

# Applying a Socio-Ecological System for a better understanding and delivery of public goods/ecosystem services: PEGASUS case studies in the Czech Republic

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## Introduction

Rural land provides a range of key functions and services on which society depends. However environmental and social benefits continue to be undervalued in land management decisions. Using the concepts of public goods and ecosystem services, the PEGASUS project investigates new ways of thinking about the way farmland and forests are managed. By doing so we aim to stimulate longlasting improvements in policy and practice. PEGASUS is a 3 year EU-funded project and brings together a multidisciplinary team of 14 partners from 10 EU countries: <http://pegasus.ieep.eu/>.

**Main research question: "What are success/failure factors of public goods and ecosystem services provision?"**

## The methods

- Identification of the environmental and social benefits in the case study area;
- Analysis of Socio-ecological system, understanding synergies and barriers of the environmental and social benefits provision (in-depth interviews);
- Approval of findings by stakeholders (focus groups). Information sources and interviewees were questioned based on theoretical background stemming mainly from theories of institutional economics (Ostrom 1990) and theories of collective action (OECD 2013).

## Results of the Czech case studies

### CZ-1 Biodiversity rich meadows in White Carpathians, East Moravia

Stakeholders coordinate their activities in a "collective action": biodiversity rich meadows are managed through partnerships of two ministries, NGOs, and farmers. NGOs play an important role in filling the gaps in management provided under state policies. There is a certain fragility of participation in collective actions. This is because although values are shared over the environmental and social benefits, this is only partial, because farmers's first motivation is economic and the second the environmental and social benefits values. Low trust in the group and low reciprocity cannot fully overcome the difference in values. Therefore conflicts arise for example when the Landscape Protection Area Administration asks for too demanding contracts with farmers, who are dependent on the support. The Landscape Protection Area Administration representatives are not experienced enough to assess the real impact of contracts on farmers.



### CZ-2 Birds and amphibians support on wet meadows, East Bohemia

#### The project „Ptačí park Josefovské louky“

Activities are extensive grassland management, irrigation system management, small ponds building, and educational activities. The main institutional change consisted of: acquisition of part of the grassland by NGOs, creation of a working group, and the agreement between NGOs on the common approach, agreement with farmers on the grassland management, agreement on restoration of irrigation systems, and also between users of water (a small water power plant is also involved). The partnership is quite strong (e.g. including trust, reciprocity, values sharing) between NGOs and relevant bodies on local level (e.g. local government), but weaker with farmers who fear the consequences of regular ground water level increases and late cuts on their farming.



### CZ-3 Restoration of forest: guided succession, North Bohemia

#### The project „Nový prales“

The process of conversion of a commercial forest to a semi-natural forest consists of cutting some old spruces, planting different species of trees, protecting them, letting old trees to die and educating the public. Different stakeholders were motivated by the leading NGO to contribute to the process of restoration by financial means or by their work. The main institutional change is the change of property rights – the NGO bought the forest land to first get freedom for the conversion of the forest (in compliance with the rules of Law on forestry) and second to build trust and reputation (also through transparency) in order to get support from general public to raise funds.



## Conclusions

Common environmental benefits and building reciprocity between stakeholders in collective action facilitates the increase of species' biodiversity and ecological stability. The main social benefits are educational and community experience. In all cases it was necessary to build trust among stakeholders in order to attract long term support – the need remains high. A collective action was needed to orchestrate both private, community and public support. Two cases, CZ-2 and CZ-3, have a common key point in buying the core land by the leading NGOs for their „pilot“ projects. The CZ-1 case can be distinguished by its dimensions - hundreds of square kilometres of strictly protected high natural value grasslands, and strong economic and social impacts on local farmers.