

# CASE STUDY

## "BIODIVERSITY RICH MEADOWS" (CZECH REPUBLIC)

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## 1 Introduction: What is the case study about?

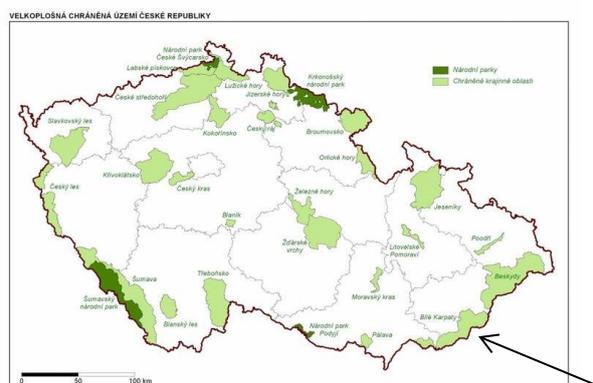
The subject of the case study is the provision of one ESBO which has a form of almost pure public good: biodiversity in grasslands of the White Carpathians Mountains (PLA - Protected Landscape Area with its Management plan and administration). Grasslands are managed mainly by farmers but also by an NGO. This ESBO has some limited potential for tourism, because grasslands are part of the landscape scenery, which is attractive.

The main research question was: “What are the success factors for ESBO provision identified, using the SES and Ostrom framework for institutional analysis?”

The high biodiversity of meadows was created by generations of extensive small scale farmers managing a high number of small plots. During the communist time the plots were merged to form large meadows/pastures and fertilisers were applied. The biodiversity decreased and the traditional farming was lost there. Now, a combination of large/medium farms and small (hobby) farmers take care of the grasslands. Also one NGO is helping to manage some of the resource.

The White Carpathians are located on the border with Slovakia, in the South-East of the country and their total area is 715 km<sup>2</sup>. The plant communities of biodiversity rich meadows/pastures in the Southern part of the White Carpathians are adapted to rather dry and warm weather and are one of the richest in Europe; and this was selected as the case study area.

**Figure 1:** Location of White Carpathians in the national territory among other protected areas



Source: Geographical portal (<http://www.hajduch.net/cesko/priroda/ochrana-prirody>)

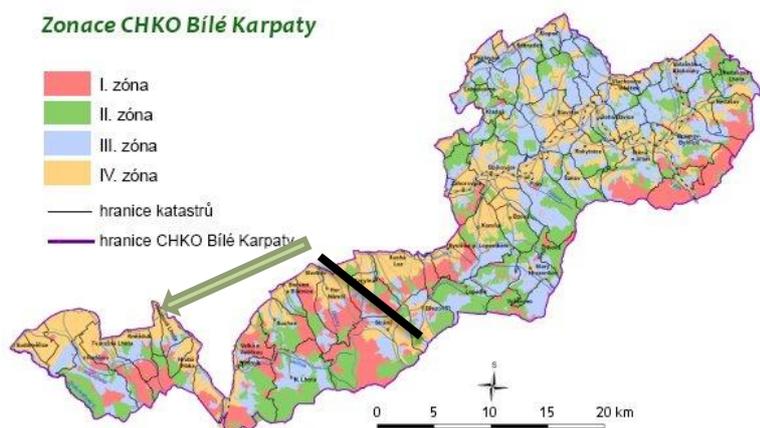
Legend: dark green = national parks, light green = Landscape Protected Areas (LPA)

The south part of the LPA was selected after consultation with the Local Administration of LPA (LAPLA). The reasons were:

1. the differences in plant communities and exceptional value of grasslands there, but more importantly
2. the distinctive mentality of inhabitants (including farmers) in Northern and Southern parts of the area (source: LAPLA representative), meaning that the SES would be different, between these two.

The main stakeholders on national level are the Ministry of Agriculture (MoA), Paying Agency (PA), Ministry of Environment (MoE) and its Nature Conservation Agency of CZ (NCA). On meso-level the main stakeholders are: the Landscape Protection Area Administration (LAPLA), farmers, NGOs (mainly a local branch of Association of the Czech Union for Nature Conservation), the regional office of the Paying Agency. Indirect local actors would include the local population, other NGOs in tourism and food processing of local products, and tourist information centres.

**Figure 2:** Case study area in the White Carpathians



Source: web site of Agency for Nature Conservation ([http://nature.hyperlink.cz/Bile\\_Karpaty/](http://nature.hyperlink.cz/Bile_Karpaty/))

Legend: red – zone I, green – zone II, blue – zone III, yellow – zone IV. Zones I and II are the most valuable.

Farmers and NGOs (71 farms/NGOs, of which 17 manage over 40 hectares) manage in total 3,972 hectares of grasslands there. Only 7 farmers and one NGO manage the most valuable sites with significant areas (source: LAPLA representative).

The ESBO in focus is biodiversity and the main activity is biodiversity rich grasslands management for both economic reasons (suckler cow grazing) and for maintenance of the ESBO. Because of the low productivity of this marginal region and potentially conflicting interests, some level of collective action is needed to reach acceptable conservation status of the grasslands. The study was focused on attempts to achieve collective action regarding meadow management in the region. Interviews were carried out with LAPLA, farmers (those managing the most valuable grasslands) and briefly also with the NGO. The approach was based on methodology developed by Elinor Ostrom (institutional analysis) and also the Socio-Ecological System concept, and was focused mainly on the action situation and related factors. The questionnaire was mainly focused on key factors influencing success of collective action. The rest of the study was based on desk research from a rich literature and previous research in the area. Outcomes of the interviews were verified during the focus group held in Veselí nad Moravou on 7 July 2016.

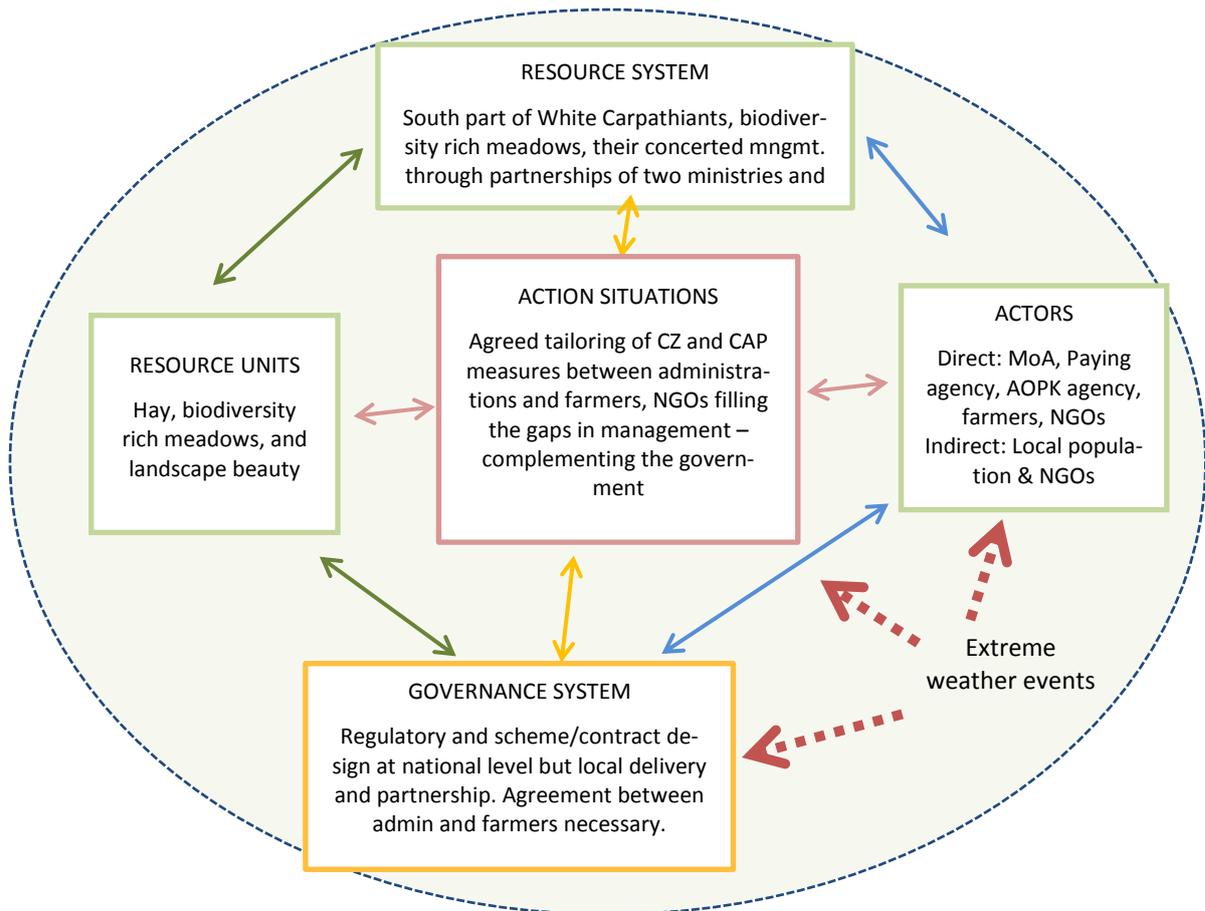
Actors in the action situation operate under governance from national level (law 114/92 Coll. On nature protection, support schemes under Ministry of Environment and CAP – Agri-environment measure). On meso level, actors tailor the national schemes to the local situation

which is under repeated uncertainty about MoE budget level (an agreement is necessary between farmers and state administration) and find a way to manage grasslands at risk of abandonment/lack of management. The main changes in past were the introduction of the Law on Nature Protection (1992), the later introduction of supporting schemes (first national and later, agri-environment measures under CAP), and still later, changes in these supporting schemes.

Information sources were analysed and interviewees were questioned using methods mainly based on theories of institutional economics Ostrom (1990), Ostrom (2005), McGinniss and Ostrom (2014), also theories of collective action (OECD 2013). Six key farmers, two employees of PLA administration, and one NGO representative were interviewed. One focus group and presentation of results to leaders of PLA administration was carried out in order to verify the results of the survey.

## 2 Definition of the social-ecological system (SES) studied

### 2.1 Figure of the SES, using the SES Framework



Outline of the main structure of the SES to be sketched out for each CS  
(adapted from Ostrom and Cox 2010; McGinniss and Ostrom 2014)

## 2.2 Short characterisation of key drivers/motivations

For the joint provision of the main ESBO (biodiversity of grasslands) the economic driver is extensive beef cattle grazing, which has for several years been in significant financial loss (Camska, Prazan 2016), such that the level of provision is not sufficient (abandonment in 90s – source: LAPLA representative). This concern is expressed in several policy tools supporting the ESBO provision. The main drivers of provision are therefore environmental (national) and agri-environmental (EU) policy tools (Camska, Prazan 2016) in order to ensure sufficient and suitable management of the resource. These policies influence the ESBO provision together with other policies such as CAP Pillar 1 Direct payments and Pillar 2 LFA payments (both under CAP). The dependence on public support has a great negative effect especially in the less favoured areas (e.g. in White Carpathians), where some farmers feel like slaves: “To be in an organic farming I feel like prostitute, because I am dependent on the support” (farmers during interviews, at the focus group, Prazan 2014a). The value of the biodiversity was recognised in 1996 when this area was put on a list of the Biosphere Reserves of UNESCO. Also it was shown that the Czech population valued the biodiversity provided by agriculture on national level, in valuation surveys (e.g. UZEI, IREAS 2013).

## 2.3 Description of other important variables chosen

According to the Czech Statistical Office (2016) there is a rather stable population in the region concerned. The area is politically stable, as is the whole country. Inhabitants, farmers, environmental NGOs, and also the relevant state administration (LAPLA) share the values concerning biodiversity rich meadows to a great extent (source: farmers, LAPLA representatives). The societal demand for biodiversity in agriculture was measured indirectly by surveys as biodiversity is not marketed (UZEI, IREAS 2013) and in the case study area, linked only weakly to tourism (source: LAPLA representative). The users of the ESBO are local, regional, and international (due to the area being recognised by UNESCO).

The value of the biodiversity-rich meadows was created by generations of small scale farmers with technologies which are now not used (e.g. because of competition, life style change). The conditions were, for example: low intensity of production, small and diverse plots, different times of grass cutting on different plots generating micro-scale diversity. Current management tries to imitate these conditions to some extent but on larger plots and with large machinery (source: representatives of LAPLA, farmers). The innovation is in tailoring the management supported by state and EU policies, requiring agreement of farmers and LAPLA on each grassland plot, which requires quite close co-operation. This is supported by GIS technology. The Nature Conservation Agency designed a typology of grassland habitats which was classified according to areas with the same management requirements. A special layer has been created in the Land Parcel Information System (LPIS) and the LAPLA administrator used the map thus created to offer, for each plot of high value, a suggested scheme under the AEM<sup>1</sup> and farmers could then negotiate or accept the offer. At the same time, LAPLA indicated in the map the plots which are so valuable that they should be excluded from AEM and reserved for Program of Landscape Management (PPK) – a full tailored management agreement between farmers and LAPLA. This tool enables management to be tailored to the specific condition of each plot,

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<sup>1</sup> Agri-environmental Measure – the measure under Rural Development Plan for period 2007-2013, later called Agri-environmental-climatic Operation.



and also helps to build scope for collective action among actors managing adjacent and homogenous types of plot.

Another innovation is a co-operation of LAPLA with the NGO, which provides management of those grasslands which were in past abandoned or still are neglected by farmers. The area is generally marginal for production (mountains, not enough rainfall) and with increasingly extensive management, its productivity decreases.

LAPLA have quite significant space for manoeuvre, they can influence about 50% of decisions on the spot concerning strategic questions such as targeting of funds and agreements, and specific options for grassland management (source: LAPLA representative). But the farmers does not share that feeling and believe that LAPLA staff have too small power to change rules, which are coming from national level (source: farmers at the focus group). The main actors are: LAPLA, working with farmers, and the NGO providing grassland management. Individual actors are not organised and do not cooperate directly on grassland management. Farmers perform some kinds of cooperation, which consists mainly in helping neighbours in case of need, but co-operation for mutual benefit does not happen and is not expected (source: farmers, LAPLA representative). Therefore the network is built around LAPLA, who provide contracts directly (under the national policies) or approve contracts under EU Agri-environmental measures at plot level, with farmers and the NGO. A large part of the land is rented, which creates in some parts of the region competition for land and even rival behaviour between farmers. For the production unit the property rights are clear when the plot is under a rental contract, but it is not so clear for biodiversity as a public good, which is the reason for taking part of the property rights from farmers. This is done by a complex system of rules for implementing both types of management contracts (national – Program for Landscape Management - PPK and EU – Agri-environmental Climatic Operation - AEM). PPK is a fully tailored annual contract in which management is agreed for each plot separately (with an unstable budget that can vary from one year to another), while the AEM schemes are contracts fixed for at least five years with predefined management used as selected from a standard menu, and with stable rules (and a budget pre-approved for seven years).

With two kinds of contracts, farmers feel trapped in the following situation: LAPLA has a right to exclude the most valuable grasslands from AEM schemes and to offer a PPK contract instead. But the PPK contracts are more demanding, management costs are sometimes not sufficiently compensated and the obligations are associated with several uncertainties (e.g. contracts are signed too late in the season for some conditions). The option is to accept all the conditions of a PPK contract or to give up support for management altogether (this has never arisen, in practice in this area) and receive SAPS and LFA (if applicable) on particular plot. In addition there have been some cuts in support levels, for example when a combination of AEM and Organic farming happens on one plot so double-funding must be avoided. Another change in policy was an increase in the minimum LU units per hectare required as a condition for participation in the grassland AEM. Such changes created a turbulent situation in the attitudes of farmers towards cooperation with LAPLA on grassland management, which had been previously rather stable. As mentioned by one farmer: “Finally after decades the cooperation with LAPLA was excellent, we adjusted the type of production, but now we are again in a struggle, because LAPLA was not able to defend these established policies for us” (source: interviewed farmer).



There is no clear leadership in grassland management. As an informal leader, one woman has made a sustained conservation effort for about the last 30 years, she is an enthusiast and powerful person (source: LAPLA representative). Among farmers there is no recognised leader but one or two of them have some leadership capacity and ambition, but they claimed to be too tired of the struggle to take a lead (source: interviewed farmers). The most powerful actor in the area is perceived to be LAPLA, not recognised by farmers as one uniform organisation, but as an organisation of different people who each carry different credit for aspects of the collective action (source: interviewed farmers). Despite quite accountable system of compliance check from Paying Agency, some farmers have a feeling, that they are regarded as cheaters even before compliance check.

Therefore farmers trust some employees of LAPLA quite a lot, but not so much LAPLA as a whole. On the other hand, LAPLA trust to some farmers more and some less, but the level of general distrust is still high enough to make collective action difficult to perform smoothly, notwithstanding the high degree of shared values concerning the ESBO, between main stakeholders. Advice to farmers on grassland management is available but farmers are not aware of this, they assume it is only available by special request. When LAPLA representatives heard this farmers' attitude the response was: "But we have produced and distribute booklets on grassland management to farmers" (source: LAPLA representatives). Farmers are not showed the results of their management effort (e.g. outcomes of monitoring) in the form of changes in biodiversity as a result of the common effort (source: LAPLA representative, farmers).

Disagreements arise mainly in the case of negotiations on the selection of AEM schemes and even more on the application of proposed management under PPK. Disagreements occur because farmers feel inconsistency by LAPLA in dealing with them (different approaches dealing with farmers, in respect of the time and space/persons allocated to the task). But most of the interviewed farmers did not see real conflicts with LAPLA. There was no formal conflict resolution system operational for rather long time. Lobbying is not performed by stakeholders, except for interventions direct to the Ministry of Agriculture in cases of emergency (e.g. weather conditions not allowing observation of the contract rules). The attitudes of farmers to collective action with LAPLA vary to some extent (e.g. some trust LAPLA more than others), but the key observations are similar and when considering only those farmers who are dependent on the resource system, these are rather consistent in attitudes influencing collective action mentioned above (e.g. trust, values sharing). There is some link to other ESBO, namely unique landscape (this is of value for tourism there), but biodiversity is not the most important component of the landscape's attractiveness.

The key point for viable collective action in this case is being able to recognise the value of reciprocity. As mentioned by several interviewees, the only motivation to start considering both sides' interests was support in the form of contracts for grassland management. Without that interviewees did not recognise the strong need to pursue reciprocity and sharing costs/benefits between the stakeholders, for management.



**Table 1:** The key variables studied in SES

Actor (A)	LAPLA White Carpathians, Farmers, NGO - CSOP
Technology used	Cutting grass, hay making, grazing
RS	Grasslands (extensive, low or no fertilisers)
Sector (RS1)	Agriculture
Clarity of system boundaries (RS2)	Area, found in maps, in landscape (high)
Size of resource system (RS3)	Total grassland area 3972 ha, most valuable appr. 900 hectares.
Human constructed facilities (RS4)	Fences, barns, shelters
Productivity of system (RS5)	tonnes/hectare (area)
Predictability of system dynamics (RS7)	Medium to high
Storage characteristics (RS8)	Storage possible as hay or heylage s fodder for winter or sale
Location (RS9)	South-East Czech Republic-White Carpathians
RU	Hay/grass as biomass
Mobility (RU1)	No
Growth or replacement rate (RU2)	Growth of grass area
Interaction among resources units (RU3)	Several but not relevant for the study (water/carbon storage)
Economic value (RU4)	Value of hay as fodder or as commodity
Number of units (RU5)	Tonnes of hay/grass
Distinctive characteristics (RU6)	unique geographic location
Spatial and temporal distribution (RU7)	Spatial and temporal variability of the grassland – rate of growth.

Source of the table structure: Hinkel, et al. (2015)

## 2.4 Discussion of the SES

There are two main drivers: 1. competition in hay/beef production and 2. policies for ESBO - biodiversity - protection. The governance of ESBO provision has a purpose to facilitate finding the right balance between the production of private and ESBO – public - goods. Actors in the action situation negotiate to find a way how to utilise/manage the resource system in a way that allows both types of production for benefit of all stakeholders and those who benefit from the production. As a result there has been an increase of ESBO provision during the last 25 years but some farmers complain that this is too much at the expense of private goods' production and losing too much of their property rights (source: farmers interviewed). But overall during the 25 years all stakeholders have achieved a kind of balance, adjusted their farming and started to appreciate that the collective action could bring benefits for all of them.



Recent changes in the rules/institutions caused a turbulent situation between farmers and LAPLA, in which the collective action may be challenged again (source: farmers, LAPLA representatives and NGO representative).

## **2.5 Common aims, conflicting interests and goals**

It is quite clear that most of the stakeholders interviewed believe that NGOs, LAPLA representatives and most of the farmers share the values of this particular ESBO. But they do not share the values of the farming viability fully. Several interviewees mentioned the general public value the biodiversity rich meadows high, but this was corrected by the focus group, and final conclusion is the general public does not recognise the value of biodiversity enough, but the awareness is growing. The most frequent reason for disagreements is negotiation about the management of the most valuable grasslands, which is demanding and sometimes not adequately rewarded. Most of the interviewees believe this is not a real reason for conflict (source: farmers, LAPLA representatives and NGO representative). But the changing rules, apparently not well communicated and explained to farmers, caused new obstacles to the participation between the key stakeholders. Another potential source of conflict is not fully consistent behaviour of LAPLA, because the organisation is not consistent and some stakeholders mentioned it does not have reliable and transparent procedures. There is no formal conflict resolution system in force, on which both sides could rely (Prazan 2014).

## **2.6 Other issues arising from SES analysis and context/case study specific aspects/issues**

This survey and previous research allow us to assume that there is no tradition between state organisations and entrepreneurs/inhabitants to build reciprocity, when trying to start collective action. And even despite significant progress over the last 25 years, the changes in rules were able to show that this collective action and corresponding values of co-operation were rather fragile.

The compliance checking process for contracts differs according to type of contract. In the case of AEM this is quite precise and strict, but farmers are quite satisfied with the reliability and predictability of the system (Prazan 2014a) ), but despite that some farmers complained on low “flexibility” in the Paying Agency judgements. In the case of PPK it is different, the compliance control is not so strict and precise, and it is therefore less predictable for farmers (source: farmers, LAPLA representatives).

The limiting factors for effective collective action on LAPLA’s side are a lack of professional knowledge in farming, lack of long term knowledge of the situation in the local area (history held in the minds of local people is not accessible to frequently changing LAPLA staff), which undermines the farmers’ trust. One LAPLA representative reported that they cannot assess whether farmers are over or under compensated, because they do not know the real impact of their management requirements on the farming systems (source: LAPLA representative, Prazan 2014a).



### 3 Status of the SES and potentials

#### 3.1 Description of the SES

Analysis showed that the SES subsystems have become much more integrated than 25 years before, where only restrictions and penalties were available to support provision of the ESBO. Farmers and LAPLA and the NGO are now much closer, but the contracts and quite demanding management of the resource system have become quite a significant burden for farmers. On the other hand, LAPLA representatives face, with some farmers, inconsistencies and a lack of willingness to cooperate and there is quite low trust, but these farmers are no longer in the majority. Because farmers feel a little bit empowered, as would be expected in a framework of 'voluntary' agreed contracts, they regard the relationship with other stakeholders as voluntary but with relatively little room for manoeuvre for them. It means that even though the collective action has its deficits, the ESBO is provided in a reasonable quality and quantity and is still improving (source: LAPLA representatives and NGO representative).

#### 3.2 Relationships between farming and forestry, and the quantity and quality of ESBOs

The farming is traditionally extensive in this area and the contracts for the management of grasslands have led to even more extensive management. Beef production is in deep financial loss in the Czech Republic, therefore any kind of support is welcome by farmers and they join the contracts on most of their grasslands. As a result, the quality and quantity of ESBO-biodiversity increased in the case study area (source: LAPLA representative). The high biodiversity is represented by flowering meadows and pastures, where a high number of rare species could be seen (e.g. high number of orchid species, in locality Certoryje of size 6 km<sup>2</sup> was found in 2004 in total 600 species of plants<sup>2</sup>) and typical structure of the meadows/pastures with scattered trees/shrubs. Without the supporting policies, several interviewees believe there could be a massive land abandonment and biodiversity loss. The situation is long term not sustainable. The reason is the beef production is not economically viable and the management of resource system is fully dependent on the public support. But farmers are still interested in agricultural production and usually produce beef (mostly sold as young cattle for finishing abroad) and partly hay for market (limited amount). In order to sustain the grassland management, the new arrangements of sharing costs/benefits among stakeholders should be found in future in the area.

#### 3.3 Key motivational, institutional and socio-economic factors

There is still a lack of willingness to find the right balance of reciprocity in the relationship between stakeholders and also the trust is not high enough (source: farmers, LAPLA representatives, Prazan 2014a). Both sides of the contract between stakeholders should feel that there is good will on the other side. All changes of policies/institutions should be well prepared and potential effects estimated before they are implemented and also well explained to all stakeholders affected (e.g. in the case of cessation of compensation for legal obligations of farming). The beef production is making a loss and farmers are using all means (including support) to seek to make their businesses more viable. It should be taken into account that direct payments and LFA payments were also available to most of the farmers or land operators in

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<sup>2</sup> Jongepierová (2008)



the case study area. But these are not targeted to ESBO provision. Nearly all farmers have long term interest in farming there and are therefore willing to find a solution. At the same time, only a minority of stakeholders reported that co-operation is just a rational and pragmatic choice without any additional value to the final economic benefit (source: farmers, LAPLA representatives, NGO). Therefore there is potential for improvement of the collective action. But it should be taken into account, that informal institutions (e.g. trust, values, norms) change only in the long term and there is always a danger of inconsistency in development of formal rules which change more quickly (Prazan 2014a). This most recent inconsistency created a lot of tensions and non-compliance and has been shown to be one of the obstacles to collective action improvement. All stakeholders have already some experience of good results of collective action, but also a lot of disappointment with other stakeholders. One of the important factors is whether the actor is an enthusiast concerning the ESBO in question. Farmers are more open to those LAPLA representatives who are really by heart biodiversity lovers, and are able to put in a lot of effort, and give up personal resources for its sake, as opposed to those who are just employees of LAPLA uninterested in the ESBO (source: farmers).

### **3.4 Levels of provision, trends and determinants**

Biodiversity monitoring is carried out every year by botanists in LAPLA using typical biodiversity indicators. According to LAPLA representatives the ESBO is provided in increasing quality (therefore the positive trend) and quantity (achievements exceed targets, so far) (source: LAPLA representatives, NGO). The gaps are in provision of these positive results to farmers, to increase their sense of ownership over the achievements of their effort.

As mentioned by all interviewees, the general public appreciate the value of ESBO and also most of the farmers. Most of the staff of LAPLA are also enthusiasts appreciating the ESBO.

The key determinants of ESBO provision are: the capacity of stakeholders to improve collective action, trust building, information sharing, and value sharing, purposefully sharing the costs and benefits (reciprocity of the relationship). LAPLA staff should build their knowledge of farming and its economics, in order to get greater trust and respect from farmers.

### **3.5 Relevant governance arrangements and institutional frameworks**

There was a successful effort in the creation of collective rules at national level between several governmental actors (MoA and MoE and Agency for Nature Conservation). The coordination of different policies designed at national level is therefore rather good and motivates actors to participate in the action situation, but experience shows, that any significant change in rules usually creates difficulties in application/adjustment of rules at an operational level and sometimes this is not possible to achieve successfully. Therefore there should always be rigorous testing of new collective choice rules concerning their effects on ground and in advance (e.g. new level of payments, change of criteria for participation in contracts).

In general some farmers complain about support in general, because they feel like slaves, who cannot afford to refuse the contract and corresponding support (source: farmers, also Prazan 2014a). This comment links to the fundamental issue of the lack of financial viability of the basic farming systems upon which their businesses have been based, up to now, meaning that they struggle to keep going in case the CAP support measures are changing (e.g. reduction in payments and changing rules).



The collective rules designed at government level on the integration of policy tools (different contracts AEM and PPK) represented a positive step forward but because of high complexity also created new difficulties in co-ordination on the ground, especially it required that among all institutions, mature and collective action should be well developed, which was not the case. It was the case especially a few years after the introduction of this change (source: farmers, Prazan 2014a). Now the delivery of the policy is running better. Farmers have a negative attitude to the co-operation in general when such complex arrangements do not work smoothly (e.g. delays in implementation, lack of knowledge on farming and impacts of management on farming).

### **3.6 Other context/case study specific aspects/issues**

Collective action in this context presents LAPLA as the initiator, who address farmers with an offer of contract (letter with PPK offer), or when farmers find the proposals for management on their fields on LPIS online (AEM contract), and call LAPLA to negotiate the management. Therefore this is a specific type of collective action, where all actors do not create groups with the same aim, and design rules for its operation. In this case, the collective action is initiated by LAPLA for its interest, while offering relevant rewards in the hope that there will be long term cooperation and mutual satisfaction.

## **4 Conclusions derived from analysis in Steps 1 and 2**

### **4.1 Key findings on the particular SES and its potentials**

Farming produces ESBO in joint production, but in order to meet societal demand (appreciated by local, regional and international community), the production of ESBO is also supported under contracts. Actors meet in the action situation, in which they agree on management of each valuable grassland plot, and carry out relevant contracted management. There is a significant effort to coordinate the two policies providing two different contracts. The outcome is increasing quality and quantity of ESBO. But this is at the expense of some social capital and the collective action does not work smoothly. The significant economic decline in the profitability of beef production is an important context for this whole process.

In the case of all stakeholders, there should be increased awareness and knowledge about the ESBO provision. LAPLA should build its knowledge of farming and its economics in order to get the respect and trust from farmers and to ensure right decisions concerning the management requirements. Farmers should be made aware of the achievements of the management of their sites in the region in order to increase their sense of ownership of the conservation agenda. In case of cease of the support, farmers reported they would reduce their effort only to observation of law on nature protection, but would not put more effort in meadows conservation, and would abandon some marginal land which is not suitable for production.

### **4.2 Governance arrangements and institutional frameworks**

Policies and governance arrangements were designed to integrate environmental and agri-environmental policies and required local actors to discuss the proposals for management on ground. Because the management is decided by LAPLA, these are tailored to local needs. In



the case of PPK the tailoring is really detailed (e.g. could be changed during the season according to weather) and AEM schemes are tailored according to type of habitat and type of management and menu of specifications. This step was a great innovation which required mature institutions and well working collective action. The process is not smooth because of several reasons: lack of farming knowledge in LAPLA, strategic behaviour of farmers (Prazan 2014a), insufficient trust between actors, low level of reciprocity in contracts (especially in case of PPK), changes in rules without considering outcomes on ground and without explaining it to actors, and others. Another reason is in case of PPK too late signature of contracts during the season (source: farmers in the focus group). It was reported that management prescriptions under PPK arrived in some cases in the middle of the season and there was no time to discuss that (source: farmers on the focus group).

CAP reform influenced the collective action by initiating changes in collective choice rules (e.g. what to compensate and what not) which were not implemented in an insensitive way (e.g. insufficient impact assessment, lack of discussion at local level). This does not influence the ESBO provision short term but has been at the expense of social capital and this could influence future decisions of farmers and provision of ESBO in the longer term.

The national/EU policies play a pivotal role. They initiated thinking about reciprocity in collective action between actors. On the other hand there is still potential for improvements by way of implementation.

#### **4.3 Other enabling or limiting factors**

Public/private partnership was initiated by collective action, which started by introduction of contracts.

#### **4.4 Reflections on the case study methodology used and potential improvements**

The complexity of action situations required deeper study and more time to carry it out. There was one proposal for possible further collective action of farmers in the region concerning farming in PLA.

### **5 Research and action mandate for Steps 3 and 4**

#### **5.1 Agreed objectives of activities to be undertaken with initiative/stakeholders**

Deeper communication of the obstacles to effective collective action and creation of some new arrangements in collective action or at least to address the obstacles.

There were two farmers (out of interviewed) and all key LAPLA representatives believing in and supporting the idea of improvement of the collective action in the area.

How to address the obstacles to smooth collective action?

How to overcome the lack of trust in order to discuss and introduce changes in the cooperation between actors in order to design new collective action?

There are LAPLA representatives keen in searching for innovations in sharing the costs/benefits associated with the ESBO provision in order to overcome low sustainability of the current system (e.g. too dependent on public support). The option was for example to invite other



stakeholders, who benefit from the biodiversity and landscape (e.g. tourist facilities - hotels), and discuss with them sharing the benefits and costs of the grassland management with farmers and LAPLA (e.g. using local products, sharing costs of grassland management).

## 5.2 Innovations, impact, transferability, potential risks and research bias

There is a need to distinguish the specificities of this case from generally applicable findings. There is general interest among stakeholders to work on the issue further.

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## 7 ANNEX

### 7.1 Documentation of research and action progress

Actors interviewed

<b>Type of actor</b>
LAPLA (local leader, botanist)
LAPLA (dealing with farming)
Six key farmers
NGO

Focus group was organised 7 July, 2016. There were four farmers, two representatives of LAPLA and two representatives of PEGASUS team.

Later the case study results were presented to leaders of LAPLA (on 9 August), and the results were verified and at the same time disseminated.

Pictures from focus group:



Picture from the case study area



Source: [http://nature.hyperlink.cz/Bile\\_Karpaty/Certoryje.htm](http://nature.hyperlink.cz/Bile_Karpaty/Certoryje.htm)

## 7.2 Supporting data and statistics

### Sketching of the SES within a project area

<ul style="list-style-type: none"> <li>Who are the key people/organisations in terms of making relevant decisions in the CS area?</li> </ul>
<p>MoA – national; AOPK – national; regional/meso level Regional Paying Agency NGO</p>
<ul style="list-style-type: none"> <li>What are the key (land use-related) environmental assets in this CS area</li> </ul>
<p>Biodiversity rich meadows in protected landscape area – i.e. Species and habitats with predominantly PG characteristics.</p>
<ul style="list-style-type: none"> <li>What are the key (land use-related) social assets in the CS area</li> </ul>
<p>Landscape character and cultural heritage and also outdoor recreation</p>
<ul style="list-style-type: none"> <li>Who generates/manages these assets/activities?</li> </ul>
<p>Farmers and on part of the area also NGOs</p>



<ul style="list-style-type: none"> <li>• Who benefits from these environmental and social assets/activities?</li> </ul>
<p>Local inhabitants for landscape and local identity, visitors-tourists for landscape diversity and beauty.</p> <p>Biologists and well educated people for ecological diversity.</p>
<ul style="list-style-type: none"> <li>• Is the system a largely state, private or hybrid network/governance system?</li> </ul>
<p>It is hybrid governance system (contract between government and farmer on meadows management as governance structure) complemented by contract between government and NGOs for management of some plots not managed under previously mentioned contract.</p>

