2. Natural resources, ecosystem services and environmental quality
2.2. Natural resources: management, use and conservation

Title: *Carbon sequestration - commons for mountain regions?*

Summary

Ecosystem services as public or common goods are facing traditional social dilemma of individual and collective interests. Distant users operate across governance scales and with diverse interpersonal and social interest, often ignoring sustainability and carrying capacity of local ecosystems. The actors enjoying and producing ecosystem services rely on different information sources than those producing ecosystem services. Paper demonstrates potential of global climate regulation ecosystem service as a tool to scale down to local policy arena.
In our paper we will demonstrate the role of carbon sequestration and common pool resource regime in European mountain regions to maintain valuable ecological values and promote economic performance and social stability of local community following previous studies based on behavioural experiments. Our approach offer innovative governance mechanism for enhancing the adaptation capacity of European mountain regions to sustainability and under the global market and global governance.

Abstract

Nowadays, one of the big challenges is to bridge debates on global commons - climate change and local commons - the management of forests and also pastures that are becoming abandoned. Moreover it is crucial to find common language in the issue of global warning between key actors in global, regional and local arena as well as between mentioned actors and academic world where all the interesting work on climate change is taking place. As one of the novel ways how to deal with the issue of climate regulation could be looking at carbon sequestration as commons. Carbon sequestration is a natural process that significantly contributes to climate regulation by a capture and a long-term storage of atmospheric carbon dioxide, main greenhouse gas, predominantly in soil and terrestrial ecosystems (forests, meadows, pastures). Carbon sequestration is undoubtedly the best way how to bind CO2 and keep the carbon cycle because it does not have any negative influence on the environment but on the contrary it stabilizes the ecosystems. It also provides a suitable solution for increasing the productivity of forestry and agriculture as well as for effective sustainable management. And European mountain regions have the potential to deal with climate change because they traditionally have landscapes consisting mainly of forests and permanent pastures. Especially important are common forests and pastures managed (or even owned) by local community because in this type of common pool resource management (regime) the individual short-term interest is suppressed by long-term society interest. In our paper we will demonstrate the potential of this common pool resource regime to increase the local community capacity of self-organisation and collective actions promoting the sustainability in mountain regions in Slovakia (following previous studies based on behavioural experiments) as well as challenges that these local communities have to overcome. We will be addressing proper institutions to support effective sustainable alternatives that combine mitigation of poverty in mountain regions with economic production and supply of environmental services, especially carbon

sequestration. The overall goal is to propose measures for enhancing the adaptation capacity of rural mountain landscapes in Slovakia to sustainability and under the global market and global governance.