Hungarian Academy of Sciences; the Crop Production Committee, the Plant Protection and the Soil Science and Agrochemistry Committee upon the invitation and with the active participation of the Czech University of Life Sciences, Prague. The workshop is dedicated to the Alps-Adria movement providing a bridge to science and people of the region. The aim of the scientific workshop is to open a forum for the discussion of research results related to resilience within agro-ecosystems.

The venue of the scientific workshop is the campus of Hotel Horizont in Špičák. This unique area, situated in the Bohemian-Bavarian-Austrian border region, is one of the most exciting transboundary nature reserves of the world. The international importance of this area can be characterized by the following facts: the designation of a biospherical reservation and presence on the list of UNESCO; the Šumava peat bog sources listed by the Rams Convention concerning the protection of wet grounds of international importance; the Šumava peat bog sources registered in the Red book of ecosystems by the International Union for Nature Protection (IUCN); international protection of the nature in the area of Bayerischer Wald – Böhmer Wald / Šumava, the title of

„Ecological Building Stone of Europe”, and the award of "European Landscape of the Year 2000".

The natural beauty and environmental value of the area is supplemented by numerous historical sites, relics, places of touristic interest, and last but not least the traditional Bohemian hospitality, cuisine and golden beer. We believe that all these will contribute to the success of the scientific meeting.

Welcome to Šumava!

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