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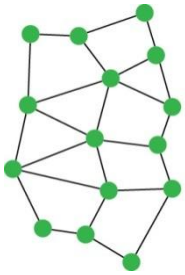
Regional development case studies

(Un)sustainable solutions within the stakeholder negotiation processes

Edited by Jana Dlouhá

4/30/2014



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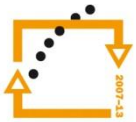

OP Education for Competitiveness

INVESTMENTS IN EDUCATION DEVELOPMENT

Published as part of the MOSUR project with the support of the European Union-funded OP Education for Competitiveness and the Czech Ministry of Education, Youth and Sports

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Introduction

Jana Dlouhá

Regional issues and sustainability

Solutions on regional level require negotiation process, and in successful global cases (those which lead to some improvement) all major stakeholders were involved. Such successful outcome was described especially in the case of Montreal protocol where environmental problem was identified and described by scientists, and then raised as a political issue – negotiations started on a global level and included all major actors. They were those who finally implemented proposed measures which included considerable transformation in many business areas.

Regional environmental problems have usually global component (generated in global economic, social or natural environment) but are greatly influenced by local economic, social or natural environment. Solutions must be sought on this regional or local level; global solutions contribute a small deal but on the other hand are sometimes greatly influenced by regional state of environment. One thing is similar: involvement of stakeholders is crucial for success on this regional level as well.

Regional solutions – majority of decisions are made on regional level, this is also where individuals could intervene. Also NGOs are active on regional or national level and there are only few operating internationally, the scope of their activities being mostly from the legal and human right point of view (they pay attention to the directives and international mechanisms).

In sustainability debate, mostly technical point of view is being discussed. **Social science** offers unique perspective (also because technical approach has been failing – offering solutions which still depend on our choices, taking into consideration extra costs they require or restrictions they bring). Environmental perspective is however not universal, there are various approaches and simple spreading environmental worldview does not work – different viewpoints meet and final standpoint should be negotiated. Numerous conflicts appear with no solutions good for everyone (sometimes for nobody). It this volume, we will respect **diversity of environmental values** and will try to understand how these values can be translated into real strategies, how they are respected within the social debate, and how do the processes of communication between these views develop in practice (nature of the potential conflicts etc.)

Respect to diversity of viewpoints brings into focus of attention principles of **deliberative democracy** while many decision-making processes rely on the “best solution” (and therefore CBA is frequently employed), within deliberation also marginal opinions might come to voice. This should require environment where **common interest** is defended and debate is encouraged by independent facilitator having in mind principles of sustainability. In practice, however, most sustainable solutions are often overwhelmed by strong (usually economic) interests and power relations prevail over fair relationships. This causes **conflicts** which often hinder *any* development in the place and region, and could be described as loose-loose results or solutions.

As environmental problems and sustainable solutions are highly complex, **communication** is identified as a core principle of success in practice. In any problem, different factors play a role, and in its reflection diverse viewpoints meet, different disciplines and discourses have something to say, in practical part many social groups are involved. Solutions, if they should have real impact and be “sustainable” over time, must be negotiated and finally supported by affected actors. There are numerous methods how to facilitate negotiation process on regional level in practice; for this some theoretical insight plus experience with existing cases (either successful or demonstrating a failure in communication) is needed. To show such good and bad practices in regional development from communication point of view.

Integration of Actor Analysis in Case Studies for (regional) Sustainable Development

Simon Burandt

Abstract:

In this article, the method actor analysis of the methodological toolkit of social and sustainability sciences is introduced. Elements of an actor analysis should be part of any case study which is done in real world contexts and human systems, as e.g. processes of sustainable regional development, decision-making or transition processes are controlled by social players and these are the ones who finally decide and interact. These processes can be investigated with practical relevance in order to contribute (information) for sustainable solutions, for examples how to steer regional development processes, how to solve existing conflicts and to deliver information for strategy development.

The method of actor analysis is introduced briefly, and different options for implementation in practice are provided. The described steps of an actor analysis can be read as guiding line for implementing an analysis, but also the examples given are intended to show the potential and different options which aspects of social interactions could be in focus of investigation and how ideas or solutions with practical relevance can be generated.

How many culs-de-sac have to be passed to create a good national park?

A case study from the Šumava National Park

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Introduction

Owing to historical reasons, a mountain range along the Czech-German border, the Bohemian Forest, has become the largest area of natural wilderness in the Central European cultural landscape. This fact has gradually emerged during the past half century, when nature conservation eventually reclaimed the most valuable parts of the Bohemian Forest as national parks (NP) (Fig. 1). The Bavarian Forest National Park was declared as the first German NP already in the 1970 and largely extended in 1997 (to the present area of 24,218 ha). The neighbouring Šumava Protected Landscape Area (PLA) was declared on the Czech side (total area of 167,688 ha) as early as in 1963. In its territory, the Šumava National Park (68,064 ha) was established in 1991. More than two decades after removing the 'Iron Curtain', however, an effective trans-boundary cooperation and nature protection of the Bohemian Forest remains rather a dream. What has gone wrong, in particular on the Czech side?

Since the very beginning of the Šumava NP, most of the setting of its vision has been reduced to never-ending discussions about an appropriate management of the forests, i.e., 'non-intervention' management versus

'necessary' bark-beetle combat. Yet, to our experience, 'bark beetle' has only been a wildcard issue and there are much deeper and more complex obstacles. This paper is the first attempt to describe the main obstacles and offer some solutions supporting the Šumava NP as a successful and sustainable project.

Historical background

Numerous opponents of wild nature in the Šumava NP used to argue that the Bohemian Forest has been a densely populated cultural landscape with entirely managed Norway spruce forests for centuries. Such unjust arguments ignore the true history, i.e., quite a late colonisation of the Bohemian Forest and rather local impacts of settlement on the forests until the last century. Former people simply had neither reason and time, nor tools and vehicles for exploitation of the upland landscape. As a matter of fact, since a peak in the latter half of the 19th century, the local population had already declined due to gradual pauperisation of that marginal settlement until the Second World War. After 1945, most of the original residents were displaced from the Czech part of the Bohemian Forest and many villages in the frontier area were abandoned, often even intentionally destroyed. Some others were resettled with newcomers that were not familiar with sustainable life in this mountain region at all. They were rather vetted and subsidised for living in the frontier zone during the socialist era. The numbers of residents more or less stagnated between 1950 and 1990 (Perlín & Bičík, 2010). Before the Šumava NP establishment, the local economy was based mainly on extensive forestry and agriculture, whereas the restricted regional tourism then suffered from both the frontier zone and the off-limits military training areas.

Though Czech scholars had limited access and the Bohemian Forest remained largely unexplored until the 1990s, they were aware of its natural value and suggested establishing the Šumava PLA. At that time, there was no political acceptance for establishing the Šumava NP. Some endangered species found refugia beyond the 'Iron Curtain' owing to the extensive forestry, the nature reclaimed the abandoned settlements, while a specific disturbance regime prevented succession on secondary grasslands in the military training areas (Prach et al., 1996, 2000). Moreover, current research on several Norway spruce stands along the frontier range has clearly confirmed that natural old-growth forests are more common at high elevations of the Bohemian Forest than has been expected so far (e.g., Svoboda, 2005, 2007; Janda et al., 2010; Hubený & Čížková, 2013). Thus, establishing the Šumava NP in 1991 was considered a good solution for this marginal region of great natural value. At the same time, in 1990, the former Šumava PLA was included on the list of UNESCO Biosphere Reserves (BR) and the Šumava peatlands became an important Ramsar site. In 2005, the whole region of the Šumava NP became a Natura 2000 protected area, both as an SPA (EU Birds Directive) and a SAC (EU Habitats Directive). As the bilateral cooperation between the Bavarian Forest NP and the Šumava NP Authorities greatly improved during the 2000s, the first transboundary Central European wilderness area of international importance, Europe's Wild Heart, has been proposed for the adjacent core zones in 2008 (Meyer et al., 2009; Křenová & Kiener, 2012).

Zoning

The Šumava NP was established in the most valuable, central and borderline parts of the Šumava PLA, whose remaining area (99,624 ha) became a buffer zone of the NP (Fig. 1). Unlike in many other national parks, including the Bavarian Forest NP, municipalities and their lands are parts of the Šumava NP. There are less than 1,000 permanent residents currently living in the six villages located inside the Šumava NP, whereas the administrative territories of sixteen more municipalities partly overlap with the Šumava NP area (Table 1). The original concept assumed that the strictest nature conservancy regulations would be implemented in the NP, the area with the highest nature value and low human impact, partly neighbouring on the Bavarian Forest NP. Development activities should be strictly regulated in the large core zones of the Šumava NP, as opposed to the buffer area of the Šumava PLA, where an adequate mix of development activities and conservation regulations has been highly welcome, particularly in the villages neglected for decades. This theoretical concept was implemented only in the initial years of the Šumava NP.

Article 4 of Czech Government Regulation no. 163/1991 of 20March 1991, which established the Šumava NP and set the conditions for its protection, says that: "Methods and ways of protecting the national park are differentiated according to the division of the national park into three zones defined according to the natural values." Areas with the most important natural values in the national park should be classified as Zone I (strictly natural), particularly natural or slightly altered ecosystems. The aim is to preserve or restore natural ecosystem processes and limit human intervention in the natural environment in order to maintain this state. Zone II includes the natural areas that were variously influenced by human activities in the past, and now generally require active management, and Zone III includes inhabited villages and adjacent non-forest area, where the main habitats are heavily modified and altered by human activities.

At the beginning, the zoning of the Šumava NP mostly accepted the international concept of zoning as a basic tool for scaling the value and protection of the NP interior. However, in 1995 the zoning was purposely changed: the strictly protected core zones (Zone I) were significantly reduced and fragmented (Křenová & Hruška, 2012), which was strongly criticised by experts, representatives of international organisations (IUCN, Ramsar Committee) and NGOs. During 2004–2005, the Šumava NP Authority proposed a new zoning, which incorporated major recommendations of experts. Unfortunately, this zoning proposal has never been officially approved, because of crude opposition from local communities and regional politicians.

Šumava NP and local representatives

Two decades of the Šumava NP history have shown several critical points that have disabled successful implementation of international (IUCN) standards. The above mentioned problems are remarkable examples of malfunctioning of the Šumava NP Council, a consultative and initiative body pursuant to Act no. 114/1992 (on Nature and Landscape Protection), as well as ambiguous attitudes of the Czech Ministry of the Environment.

Experience from endless negotiations about the new zoning proposal and several other important documents (e.g., new management plan or visitor regulation) has shown that local representatives have often replaced true arguments and real objections with obstinate claims and dictates. Local representatives have very often changed their opinions, thus a lack of mutual trust between them and the NP Authority has cumulated until the recent past.

Firstly, unlike the Bavarian Forest NP in Germany, the Šumava NP has never been given clear and full political support by the Czech government. This fact is illustrated by as many as nine directors within 22 years! (In contrast, the Bavarian Forest NP has the third director in the 43 years of its history.) Thus the Czech directors' position has been unstable and their behaviour has been neither transparent nor consistent. In consequence, both vision and long-term strategy of the Šumava NP remain uncertain and unclear, whereas its budget has largely depended on timber sales.

Secondly, the legal framework for the Šumava NP has been specifically questioned. It was passed by the Czech Government prior to the effect of Act no. 114/1992, which supposes that each new national park is established by a special law. Though the Act explicitly specified all the national parks in existence then, many politicians have often abused that situation. Two more serious problems emerged by the turn of century. After heavy lobbying of private owners and foresters, the Czech Parliament approved direct restitutions of all former municipal forests in national parks. This way, the Šumava NP lost full control over 9.2% of its territory (Šumava NP Authority, 2013), whereas the owners became eligible for financial compensations for decreased income, yet escalating their complaints over 'unjust bark beetle combat' in the surrounding NP forests. The largest parts, including some core zones and long-term reserves, are owned by the municipalities of Kašperské Hory (4,916 ha) and Volary (971 ha). Unfortunately, their management activities often miss nature conservation standards. Indeed, their efforts for excluding the forests from the NP territory have currently increased. Furthermore, regional governments took responsibility and control over the regions established in 2000. Though the Šumava NP has clearly been under the jurisdiction of the Ministry of the Environment, both the regional governments have applied common infringement on the NP forestry, nature conservation, regional development, etc. Regardless of many other development and administrative challenges in the South Bohemian region, regional politicians (inspirited by developers) have focused their main attention inside the

Šumava NP and proposed controversial activities, such as a new ski lift and piste in the core zone of the NP, or commercial canoeing in a unique pearl mussel habitat.

Thirdly, the Šumava NP and PLA Authority and the representatives of local municipalities have never become reliable partners. Since the very beginning, the Authority continued its, rather restrictive, nature conservation approach, often neglecting and ignoring problems and expectations of local people, who largely used to rely on the state paternalism in the past. It took a decade or so before the Authority gradually changed its approach that failed either. Thus, in consequence, the local representatives – largely unready for the new situation in the 1990s, i.e., overall political and social changes in the country, opening of the national border, closure of the military training area, and establishment of the Šumava NP – have easily learnt to say: 'we would like to do this and that, but we cannot do it because of the NP obstacles'.

Under such circumstances, the Šumava NP Council does not create a favourable environment for creative and responsible cooperation between the local representatives and the NP Authority. Mayors of all the municipalities with an area within the NP territory (Table 1), together with representatives of the two administrative regions and the mountain rescue service, are mandatory members of the Council. These 25 members in total form a relevant majority of the Council. The Council indeed is supposed to negotiate strategic documents of the national park, such as zoning, management plan, or visitor regulation. Instead of approving knowledge-based and science-wise solutions for nature conservation and sustainable life, the Council has become a 'board of regional regents' without any accountability. Some full-time mayors often used to act, more or less deliberately, as latent lobbyists for hidden entrepreneurs, developers, or land owners. Some of the Council meetings have served only for tasking the NP directors, or for formal approval of documents fulfilling wishes of regional politicians and developers. The number of scientists, complaining against these practices, was reduced by the political director two years ago to be able control the majority in the Council. The obligatory Council setup in fact allows for overbalancing of such hidden interests and often overrules actual nature conservation in the Šumava NP if the director is not tough enough or even is proactive.

Last but not least, during the entire history of the Šumava NP, the Authority has largely focused on the NP agenda, such as forestry and pest control, zoning and visitor regulation. Curiously, the Authority has hardly fulfilled the predetermination of the PLA territory as an actual buffer zone for the NP. For instance, the management plans of the NP and PLA have been largely incompatible, sometimes indeed applying contradictory measures to similar habitats, and have never been synchronised either. Similarly, the Authority has so far given up applying the status of the Šumava BR to the joint NP and PLA territory. An obvious reason is the fact that the BR has got no legal framework in the national legislation and, thus, neither financial nor personal support by the Ministry of the Environment or the Czech Government. In our opinion, the UNESCO BR concept would be a good framework for solving the most controversial issues and an excellent tool for sustainable tourism and overall development of the entire region. As a matter of fact, the existence of the Šumava NP represents a great tourism potential not only for the six villages located within the NP or others in its territory but for many other municipalities in the Bohemian Forest region. The Šumava NP and PLA Authority, however, has not made a serious attempt to implement the UNESCO BR concept in the region in the past 23 years.

Regional development and landscape planning

Due to a lack of local capital, both privatisation and further development of tourist infrastructure has largely been funded and organised from outside the region since the early 1990s. In consequence, any profit was funnelled out of the region, where the owners were settled. This also affects the quality of the visitor services because most of the lessees are not motivated for long-term care about their guests.

Since the mid 1990s, more and more development activities have come to the Šumava NP.

Responsible state authorities, in particular the Ministry of the Environment, have responded to regional complaints against the NP and have supported various local requirements, such as wastewater treatment plants, sewerage systems, road renovations, etc. The enhanced funding for municipal and tourism

infrastructure is partly obvious from the comparison of municipal budgets in Table 1, where the means of five annual incomes per resident were used to avoid extremes. The 22 municipalities in the NP territory have incomes at least twice higher than villages of similar sizes (categories of 1–100 and 200–500 permanent residents are defined for either region) outside the Šumava NP (*http://www.rozpocetobce.cz, http://www.czso.cz*). Six villages inside the Šumava NP have significantly higher incomes than the others (cf. Table 1). The extremely high incomes of Modrava come from taxes of a rich businessman registered there.

Landscape planning, including *landscape architecture* and *spatial planning*, has been a weak point and suboptimally used tool. Limits defined in the land use plan of the Great Šumava region, approved by the Czech Government as the main planning unit for the Czech part of the Bohemian Forest, were soon broken. Currently, the local land use plans of many of the villages in the Šumava NP are unsystematic and reflect mainly wishes of various developers, lobbyists, land owners, and local decision makers. Unfortunately, even some architects have done a poor job. The plans are not compatible with the applicable procedures of the Czech Chamber of Architects and only a few of them have been evaluated with a SEA. The plans do not stimulate sustainable regional development and utilisation potential of the region. This situation opens doors for controversial development activities and local representatives may be exposed to corruption. Local municipalities have had to deal with burdens of some development projects for decades (e.g., apartment houses in Borová Lada, Nová Pec, or Mechov near Srní). Such developers' building is hardly compatible with sustainable life, largely neglects necessary infrastructures for visitors as well as job opportunities for residents.

The poor spatial planning and the crisis in human resources have caused serious troubles to business. There are only few local business premises operated by residents (e.g., a local grocery shop and bakery in Kvilda). Many other stores, restaurants, accommodation and other facilities are leasehold and their profits leave the Bohemian Forest region.

The specific socio-demographic situation in the former frontier area can also explain a lack of both local innate authorities and respect to learned people (cf. the proportion of graduate people in Table 1). There are no "Mr. Teacher" or "Mr. Parson", well recognised by their neighbours, as there used to be in the long past. On the contrary, there are abundant unemployed and partly disabled people, who are not motivated to travel out of their villages to find a job. Though the 'bark-beetle combat' has been a local 'headline' for decades, most of the salvage logging has been done by big companies from outside the region, whereas residents are left jobless. Some of those people are easily manipulated and prone to aggressive behaviour such as that of a local militia against the eco-activists who protested against the unjust bark-beetle combat in the summer of 2011. On the other hand, despite the half proportion of graduate people in the local population compared to the national average, the local unemployment rate is not as high as in other marginal regions of the Czech Republic and, on average, it is close to the mean national unemployment rate (Table 1).

Local people's expectations and municipalities' tasks have often gone far beyond the real power of the Šumava NP and PLA Authority. Though it should be rather a partner than a leader in regional development, the Authority has frequently organised (and even funded from its own resources in the past) many regional infrastructures and activities within the Czech Bohemian Forest, such as public transportation by green buses, winter maintenance of white trails for cross-country skiing, or building of cycle tracks.

Conclusions

Unfortunately, we have to conclude that, after twenty-two years, the Šumava NP represents a Gordian knot tangled from many ideas, misunderstanding, disillusions, lost opportunities and hopes.

Several studies (Těšitel et al., 2003, 2005, 2007; Kušová et al., 2006; Třebický & Čihař, 2006; Görner & Čihař, 2012) have delivered ideas and recommendations, which have mostly remained in paper only. It is hard to say whether they were out of reality, or the potential recipients were not interested in or not open to new ideas. Also, some more practical projects have been announced, such as the Partner of the NP (very successful indeed in the Bavarian Forest NP; Rall, 2008), but not successfully implemented. Also, the KIPR project (Landscape-integrated regional development plans for the National Park region, i.e., the area of the Šumava NP and PLA)

was launched unsuccessfully in 2009, and then resuscitated in 2011 and again in 2013. Only several studies and strategic development documents have been published as project outcomes until now. Maybe the KIPR project and the database of projects will help to create a new happy land in the National Park region during the next EU funding period (2014–2020). The coming years will show whether the KIPR project can start a new era in the relationship between the Šumava NP and PLA Authority and local people, or the partial success of the project will be forgotten as fast as some good projects implemented in the previous years, such as a long-term cooperation of the Authority with local municipalities on maintaining cross-country ski trails; the project "Our Peat Bog" – a common project of the Authority, the Volary municipality, and its forest company on restoration of the excavated peat bog Soumarské rašeliniště; or the Glass Arch – a transboundary project bringing together regional cultural history and a nature conservation mission (Eisch, 2005).

Unfortunately, two decades of experience have shown that these good examples quickly disappear from memory, whereas a bitter aftertaste of misunderstanding, false promises, and disappointed hopes repeatedly prevails. As if the continual state of war between the National Park and local people made someone happy! Maybe yes, maybe not. Who knows? It is clear that there are few people making their own popularity and profits of this long-term conflict delivering much more losers than winners.

Americans call national parks "one of the best ideas". We can hope that good ideas, initiating the Šumava NP establishment in the early 1990s, will be resuscitated soon and local people, visitors, managers, and politicians all together will find their common responsibility for this amazing wild nature island.

Acknowledgments

This study was supported by the projects OP VK CZ.1.07/2.4.00/17.0130 and No. CZ.1.05/1.1.00/02.0073 of the MSMT.

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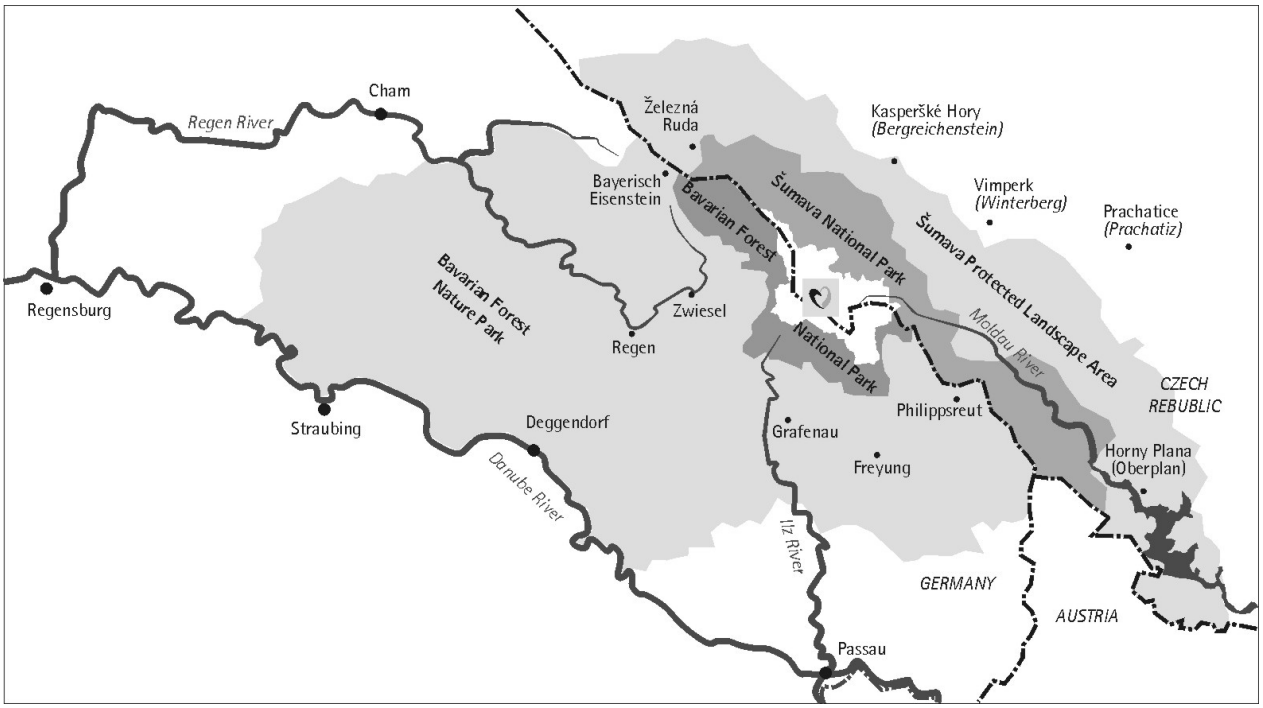
Table 1: Alphabetical list of municipalities, their administrative territories (AT), their portions in the Šumava NP (% of AT in NP; those with 100% are in bold) and in the total area (% of NP area), numbers of permanent inhabitants, unemployment rates (UER), gender proportions of graduate residents (M – males, F – females), and specific incomes (annual means for 2008–2012 were used to avoid extremes).

Municipality	AT (ha)	AT in NP (%)	NP area (%)	Inhabitants*	UER* (%)	Graduates* M (%)	F (%)	Incomes (CZK/resident)
Borová Lada	6,895	48	4.86	280	12.3	5.0	3.6	43,420
Čachrov	8,818	19	2.45	553	11.4	4.6	5.2	38,225
Hartmanice	6,221	27	2.51	1,106	15.4	4.4	3.3	31,874
Horní Planá	9,926	15	2.20	2,189	14.0	6.1	3.7	25,486
Horní Vltavice	5,880	8	0.68	390	8.1	5.5	2.6	33,862
Horská Kvilda	2,991	100	4.39	73	5.0	6.7	20.0	50,267
Kašperské Hory	4,412	33	2.13	1,593	15.4	7.4	5.8	53,009
Kvilda	4,518	100	6.64	170	3.0	6.7	3.9	86,603
Lenora	1,780	4	0.12	800	11.5	2.8	3.3	19,631
Modrava	8,163	100	11.99	52	7.4	4.3	0.0	2,980,407
Nicov	1,378	11	0.22	77	2.4	0.0	2.8	33,681
Nová Pec	6,638	78	7.61	563	15.8	2.1	3.6	28,811
Nové Hutě	2,324	53	1.82	85	14.6	12.5	5.0	32,270
Prášily	11,227	100	16.49	152	23.2	12.0	5.3	67,023
Rejštejn	3,044	84	3.76	236	22.6	4.5	0.8	47,833
Srní	3,348	100	4.92	290	9.2	3.5	4.2	65,891
Stachy	2,813	8	0.32	1,218	6.2	7.2	5.3	19,620
Stožec	10,478	100	15.39	212	9.7	11.2	3.8	69,278
Strážný	4,964	92	6.71	451	10.7	6.0	3.6	81,756
Volary	10,763	11	1.79	4,013	9.0	4.9	2.9	20,548
Želnava	1,034	65	0.99	139	29.0	5.4	1.9	17,753
Železná Ruda	7,981	17	2.01	2,318	7.6	7.1	5.3	23,069
Total / *Mean*	125,596		100.00	16,960	12.0	5.9	4.4	175,924 / 42,377**
Plzeň region				571,709	7.0			20,109***
								12,550****
South Bohemian region				636,138	7.5			21,956***
								16,668****
Czech Republic				10,505,445	8.6	10.8	7.1	

*as of 31 Dec 2011; **including/excluding Modrava; ***/****municipalities with 1–100 / 200–500 permanent residents, respectively



Sustainability assesment of the Hostětín cider house project

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Hostětin and its historical context

Projects dealing with the utilisation of local resources, energy savings, renewable energy sources and environmentally friendly technologies have been developed in the small White Carpathian village of Hostětín since the early 1990s. They have included a reed bed sewage treatment plant (completed in 1996), the use of solar technologies for hot water preparation and electricity production (1997-2011), heating for almost the whole village using wood chips (commissioned in 2000), energy-saving street lamps (2007), a cider house with organic production (in operation since 2000), the passive house of the Veronica Hostětín Centre (built in 2006), a demonstration natural garden, and numerous educational elements accompanying these projects.

The model projects in Hostětín did not originate from any external impulse. They are the result of a search for a balanced solution that conforms to local conditions. The village with a population of 250, whose continued existence was threatened by a ban on construction from the 1970s, was looking for the most appropriate wastewater treatment method. The construction of a reed bed treatment plant, the implementation of which resulted from a combination of the nature protection needs in a Protected Landscape Area, persistent efforts of the mayor and the district authority, and expert and awareness-raising activities of the civic sector, brought a lift of the construction ban, necessary for continued existence of the settlement, along with an innovative impulse which stimulated further development of the village in line with sustainable development principles. Among other factors, the common denominator of all the projects was the co-operation between the

municipal authority and the non-profit sector, making use of experience primarily from abroad. Ultimately, then, the comprehensive set of projects in Hostětín has helped, based on good practice examples, to explain what future sustainable settlements might look like. The goal is a community that is on the path towards energy self-reliance, with a strong and functioning local economy that does not burden the environment. A community that is rooted in the landscape, aware of its cultural history, and friendly to both its inhabitants and nature.

Hostětín cider house

Besides orchid meadows and fir-and-beech primeval forest, extensive fruit orchards are one of the typical elements of the White Carpathian cultural landscape. The initial intention of voluntary nature conservationists (Czech Union for Nature Conservation, ČSOP) to preserve the traditional fruit-growing in the White Carpathians grew into a long-term programme of surveying and mapping the local gene pool, planting of gene pool orchards, and promotion of processing of the local fruit production. The construction of the cider house then became one of the progressive steps in the broadly designed fruit-growing programme for the White Carpathians (Tetera, 2006).

The plan was elaborated in a collaboration of several non-governmental organisations and local organic farmers. Together, they established the Tradice Bílých Karpat (White Carpathian Traditions, TBK) umbrella civic association in 1998. Its objective is to stimulate local inhabitants to manage the natural resources, landscape and biodiversity of the White Carpathians. Non-governmental organisations played the key role in the process: Veronica Ecological Institute (part of the ČSOP local group Veronica) and, later also the Veronica Foundation, which formulated a vision supposed to motivate local land owners to maintain and develop their orchards by means of processing, sales and utilisation of traditional food varieties.

Case study: The Battle for Jezeří Chateau

Jan Marek, Andrew Barton

Introduction

For Jezeří Chateau, perched dramatically on the foothills of the Ore Mountains in North-West Bohemia, its struggle for survival has been an enduring one over the centuries and reached its most critical moments in the latter half of the 20th century long after pan-European wars were consigned to history. From its role as a troop base in the Hussite Wars, the various radical reconstructions it underwent, its numerous changes of ownership, and its use and misuse by German troops during the Second World War, Jezeří Chateau still faced almost inevitable ruin through deliberate neglect from the 1950s onward when the communist regime became transfixed by extracting as much of the surrounding coal deposits as possible, even at the expense of demolishing the chateau itself. Even now, after a successful fight to preserve the building, the threat of demise looms over the chateau once again as various interest groups lobby to lift the territorial mining limits imposed in the early 1990s.

Jezeří Chateau in 1882

The early history of the chateau

Even the landscape under the Ore Mountains has been through many radical changes, including the destruction of the villages Ervěnice, Nové Sedlo, Komořany, Třebušice, Dřínov, Albrechtice and Dolní Jiřetín,

though one can still admire the genius of the builders from times gone by who couldn't have chosen a more natural site for the chateau. It isn't, however, just the calibre of this first class architectural landmark that impresses us. The chateau has also played a dominant role in the history of the region.

Today's baroque structure covers a renaissance chateau, which in turn covers a gothic chateau. We could go even deeper into its history and look at the original Slavic settlements of the entire region. This site was chosen even earlier for their settlement by the Celts, who had their main settlement and holy sites on the slopes of the Ore Mountain foothills. Today, Jezeří Chateau is a monument of the first category, exceptional not only for its extraordinary and architectural value, but also its unsettled fate, it's unusually beautiful location and its importance for the present and future development and shaping of life in the sub-Ore Mountain landscape.

The Gothic Chateau

There used to be a medieval chateau on the site of the present day chateau, but its founding date is unknown. The first written record of it dates from 1363-65 and states that the chateau was owned by the masters of Rvenice. Even then we encounter the names "de Lacu" (of the Lake) as well as "of Aysemberg", also reflected in the old German name Eisenberg, logically connected to ore mining in this part of the Ore Mountains.

Bušek of Eisenberg sold the chateau in 1406 to Petr of Perč; the next owner of the property was Albrecht Sn. of Kolowrat. After his death, Jezeří was passed on to Jan Smolík of Slavice, a Catholic supporter who managed to hold the estate throughout the Hussite Wars. He left the chateau to his son Zikmund, who was known for his dislike of Saxons. Owing to this fact, there were frequent skirmishes between Jezeří and the Saxon troops at the nearby chateau of Hněvín.

The next owner of the chateau, the knight Kunz of Kaufunk (1450), also backed the interests of the kingdom of Bohemia, although his family came from Saxony. The reason for his attitude, however, was animosity between the Kaufunk family and the Prince Elector Friedrich of Saxony. The conflict escalated in 1455 when Kunz abducted the elector's sons from the chateau of Altenburg to force Friedrich to give back the Fictum estates he had confiscated from him. Jezeří was supposed to be the place where prince Arnošt was held, but this intention never came to be. Kunz of Kaufunk and his men were caught on the Saxon side and Kunz was executed at Freiberg in 1455. Worried about the fate of Kunz's sons, Kunz and Heinrich, the regional governor Jiří of Poděbrady took possession of the chateau and made use of the presence of his troops at Jezeří to capture the town of Most.

In 1459, the Smolík family returned to Jezeří and the last of them, Zikmund, bequeathed the chateau to his brother-in-law, Mikuláš Hochhauser of Hochhaus, in 1513. It was probably then that the chateau was rebuilt as a renaissance chateau.

The Renaissance Chateau

The conversion of the medieval chateau into a renaissance chateau was finished in 1549. There is an ornamental stone wedge over the main gate that commemorates this event. The wedge bears the coat of arms of the Hochhauser family, the year 1549 and an inscription stating "O people, remember where the master is and his family."

When Mikuláš died, his son Petr took over the chateau, and from him it was passed on to his sons Václav Jr. and Mikuláš. The latter later bought the part belonging to his brother, but unfortunately died fighting the Turks at the Battle of Jager in 1569. The estate went back to his brother Václav, who sold it to his cousin Jiří Hochhauser of Hochhaus in Albrechtice. Jiří's son Jan Mikuláš (who owned the chateau from 1605) was punished for his participation in the Bohemian Revolt of 1618 by having his fortune confiscated in favour of the emperor Ferdinand II.

The emperor gave Jezeří together with other estates to prince Karl of Liechtenstein by an edict of 15 March 1622. The new owner sold it almost exactly a year later (24 March 1623) to Vilém Popel Jr. of Lobkowicz in Bílina for 80,847 Meissen three-scores. Vilém, however, only paid for two thirds of the estate – 67 956 three-

scores. The other third remained in Hochhauser possession and Vilém was supposed to pay the rest of the price to the heirs of Jan Mikuláš. Apparently, he failed to do so, because in 1631, during the Saxon invasion, Jiří and Bernard Hochhauser, who had lived in exile until that point, returned to Jezeří, pilaged it completely and "took whatever could be taken". The financial disputes between Lobkowicz and Hochhausers were settled completely only in 1638.

To the great advantage of historians, a description of the renaissance chateau has been preserved. It had been made for the occasion of selling the chateau. The catalogue mentions the foreroom, the masters' room, the kitchen, the buttery and pantry, three rooms for maids, an upper closet, the ladies' room and closet, the hind closet, the upper chamber, the hall, the schoolroom, the second hall, a lower vaulted chamber, a masters' closet and chamber, and the clock tower. There was an orchard around the chateau that included fruit and walnut trees, among other types. There were also three derelict vineyards, and below the chateau was a brewery and a Meierhof (a farm belonging to the local gentry). The estate also consisted of five villages and three other Meierhofs.

An account from October 1621 describes the chateau of Jezeří as "heavily damaged by soldiers", not one window was intact and the doors and floorboards were torn out. Minor reconstructions, however, began at the chateau as soon as 1627; in 1638 the "brick roofs" were being repaired.

Unfortunately, on 18 February 1646 the chateau caught fire and burned to the ground, with the exception of a small tall building and the stables. A year later, Vilém Popel died and the estate went to his son František Vilém, the founder of the Nové Sedlo-Jezeří branch of the family. There were, however, no significant alterations to the chateau carried out during his lifetime.

The Baroque Alterations

The chateau came to be significantly altered during the lifetime of František Vilém's son – Ferdinand Vilém of Lobkowicz, who resided at Nové Sedlo until the work was finished and only moved to Jezeří in 1697. The year 1696 over the main gate must therefore mark the end of the chateau's alteration. We can correctly assume that at this point Jezeří was a magnificent place in full alignment with contemporary ideas of a family residence. Unfortunately, the name of the project's architect remains unknown; we don't even know the reason why the greater part of the Lobkowicz archives were not preserved.

The main longitudinal building with its four perpendicularly adjacent wings formed an H-shaped ground plan, with the hall buttress coming out of the southern side. In front of the main frontispiece with a shallow central buttress ending in a prismatic tower, there was the court of honour. At each side of the main portal there are atlantes by Jan Adam Dietz from the mid-1800s.

Jezeří chapel under reconstruction

As Ferdinand Vilém had no male heirs, he bequeathed his estate to his brother Oldřích Felix, who took over after his tragic death. On 25 September 1713 there was another fire at the chateau. Oldřich Felix, who had gone hunting that day, returned to see the building ablaze – the fire had spread so much by then that it could not be extinguished. Thanks to the committee sent by the hetman of Žatec to ascertain the damage, we now know how some of the rooms at Jezeří had looked before the fire and we can tell that the chateau already had the outer shape it has today. Unlike its renaissance predecessor, which had a tiled roof, this one only had shingles. On the middle floor there was a "new, spacious and beautiful ballroom with an oval, stucco-decorated vault, with huge columns and mascarons which took a group of ten masons, two stuccoworkers and six carpenters a whole summer to complete". The room had nine windows and the damage inflicted by the fire was worth at least 4500 guldens. The

adjacent room, by the “new dining hall”, with stuccoed ceiling and a beautiful floor was also completely destroyed (damage worth 388 guldens); another of the long list of destroyed rooms had been painted „al fresco“ (damage amounted to 350 guldens), and the alcove had a stuccoed ceiling and a valuable floor, too (350 guldens). In two adjacent rooms the fire also ruined frescoes, stuccoes and floors and its heat melted two beautiful tile stoves. In the great dining hall next to the chapel, decorated with stuccoes, a big green tiled stove was destroyed as well as a double door made of oak (damage worth 400 guldens), the fire also devoured the red room next to the dining hall, and the room next to that, a gilded study with stuccoes and frescoes on the ceiling, and another alcove (1400 guldens in total). The main helical staircase was destroyed as well as the old and the new towers with their little chambers, the “forest room” and the painted chamber, the kitchen with its foreroom, Count Lobkowicz’s painted rooms, four offices, a closet as well as a great hall above the dining room with a beautiful ceiling and floor, four capuccin rooms and another office. The fire did not spare the middle tower with a clock and two bells either, nor two dormers. A separate building below the chateau with six rooms, three closets and a laundrette was burned to the ground. The orangery, the lathe workshop, the new sawmill and other well-documented rooms and space also turned to ashes. The total damage soared to 30,398 guldens, 19 kreutzers and 3 denari.

Former staff quarters

Oldřích Felix decided to use his “modest means” to renovate the chateau the same year, and probably barely managed to do so just before his tragic death in 1722. He was also the last member of the Nové Sedlo-Jezeří branch of the Lobkowicz family, therefore the will of 4 September 1722 leaves the estate to Karel Adam - once he attained his majority – and until then it was to be managed by his father, Jiří Kristián of Lobkowicz. Karel Adam then formally sold Jezeří to Ferdinand Filip Josef, Prince of Lobkowicz in Roudnice, in 1752, thus passing the chateau, as was expected, to the Roudnice-Bílina line of the family.

Early to mid-20th century history

The turn of the century

In the time of Ferdinand Filip (from 1752), the chateau was in good condition, and therefore it was enough to simply carry out regular maintenance. After Ferdinand Filip’s death, the estate went to Josef František Maxmilián, whom we connect with a flourishing art life at the chateau (Musical Past), as well as with major alteration works. The purpose of those was to adapt the chateau to meet requirements for what was then deemed the adequate comforts of a nobleman’s lifestyle. Minor reconstruction works were carried out as soon as 1797, but the main phase of the alterations began in 1802. The structure and use of individual rooms has more or less been preserved to this day. The extensive adaptation of “piano nobile” was carried out in the northern as well as the southern part of the chateau (the theatre hall and the new chapel).

The western facade and tower of Jezeří

After František Maxmilián’s death, Ferdinand Josef of Lobkowicz became the 8th Prince of Roudnice. In 1821, negotiations for including Jezeří in the family inheritance began. The negotiations were successfully closed in 1835 when this permit was filed in the Land Register. In 1868 Prince Mořic of Lobkowicz became the manager of the family inheritance, and after him it became Ferdinand Zdeněk, who assigned the management to his second-born son in 1920. JUDr. Maxmilián Ervín of Lobkowicz studied law and then became an important diplomat in the services of Czechoslovakia. This was the reason he went into exile in the UK in 1938 and became equally important in the Czech anti-fascist movement there.

Jezeří during the Second World War

After Munich 1938, the Lobkowicz domains were broken up – those that found themselves in occupied territory were administratively assigned to the "firm hand" of a directorship in Bilina. Immediately following the first days of the occupation, the chateau was occupied by the staff of "SS-Leibstandarte Adolf Hitler" headed by Obersturmbannführer Sepp Dittrich. A large part of the moveable chattels were taken prior to the Sudeten conquest to Roudnice nad Labem, although following the take-over the Lobkowicz property had to be returned to Jezeří; it was later transferred to Bílina.

Hitler's personal banner departed Jezeří on 19 October 1938, when the chateau was occupied by a garrison designated to keep watch over prisoners who were accommodated close to the forestry management offices at Jezeří. These prisoners were Poles, Russians and Frenchmen, as well as German soldiers on criminal charges. In March 1943, the chateau was used for prison purposes. A special camp was established there for prominent persons "Sonderlager für prominente Persönlichkeiten" – mainly highly placed French officers. A labour commando of 96 men from the Flossenbürg concentration camp also came to the chateau. The whole chateau was painted a camouflage green. Guardhouses were constructed around the building connected by electric fences and patrolled by guard dogs. The wider surroundings were closed to the population. In the chateau itself, an average of around 100 people were accommodated. From 1943, about 238 men went through this camp. Among the prominent personalities interned at Jezeří were Pierre de Gaulle – the brother of the future French president Charles de Gaulle, the son of the former French premier Michael Clémenceau, Dr. Menetrel – Marshal Pétain's personal physician, Prince Michael Montenegra, and others.

Post-war history

The Communist Putsch and the start of the chateau's downfall

After the end of the Second World War, the chateau and its lands were over time returned to the ownership of the Lobkowicz family; it is said that guests at that time included the Czechoslovak Foreign Minister Jan Masaryk. The Czechoslovak ambassador to Great Britain, JUDr. Maxmilián Lobkowicz, remained faithful to democracy after the Communist putsch of February 1948 and decided to remain in exile.

Soon after the February "victory" – on 20 April 1948 – the Provincial National Committee introduced national administration at Jezeří. On 21 August 1949, the chateau was taken over by the National Culture Commission. The state of the chateau was declared to be bad, especially in relation to the roof, the plaster and castellated decoration of the bannisters on the rear terrace, while the floors were seen to be in good condition. The chateau was first rented out to the Ministry of Technology, but on 22 September 1950 the government decided to make it available to the Ministry of National Defence; it was specifically allocated to the management of the Chomutov garrison.

The "takeover" of the chateau took place on 28 August without notifying the National Culture Commission and the State Monument Administration in a way that completely contradicted the principles of these institutions. The 100-member garrison simply occupied the chateau, threw the remaining inventory into the chapel, and whitewashed the whole chateau in their own style both in reality and figuratively. The Czechoslovak People's Army tried to adapt the chateau grounds completely to its own needs. The interiors were destroyed, many rooms in the chateau were intentionally modified and the remaining furniture stolen or destroyed.

In 1955, the chateau was taken over by the Ministry of Interior. In line with a decision dated 9 January 1958, administration was delegated to the Ministry of Education and Culture, Monument Care Department. On 29 August 1958, the chateau was transferred to the State Monument Administration, and then in 1959 it was transferred to the Regional National Committee in Ústí nad Labem. At that time there was no security provided at Jezeří and the chateau was left exposed to vandals from 1960. From 1961 to 1972, the chateau was administered by the District National Committee in Most when the first project for reconstructing the building was drawn up. Its author was the Institute for Landscape Creation and Protection of the Czechoslovak Academy of Sciences, which had responsibility for supporting Jezeří in its research programme. A further anticipated use

of the chateau consisted in the intention to build an extensive recreational area of supra-regional importance, but everything remained an idea only, just like the declared intention to have exhibitions of famous musical traditions.

From 1964, artistic-historic and construction research was undertaken under the leadership of Václav Mencl. The subsequent reconstruction was methodologically contributed to by the Regional Centre of State Monument Care and Nature Protection in Ústí nad Labem, although its collaboration with the Usti-based District Construction Enterprise only led to the further devastation of the building. At the same time as the demolition of the unmaintained chaplain's dwelling and kitchen annexes, the north-east wing of the chateau and the underlined buttress were seriously damaged, known these days as the oriel. This desperate situation was allowed to continue for the whole of the following period without any security, and it is testimony to its solid and honest construction that no other parts of the building fell apart. In 1967, the then administrator permitted further gross interference by the District Construction Enterprise from Ústí nad Labem by ripping up around 150 m² of parquet flooring and its subsequent use at the chateau in Ploskovice. The District National Committee in Most reconstructed the gatehouse as a temporary dwelling for a guard, and in 1972 the chateau was transferred to the administration of the Regional Centre of State Monument Care and Nature Protection in Ústí nad Labem. Further reconstruction was therefore postponed indefinitely. The chateau administration at that time prohibited even normal maintenance being carried out and justified neglecting the state of the chateau on the grounds of the ambiguous situation regarding the mining activities of the North Bohemian Lignite Mines.

The period of greatest threat

Coal undermines the existence of the chateau

In the years 1973-76, engineering-geological mapping was undertaken in the foregrounds of the Czechoslovak Army opencast mine, from whose conclusions stemmed a desperate need for more detailed research of the coal basin limits in 1980s. This mainly confirmed the fears that the extent of the crystalline massif of the Ore Mountains could significantly influence coal mining activities and vice-versa. It was found that it was necessary to urgently verify the state of the crystalline massif, its disrupted tectonic plates, efflorescent processes and landslide activity in the very places where the coal basin limits abutted the Jezeří chateau grounds. The responsibility for the research was given to Construction Geology Prague under the research management of RNDr. Jan Marek.

In 1975, Dr Marek informed the Regional Office of State Cultural Heritage and Nature Conservation of the risk to the Jezeří Chateau heritage building and the surrounding mountainsides. He set up a permanent field office in an abandoned old tower of the chateau with the Regional Office's approval.

The critical site became popular after he submitted his final report on the engineering geological mapping and especially after his articles were published. Czechoslovak Television asked him to on their economics show "Is It Worth It?" from the chateau courtyard. Jezeří started to host journalists, political officials, leading scientists, entire busloads from the Regional Mining Authority in Most, Báňské projekty in Teplice, the Regional Office of State Cultural Heritage and Nature Conservation in Ústí nad Labem, the Central Geological Institute, various institutes of the Czechoslovak Academy of Sciences, and universities in Prague, Brno, Ostrava, Bratislava and Košice. Josef Velek – the only journalist with an openly pro-environmental focus – arrived. Dr Marel spent several evenings debating with this young author of such well-known books as "Jak jsem bránil přírodu" ("How I Protected Nature"), "Příběhy pro dvě nohy" ("Stories for Two Legs") and others that the communists in control didn't like much. He began to write a new book about the Jezeří problem, but never completed it: he died diving in the Red Sea soon afterwards. Wagging tongues said somebody pushed him.

View of mines from western side of Jezeří

The growing popularity of the Jezeří area was in sharp contrast to the frightening state of neglect of the chateau itself. The expansive building had been abandoned in 1954, it had been stripped of all its furnishings (burgled) and managed in a hands-off way by the Regional Office of State Cultural Heritage and Nature Conservation by means of a single custodian. Outside the scope of interest of district or region-level political authorities, it was rapidly decaying. To make the responsible political and administrative authorities and, more importantly, mining institutions aware of the real value of the building, Dr Marek compiled an overview of its historic and structural development, assessing its importance, and published it in the North Bohemian Mines professional journal "Hnědé uhlí" ("Brown Coal").

A new geological survey is commissioned

The practical result was that, almost simultaneously, both the State Cultural Heritage Conservation and the general management of North Bohemian Mines commissioned Stavební geologie to perform a new, detailed, purpose-driven engineering geological survey of the Jezeří area. It was obvious beforehand that the survey was primarily meant to either confirm or refute his conclusions and interpretations made as part of the previous geological mapping. It was also evident that it would not succeed without unconventional and costly mining engineering methods, tunnels, shafts and deep core holes. It was not clear beforehand where to put them, what sizes to make them, who would design them, who would make them and how, and who would pay for them. A professional project design had to be made for each separate mining facility. In order to clarify those issues, Dr Marek spent the whole of 1977 making a detailed survey of the cellars and other underground spaces of the Jezeří Chateau grounds, and commissioned geophysical measurements in several points along the chateau buildings and the surrounding slopes where he had predicted the existence of tectonic fault zones. Only after that did he design subsequent, technically demanding works. He had his entire design reviewed by the most distinguished professionals, his old professors Quido Záruba and Vojtěch Mencl, the founders of the scientific discipline of engineering geology. They both came to Jezeří several times despite their advanced age of around 80 years.

Problems with finding a company to accept the commission

A team of designers at Báňské projekty Teplice – the last ones who still knew how to design underground mining works in the North Bohemian Basin – were charged with drawing up the technical designs for the mining works. At the foot of the hill under the chateau, Dr Marek proposed a vertical shaft and two horizontal galleries under one another, dug towards the mountains; the bottom gallery was to be dug from the bottom of the shaft. Their purpose was to detect and cross the predicted tectonic fault zones. However, the mining engineers gave up on the job after a year spent designing it. There was no-one at hand who would be willing to carry out the designed work.

The Central Committee of the Communist Party decided that the costs of the designed works were to be paid by the North Bohemian Mines (Doly V.I. Lenina [V.I. Lenin Mines], later renamed Mostecká uhelná společnost [Most Coal Company]). So Dr Marek borrowed Stavební geologie director's managerial Tatra 613 with a driver, put two mine development officers with signed and stamped authority in their pockets in the car, and started to tour Czechoslovakia. They tried to enter into contracts for the work at Jezeří with well-known companies that did mining work. They failed in Rýmařov and in Zlaté Hory near Jeseník and in Žilina and in Spišská Nová Ves.

In the meantime, Jáchymov-based Výstavba dolů uranového průmyslu (VDUP – a uranium mining company) began digging a hydraulic tunnel in the mountainside above Jezeří to divert the Šramnický brook, and then another tunnel at Albrechtice to divert the Černický brook to the reservoir at Loupnice. Dr Marek and his team monitored the digging of both tunnels for over a year. They closely documented of the geological phenomena detected in depth within the crystalline complex to have enough background information for comparison for the planned survey under Jezeří. However, they were only able to do that at night, when the digging underground was halted for the day. To make even more work for themselves, they also took up documenting the new three-kilometre-long drainage tunnel in Jáchymov.

Thanks to co-operation with VDUP Jáchymov, they succeeded in convincing the company's diggers to perform at least part of the planned mining work under Jezeří after the digging was completed. Most importantly, they managed to do the principal work: the horizontal gallery dug from the mountain base into the crystalline complex right under the chateau, 430 m long. They were documenting the gallery throughout the digging process; again, mostly at night. Deep core holes were bored in front of the gallery portal; an underground hole was bored inside the gallery, and an inclined core hole was bored under the chateau foundations. They documented all the rock formations around the chateau. They measured all the fissures, analysed the geodynamic phenomena and other facts. They found and documented the remains of medieval chambers for iron ore extraction and processing in old "salamander furnaces" discovered around the chateau. Dr Marek published the findings in the professional journal "Rudy" ("Ores"), which later resulted in their inclusion among protected national technical heritage sites.

Confirmation and praise for geological findings

The research around Jezeří took more than 4 years and was completed in 1981. It fully confirmed the findings and conclusions of the previous engineering geological mapping, which the North Bohemian Mines management would not accept in 1976. It confirmed the existence of massive tectonic fault zones at the mountain base and inside the massif, various anomalies in the positioning of the basin sediments along the seam edge and the groundwater conditions, and most importantly, it confirmed the unstable position of the promontory on which the chateau rests.

View of mining operations from Jezeří

Dr Marek was writing the final report on the Jezeří survey in bed at the Institute for Clinical and Experimental Medicine (IKEM) in Prague, where he had been taken after he collapsed as a result of extreme physical strain, long-term mental exertion, dangerous work in the underground and staying in the unheated tower at Jezeří.

When he was put more or less back together at IKEM, he defended his set of findings and generalised experience as his Candidate of Sciences dissertation thesis at the Charles University Faculty of Science. The thesis was reviewed by three top experts at three universities whose expertise it involved: the geotechnician Prof. Mencl of Brno Technical University, engineering geologist and hydrogeologist Prof. Homola of Ostrava Mining University, and geomorphologist Prof. Král of the Charles University Faculty of Science. They assessed it as the best in years and the most momentous in the Czechoslovak Federation, with a direct impact on the entire country's economic situation. It seemed that the battle was over and there could be some resting on laurels at last. The reality soon proved otherwise, though.

Additional mathematical modelling reinforces potential danger of continued mining

The results of Dr Marek's research were to be confirmed by a mathematical calculation of the stability of the slope. This was an extremely tall slope, however, its integrity had been disrupted by tectonic zones, and its base was meant to be lightened through coal mining. There was no one at hand who wanted to take on that task without sufficient previous experience and examples from foreign literature. Eventually, the calculation was taken up by the country's most experienced experts, geotechnician Vojtěch Mencl and mathematician Ladislav Mejzlík, both emeritus professors at Brno Technical University. They used the finite element method, novel in the Czech Republic at that time, using computer equipment. In addition, a physical model was constructed at the BTU Construction Faculty Geotechnics Department made of equivalent materials (Jezeří Chateau being represented by two sugar cubes).

While the professors were doing their calculations, the lecturers and instructors in white coats were working with the physical model located inside transparent plexiglass walls. They used a toy spade to rake away fine

sand, which stood for the basin sediments, imitating the mining activity in the opencast mine. The condition of the adjacent crystalline complex was monitored by means of a network of surveyed points; movement was expected, and Dr Marek was cautiously watching along with renowned experts from the Academy of Sciences. After all the sediments were removed, nothing shifted until late at night; the sugar cubes remained in place. The next morning, they found the massif had collapsed complete with the sugar cubes.

The mathematical calculation confirmed that removing the top two-thirds of the sediments at the base of the mountainside might not cause a stability collapse of the entire slope, but the bedrock directly under the chateau would suffer deformities of up to 10 cm. A total collapse in stability would occur if the basin fill extraction continued. (The coal seam is located in the bottom segment of the sedimentary strata series.)

Jezeří becomes national research site to test further data on mathematical and physical modelling

Moreover, the course of both the mathematical and physical modelling showed a deficit in some input data, the importance of which only became clear during the modelling, such as the role of discontinuous groundwater horizons, the size and orientation of the natural tension inside the crystalline complex at the mountainside base, the role of slow secular movements of the massif due to internal geological forces, etc. That was why the Jezeří area immediately became a test site in which various professional institutions and teams of specialists tried to test various empirical approaches to modelling, conduct parametric studies and regression analyses. Eventually, Stavební geologie Praha became the manager of an extensive national research task “Studying stability problems of opening opencast coal mines at the base of the Ore Mountains”. As part of this, Dr Marek dealt with the issue of “Studying the tectonic loosening of the crystalline complex”. Using inclined and horizontal core holes in the mountainsides around Jezeří, he examined the presence of tectonic faults and zones, verified their tectonic effects in the ground surface, and tested possible applications of various geotechnical equipment for monitoring changes in the tension and movement inside the massif. The research was completed in 1986.

After Dr Marek submitted the results of the detailed survey at Jezeří, the mine management commissioned detailed engineering-geological surveys of similarly critical sites below Jezerka, at Černice and Horní Jiřetín, again using elaborate mining work. The mining work was taken up by the tried and tested VDUP Jáchymov, which was then able to dig vertical shafts in addition to horizontal galleries. At the same time, comprehensive surveying started on the adjacent site in the forefield of the disused Obránců míru opencast mine, between Jezeří and Janov, covering another approx. 20 km2. Its chief focus was on the stability of the mountainsides and the end slopes of the planned opencast mine. Dr Marek continued the detailed engineering-geological mapping of that section and kept track of all the other survey and research works.

Detailed survey results championed by incipient environmental movement

Immediately after the conclusion of his detailed survey at Jezeří in 1981, Dr Marek held a seminar for the staff of the Regional Office of State Cultural Heritage and Nature Conservation in Ústí nad Labem about its results and predictions for the future progress of the coal mines. The seminar was also attended by the heads of the then newly formed youth conservationist movement “Brontosaurus” from Most and Litvínov, Miroslav Brožík and Petr Pakosta. Dr Marek invited them to make use of the assistance of young environmental activists to help in saving and rehabilitating the devastated chateau, its gardens and the former parks around it. The Brontosaurs pulled their weight effectively with the consent of the Regional Conservation Office, but to the displeasure of the District Committee of the Communist Party in Most. The latter regarded their action as a violation of Party guidelines, which were unequivocally in favour of the coal mining. They saw no gratitude either when they cleared out the devastated historical Franciscan hospital in Most, scheduled for demolition, and prepared it for renovation.

The youth group ran the “Quite Small Theatre” in Litvínov, where they invited well-known people in environment-related professions for discussions with locals. In 1982, they invited Dr Marek to lecture on “Shall we prop up the Ore Mountains?” The feedback was considerable. The public of Litvínov, Most and the surrounding villages revived their interest in conserving not only Jezeří but also the surrounding landscape and the remaining settlements. Discussion evenings followed, involving presentations by Dr. Skřivánek of the State Conservation Office headquarters, Dr. Vaněk and Ing. Stoklasa, both renowned experts of the Academy of Sciences Institute of Landscape Ecology, and others. They all endorsed the continued existence of the chateau.

Authorities continue to support mining, but in modified form

With minor variations, the detailed surveys below Jezerka, at Černice and Horní Jiřetín produced findings similar to those from the Jezeří survey. The mountainsides and their bases were modified by tectonic fault zones up to several dozen metres thick. Within them, the crystalline rocks were crushed or even disintegrated into a sandy-clay earth. The basin strata series at the edge of the basin were also disrupted by various fault and non-fault deformities.

Now the problem was how the mine planners and operators would cope with that because they still insisted on their original plan to fully deplete the seam up to the edge using the large-scale opencast method, albeit at the cost of disproportionate expenses and special precautions, the technical and energy intensity of which would clearly outstrip any profit from the coal mined.

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Jezeří threatened with demolition by new mining design

Design ideas verging on fantasies were developed, including stabilization of the Ore Mountain massif using a series of pretensioned anchors up to 80 m long, bored from slope sections cut into terraces. Another was to remove the entire exposed section of the crystalline complex so that the end slope of the opencast coal mine would face mountain slopes dressed at a stable incline of approx. 35°. Obviously, that would have required the complete removal of the forest, the groundcover, the protruding rock formations, and naturally, Jezeří Chateau. The latter version was even elaborated into an implementation design, undersigned by Ing. Kubricht, former chief architect of Most and a designer at Báňské projekty at that time. To that end, the mine management, the Brown Coal Research Institute in Most and Báňské projekty in Teplice filed a joint application with the Ministry of Culture in 1982 calling for cancellation of the heritage conservation status of Jezeří Chateau and the adjacent Ore Mountains hillsides.

Dr Marek learnt about the meeting called by the Ministry of Culture to discuss the matter the night before during a discussion with Ing. Stoklasa at the “Quite Small Theatre” in Litvínov. Following a discussion weighing up the relative importance of the coal on the one hand and the local landscape, cultural heritage and health of the population on the other, which carried on until midnight, he set off for Prague in his 4WD. He was going to wash and change at home and attend the crucial meeting the next morning. On the way, driving through a February night snowstorm, he missed the elevated on-ramp leading to the new bypass at Panenský Týnec and crashed into a ditch. He left the overturned car through the rear window before the running engine exploded and the car caught fire. He managed to explain the accident to the Louny police, catch the first bus to Prague from Louny, attend the meeting at the Ministry, and take part in the discussion. The miners’ proposal to lift the conservation status of Jezeří and expand the mining district up to the summit portions of the Ore Mountains was not approved.

However, the meeting had a tragic aftermath: Ing. Kašpárek, director of the Regional Office of State Cultural Heritage and Nature Conservation in Ústí nad Labem, had a heart attack and died the next day.

Proposal to demolish Jezeří ignites widespread debate

The miners' plan to destroy Jezeří Chateau and the adjacent mountainsides provoked a long-lasting and frequently passionate polemic in the daily press and other media as well as at various professional conferences over the period 1981-1987.

Disapproving positions were expressed by leaders in culture, history, nature and heritage conservation, representatives of the local population, youth environmental movements, and journalists alike. Dr Marek initiated the production of a monographic issue of the popular journal "Památky a příroda" [Monuments and Nature] dedicated to the Jezeří issues. It was published in 1983, and the editors still refused to include a paper by Dr. Líbal, the country's leading expert on heritage buildings, who resolutely defended the conservation of Jezeří.

The authorities persecute the conservationists

The village of Albrechtice fell prey to the mining preparations below Jezeří in 1985. As was the custom in the area, the houses to be demolished were looted. At that time, Dr Marek's colleagues and he were arrested at Jezeří and charged at Most police station with lotting the chateau. The event was probably stage-managed by mining lobbyists. A lengthy report was made after a long interrogation; no prosecution followed but he was still stalked by the police even at home in Prague.

In the eyes of the mining authorities, Jezeří Chateau was becoming an increasingly hated structure, allegedly an obstacle to further advances in coal mining, although it is situated outside the coal seam. The official caretaker of the building – the Regional Conservation Office in Ústí nad Labem, which had no means even to do basic maintenance – was reluctant to invest its limited resources in a building endangered by demolition, the proposal for which had already been made. It made several efforts to get rid of the dilapidated building: by assigning it to the mine corporation! It even dismissed the only employee – the chateau custodian. Therefore, the presence of Dr Marek and his six colleagues in the field office, which they refused to abandon, was the only obstacle to carrying out the demolition plan.

The Jezeří issue reaches a wider international and national audience

In the meantime, the Jezeří issue made it into an international forum. It was talked about at geological, hydrogeological, engineering geological and geotechnical conferences all over the world (Melbourne, Washington, Nuremberg, Granada, Moscow, etc.), but mostly by others. After Dr Marek submitted his final research report, there were suddenly scores of ambitious experts willing to declare the results, conclusions and interpretations as their own, and boast about them abroad. Dr Marek was not even allowed to read out my paper at the World Geology Congress in Moscow in 1984. However, he produced a short film about the stability issues of the Ore Mountain slopes due to the coal mining for Washington D.C. and a paper on a similar issue for Melbourne. Ing. arch. Zdeněk Stáhlík of Terplan and he became expert advisors for another, more artistic short film on the issues around Jezeří and the Ore Mountains.

During the harsh political "Normalization" period, however, positions published in "Rudé právo" – the leading press medium of the all-governing Communist Party – were the most significant ones. Editor Jindra Čekalová played an exceptional role there. She was not afraid of publishing opinions that clearly went against the existing ideological positions and guidelines of the ruling Party, whether under her own name or signed by apparently non-conforming individuals, irrespective of the disapproval of the then editor-in-chief, comrade Kojzar, and at the risk of her own existence.

Editors of dailies and popular periodicals visited the critical area around Jezeří as a group in 1985. The editorial office of "Věda a technika mládeži" celebrated Dr Marek as the winner of a nation-wide competition of discoverers and inventors.

The regime finally begins to change its stance

Party officials agree to limit mining and preserve the chateau

Regional, district and municipal secretaries of the Communist Party made a field trip to the Jezeří area in 1986 with the aim of giving political support and assurance to the uninterrupted operation of the coal mining. Rudé právo editor Čekalová elbowed her way into the field trip (and could not be refused due to her position), and brought Dr Marek along as her expert advisor (otherwise he could not have attended such a meeting, being a branded opponent to the regime). He provided the board of secretaries with a comprehensive explanation of the issue, took them to the dam of the then emptied Lake Dřínov, guided them around the derelict chateau, and attended the final discussion at the House of Culture in Most. Of the 12 Party exponents originally biased in favour of continuing the coal mining, eleven eventually voted for limiting the mining and preserving Jezeří Chateau. Comrade Šenkýř, a regional Party secretary, formulated the final statement.

Deputy Prime Minister Rudolf Hegenbart, a pro-reform secretary of the Central Committee of the Communist Party and head of the Interdepartmental Committee, visited Jezeří in 1987. He arrived with several ministers and in the company of the General Manager of North Bohemian Mines, dressed in an incomplete miner's uniform. On the terrace of the chateau, overlooking the coal basin, he listened to the General Manager's lecture on the mining progress, continuing success and bright prospects for the coal mining. Then he listened to Dr Marek's lecture. After that, he asked him for his published works to study and kept holding on to his elbow throughout the rest of the guided tour. Before the end of the excursion, he made Dr Marek sit in one of the two chairs available in the chateau courtyard, sitting himself on the other one, while the team of ministers and the General Manager of the mine corporation had to look on standing in a semicircle around them. Everyone present must have been clear about the fact that the decision had been made.

The Central Party Committee concurs

There was no doubt that Hegenbart then had to overcome the opposition of the conservative members of the Central Party Committee and negotiate with representatives of the international Comecon, directed from Moscow. No definitive and formal decision was arrived at for a long time. That was why Dr Marek appeared on the popular TV show "Vysílá studio Jezerka" in October 1987 and demanded a political decision. The response of the Prague Municipal Committee of the Communist Party was rancorous, and he was again deleted from the list of nominees for State Awards. Jana Fořtová, the TV show host, preferred emigration. Nevertheless, the government's decision was published in the spring of 1988: Jezeří Chateau would be preserved and renovated. The coal mine had to ensure the stability of its underlying slope. The Government earmarked special lottery funds for the renovation.

The mine managers and planners were thus forced into a solution they did not welcome: they had to leave intact the portions of the basin strata series below the most critical parts of the main Ore Mountains side, including the coal seam, which could not be extracted through an opencast mine. Those areas were to act as pillars whose purpose was to secure the stability of the tectonically disrupted mountainsides and thus the safety of operations in the open mine pit. The pillar below Jezerka contains approx. 10 million tonnes of coal; the one below Jezeří has 20-30 million tonnes of coal. Naturally, the pillars and their surroundings had to be kept under geomechanical and geodetic monitoring. The village of Albrechtice could not be saved: it had been destroyed shortly before that (quite pointlessly, as it turned out).

The new struggle to maintain the chateau

The victorious celebrations quickly gave way to having to sort out who would undertake the overall renovation of the intricate building. A bid was made by Průmstav Pardubice, a Chomutov operation, a large and well-established company, but its general manager forbade the commission. The first money that arrived in the Jezeří account was used for erecting a metal scaffold around the main building, and a small construction team from the Žalany u Teplic co-operative farm started fixing the roof. When they found out it was beyond their capacity, they passed the task on to the Most state farm.

A small group of persistent campaigners to save Jezeří with a larger circle of supporters established itself as the "Association to Save Jezeří" in 1988. It registered itself with the Ministry of the Interior when a mild political thaw came. Later on, the citizens' association name was changed to the "Association to Restore Jezeří" in order to better express its current goals and efforts. The purpose was not only to save the historic building but also to restore its surroundings and the remains of the original landscape. A notable paradox then occurred: the Association exponents who were experts on various scientific disciplines and land use, who were previously in opposition to the governing political team, now became an informal advisory board to the Secretary of the Central Committee of the Communist Party! The one who took up the task of resolving the long neglected and truly pressing environmental problems: Rudolf Hegenbart. Associations members were summoned as needed and met in Prague, usually in the Terplan basement. An exceptional meeting was held in the little-known Ore Mountains hamlet with a long mining tradition, Hora Sv. Kateřiny, in October 1988, when they celebrated the birthdays of the environmental activist Petr Pakosta as well as Dr Marek.

The collapse of the communist regime: the context to rescue the chateau changes again

Soon afterwards, however, the party and government began to break apart and collapse in November 1989. That had serious implications for Jezeří. The former all-governing position of North Bohemian Mines lost its political support and, soon after that, its economic power. They were forced to reduce the mining activities to a fraction of the previous volume, making the advance of the Czechoslovak Army opencast mine slower. They had to start acting at least a little "environmentally", since that was the universal imperative of the new era.

Jezeří attracts high profile visitors

Jezeří was receiving increasing visits by new statesmen, ministers, deputies, Prime Minister Petr Pithart, and President Václav Havel. William Lobkowicz, the grandson of the last pre-war owner, arrived from the USA in 1990, took up permanent residence in Prague and requested the chateau be returned to him. One of my colleagues at Jezeří, Dr. František Jeniš, left for an expedition called "Driving a Tatra Round the World" and died in the mountains of Pakistan.

In 1991, Prince Charles and Princess Diana made their first official visit to Czechoslovakia. The schedule for the end of the visit by the pro-environmental Prince, arranged with the Presidential Office, included a visit to the Most district, marked by large-scale destruction due to coal mining, and Jezeří Chateau, which had barely escaped its demolition order. Princess Diana left for England, and Prince Charles and his entourage arrived by plane – piloted by the Prince himself – at the disused military airfield at Žatec. In place of President Havel, he was accompanied by Chancellor Schwarzenberg, the British Ambassador, Federal Minister of the Environment Josef Vavroušek, Czech Minister of the Environment Ivan Dejmal, and journalist Pavel Tigrid. During the tour of the coal basin, Dr Marek gave a general lecture on the dam of Lake Dřínov and the body of the cut-off road below Jezeří. Then the convoy arrived at Jezeří, where the Prince was welcomed by Parliamentary Chairman Milan Uhde and the Lobkowicz family in the upper garden. Dr Marek presented an overview of the chateau history in the courtyard, and the terrace overlooking the mine pit provided the guests with a vista of the gaping mine pit and the country that was being devoured by the demanding power industry. The Prince was sincerely shocked. After Dr Marek introduced the activists of the Association to Restore Jezeří, he said, "I do not envy your job," and registered himself as a member of the Association. So did Milan Uhde and Pavel Tigrid.

Of course, the regional, national and international media informed the public about the visit. Only after that could the Jezeří area and its adjacent mountainside be considered to be saved in the new political era: the topic had been made popular enough by the media.

The Prince promised to contribute towards the restoration of Jezeří with money from global funds. In order to be able to accept any such donations, the Association to Restore Jezeří set up the Foundation to Restore Jezeří with the economist Ing. Jaroslav Stoklasa as the chairman, and opened an account with a bank in Most. The first deposit was made by the Prague-based architect Karel Císař, who designed the chateau renovation

project. No other money arrived, though. The Prince kept his promise, but the money never made it past Prague. It was used for renovating the Baroque gardens under Prague Chateau and perhaps the replacement of several of the Charles Bridge statues. Money from the special funds, allocated by the State through the Regional Authority, only kept arriving until its dissolution in 1993. Then it dried up.

Through Ing. Stoklasa, who had become an advisor to Minister Vavroušek in the meantime, the Association tried to promote the idea of making Jezeří a national centre for studies of possible rehabilitation of extremely damaged landscapes. Something similar exists in Austria, where the state has given Chateau Laxenburg, confiscated from the Habsburgs, to international environmental projects. Ing. Stoklasa brought up the proposal in various ministerial and environmental circles, including abroad, but did not succeed.

Limits placed on mining operations in the North Bohemian coal basin

Territorial limits to the mining of brown coal in North Bohemia was approved in parliament in 1991 through the binding resolution of the government of the Czech Republic No. 444, which was passed at the instigation of the then Minister of Environment Ivan Dejmal. It defines the mining areas where coal reserves have been written off.

Limits to mining operations close to Jezeří Chateau

The main reason for the setting of the limits was to protect the environment and landscape in the North Bohemian region. The limits serve as a government guarantee to North Bohemia districts that henceforth their environment would not continue to deteriorate and that their long-term existence was assured (i.e. that it was worth purchasing property there, building and repairing houses, reconstructing roads, setting up businesses, etc…).

The limits also served to provide confidence to those wishing to protect, preserve and repair Jezeří Chateau as there would no longer be any prospect of encroaching mining operations undermining the slopes of the Ore Mountains upon which the chateau rests.

Problems with funding of maintenance and ownership

Jezeří Chateau was no longer an exception as a heritage building saved just prior to destruction under the new political conditions. Other regions too began making claims on funds for renovating their dilapidated heritage buildings, such as Brno did for Špilberk. Faced with such a situation, the government gladly complied with former owners' claims, and restored Jezeří Chateau to the Lobkowicz family.

The former economic hinterland for the chateau – the Jezeří and Nové Sedlo nad Bílinou dominion – fell prey to large-scale coal mines. The restituted owners were given no compensation for it. Only the forest properties in the Ore Mountains remain; they had been degraded due to the pollution and climate change resulting from coal combustion in power plants. They were given back about 10 more buildings, mostly in a devastated condition and without their economic hinterland. They soon concluded they could not sustain Jezeří. William Lobkowicz offered to transfer the chateau to the Association free of charge. Dr Marek had to decline that generous offer politely, both for himself and on behalf the Association that he chaired. It was unclear how they would provide the dilapidated building with security, fire safety, drinking water and other essentials. None of them had enough money for renovating it.

Some risk emerged at the other end: The Lobkowicz family were in dire need of funds for renovating their other restituted properties. In order to raise some funds, they offered Jezeří Chateau for sale. Given the situation resulting from the coal mining, it was obvious that the coal miners would be the only potential buyer. The intention would not be to locate their managerial offices in it or convert it to a holiday resort for their workers, but to finally erase the despised building. No one could prevent them from doing so as the legitimate owners, meaning all the previous efforts to save it would be in vain.

So the Association had to fight on. Dr Marek approached the Lobkowicz family with a long letter in which he invoked their moral obligation towards the building that they had owned for more than 300 years, and its liability for the history of the Czech lands, in which it often interfered significantly from its seat at Jezeří. Dr Marek argued that the chateau must not be sold but returned to state ownership. The old Czech nobility obeyed! The government authorities had to be convinced again that they ought to take over the building, which they had left to rot, and complete its renovation. It was not easy, but it worked. The case was partly supported by Dr Marek's reputation in heritage and environmental conservation circles, partly by the fact Milan Uhde and Pavel Tigrid were members of the Association to Restore Jezeří, and definitely by Prince Charles's visit.

Nevertheless, Prince Charles was not the only royalty to visit Jezeří. In another official state visit, Queen Beatrix of the Netherlands and her husband, Prince Klaus, arrived in the company of the Dutch Ambassador, Chancellor Dobrovský and Minsters Dlouhý and Benda in 1994. As part of the Presidential Office plan, the welcome in the chateau garden was be followed by a view from "Charles' Vista" and a presentation by the North Bohemian Mines manager. Local environmental activists protested against that. They convinced Chancellor Dobrovský that the presentation should only be made by Dr Marek. The mine manager would then be allowed to boast the mining successes in the basin below. Dr Marek handed the Queen the commemorative essay "Krušné hory, Jezeří and related matters" and a handful of raw Bohemian garnets. The Queen said she "would like to be as helpful as possible in saving Jezeří and the landscape". Unfortunately, her willingness was not exploited as a result of an avalanche of other events. Ministers Benda (environment) and Dlouhý (industry and trade) said nothing and would make no perceptible effort for Jezeří later on.

The battle is won and restoration work begins

Jezeří Chateau and its surrounds today

Following the exceptional case of the State taking back over a property that had been restored to its legitimate owner, the State invested some money in its renovation, but far less than the demanding project required. So work proceeded only slowly. Nevertheless, several years later, one can appreciate that the chateau gleams in the distance with its new roofing, repaired chimney heads, copper-plated cupolas, and gilded balloons on the spires. Parts of the chateau have been made accessible to the public. The warden is Hana Krejčová, a local and a former singer at Teplice Theatre, who has a welcome attachment to the place and the chateau. We may yet see the renovation completed.

The Foundation to Restore Jezeří has been dissolved. The Association to Restore Jezeří has not, and although the effort to restore Jezeří has been accomplished, there are still problems in which it has to be involved or which it has to take up under pressure of current events. Although there are no regular meetings, the Association is still capable of mobilizing its active core members and apply its font of knowledge and experience wherever it is needed.

The saving of Jezeří was a battle won among the several large battles that individuals and environmental groups waged against megalomaniacal projects promoted by the Party and those in power at the time. They prevented the construction of a large dam on the Berounka near Chateau Křivoklát and a high-rise hotel on the top of Sněžka (the highest peak in the Czech Republic). The only thing they failed to prevent was the development of a car racing circuit in a suburban forest near Brno, which totally ruined the notion of the idyllic setting of the writer Alois Mrštík's "May Fairytale". That can be regarded as a fair success during the totalitarian era.

Jezeří is made publicly accessible again

Jezeří Chateau was opened to the public again in June 1996. Given the state of the monument, a whole range of provisional arrangements were made to enable basic viewing. There weren't many options for exhibiting the chateau, and so in making it accessible it was necessary to overcome many various technical obstacles. It was necessary to delineate the best preserved part of the entire premises that wouldn't represent a safety risk to

visitors. The most suitable solution proved to be making several rooms partially accessible in the northern part directly connected to the chateau gardens whose main gate was used for providing temporary access to the grounds. In 1996, two rooms were made accessible – the small salon and a bedroom with direct access to the chateau gardens, where a small wooden outbuilding was also used for selling tickets and souvenirs. The tour itself included only a commentary on the chateau's history and the showing of a short documentary film about the chateau's history and surroundings because the chateau was completely empty of any fixtures. The second part of the tour was of the cellars and chateau silversmith workshop. After several years, the tour circuit expanded to a further three rooms and in the northern tower where a labelled exhibition of the 19th century interior was installed with a look at how the building was used for hunting purposes in the past. An inventory from the National Heritage Institute depository in Ústí nad Labem was used for this exposition, while supernatural creatures and fairy-tale characters were installed in the cellars.

Tours of the building take place at the same time reconstruction work is being carried out so that the chateau management is forced to adapt to situations as they arise. An important change in the tour circuit resulted from the erosion of the painted timbered ceiling on the second floor of the northern tower when it was necessary move the inventory and look for another suitable type of tour circuit. This happened in January 2004. Given that partial reconstruction of the ground floor of the lord's manor had been completed, which permitted the use of this space for a cash desk and facilities for visitors, the entrance to the chateau was able to be moved from the inner forecourt. The inventory was moved to the southern part of the chateau, which had already been stabilised by the reconstruction work undertaken on the roof and ceilings.

The battle begins anew

The dawning of the democratic era did not, however, herald the end of the chateau's battle for survival. Although the first post-communist parliament approved territorial limits to mining operations in the North Bohemian coal basin in 1991, which provided a sense of security to the chateau and its neighbouring townships in Horní Jiřetín and Černice, in more recent years those limits have come under increasing pressure by the mining lobby and representatives of various political parties to be lifted or abrogated altogether.

The viability of the limits has long had doubt cast on them by the mining companies directly affected by the limits, Severočeské doly and the Czech Coal Group, and the electricity power company ČEZ. While the official stance of Czech Prime Minister Petr Nečas[1] and all political parties represented in the Czech parliament as of 2012 (apart from the Communist Party of Bohemia and Moravia[2]) was in favour of maintaining the North Bohemian mining limits, mining interests have or have had the support of at least some individual members of parliament. These include prominent members of the main government coalition partner, the Civic Democratic Party, such as deputy party leader and Trade and Industry Minister, Martin Kuba[3] and Jan Bureš.[4].

At the regional level, however, Czech Social Democratic Party politicians in the Ustí region have broken ranks with their national organisation by supporting a breach of the limits.[5] Following regional elections in 2012, the Communists emerged as the largest regional party in the Ustí region, and its regional leader, Oldřich Bubeníček, restated the need from his party's perspective to lift the limits to maintain regional employment, albeit "only if the miners agree with the local inhabitants and there is proper compensation".[6] Negotiations between the Communist Party, the Czech Social Democratic Party and Severočeši.cz (North Bohemians) on forming a coalition regional government indicated that there was general agreement on breaching the mining limits.[7]

Other important energy policy stakeholders are also in favour of breaching the mining limits. The head of the Energy Regulatory Office, Alena Vitásková, for example, supports mining past the current limits in order to lower energy prices for consumers. "If the coal limits are breached, heating from coal will be the cheapest for customers, that's obvious. I'm in favour of breaching the limits – that way we'll get an energy source cheaper than gas and renewable sources."[8]

Support nowadays for maintaining the limits and opposing expanded mining operations is led by a coalition of national NGOs, local civic associations and elected municipal officials from the towns most at threat from the lifting of the limits, e.g. Horní Jiřetín and Litvínov.

The most prominent opponent to expanded mining from among local municipal politicians is Vladimír Buřt, deputy mayor of Horní Jiřetín, who has been a member of the local council there since 2003. Buřt won a seat on the Ustí regional council as a member of the Green Party on the Hnutí PRO kraj ticket in the 2012 regional elections. He also has a very personal interest in protecting Jezeří Chateau - he resides in the chateau buildings with his partner, the chateau castellan.

He was the recipient of the 2009 Josef Vavroušek Prize[9] for his persistent defence of local communities against the private interests of mining companies. Buřt was also awarded the Ivan Dejmal Prize in 2011 for an outstanding positive achievement associated with the landscape by the Society for Landscape.[10]

Buřt has stated his conviction that in relation to Horní Jiřetín, there is little coal remaining following termination of coal mining operations in town's cadastre in the late 1980s that made extensive use of deep mining technology, and therefore Horní Jiřetín represents more of a blockage to mining further afield rather than as a site resting on large coal reserves. "A large part of Jiřetín is built on the slopes of the Ore Mountains. If the miners wanted to get the rest of the coal directly under Jiřetín, they'd not only have to mine the built-up area, but also much of the slopes of the Ore Mountains. They'd have to remove the beech forests and hillsides up to another one hundred metres above the town. That in itself is incredible barbarity, and it's nonsense of course from an economic point of view."[11]

Buřt belives Jezeří itself may be threatened by fissures on the surrounding hills and new landslides allegedly caused by the mining. As the mining gnaws away at the surrounding hillsides there is the threat of a landslide into the valley. Jezeří has until now been supported and protected by its surrounding park, but visible crevices in the land have increasingly threatened its stability. The miners, however, claim that they are monitoring the area around the Czechoslovak Army open cast mine and any fears are unnecessary.

But according to Buřt, the machines are eating into the hills more and more and disrupting the stability of the land: "I'm watching regularly with great concern; it can happen anytime." [12]

There is only one access road to the chateau which more than 20,000 visitors used in 2010, which was about 50% more people than the previous year.[13] Paradoxically, visitors cannot tear their eyes away from the massive mining operations below the chateau as well. Should the mining limits be abrogated, then not only would the adjacent settlements disappear and the chateau foundations destabilised, but the chateau access road would be removed.

Czech Coal, however, has said that should the mining ever continue beyond the current limits, a new road to the chateau and to the settlements in the Ore Mountains that depend on access via Horní Jiřetín would be built, or the old disused E13 road from Chomutov would be restored.[14]

In early 2011, a large landslide occurred on the edge of the Czechoslovak Army Mine below Jezeří that Czech Coal wanted to backfill and landscape at a cost of CZK 100 mil., for which the company used financial reserves earmarked for recultivation projects.[15] Czech Coal stated at the time that "in view of the lack of the lack of soil in connection with the territorial ecological limits it is necessary to ensure the long-term stability of the slopes partially through mining methods i.e. backfilling, in combination with structural landscaping."

Buřt accused the mining company of defending its irresponsibility by blaming Jiřetín and the limits, adding that the company was essentially admitting that it know about the possible risks. Continuing mining along the foothills would simply escalate the problem, not resolve it, said Buřt.

Buřt said that landslides into the mining pit occurred every year, but the one in early 2011 was one of the biggest. The regional organisation of the Green Party said the miners did not respect the laws of nature in the area. Thirty years previously it had been decided that mining would be diverted to a safer distance from the Ore Mountain foothills with the remaining land under the chateau park being preserved as a stabilising pillar. The Green Party representatives believed the landslide had disturbed the pillar.

But Czech Coal did not agree with the ecologists even after the slide. Its spokespeople referred to their views as "non-expert discussions and speculation". The company rejected "professionally unfounded" claims about the threat to the Ore Mountains, Jezeří chateau, nearby settlements and neighbouring towns further from the

mine. “Discussions about the stability of the slopes and the influence of the mining should be held at a professional level and not in the form of speculation”, said Czech Coal spokesperson Gabriela Benešová.[16]

Immediate threat of expanded mining reduced

Supporters of expanded brown coal mining beyond the existing limits took a major blow on 26 September 2012 when parliament agreed an amendment to the Mining Act which removed the right to expropriate private property for mining purposes. The amendment was criticised by the opposition parties in parliament: parliamentary Economic Committee chairman, Milan Urban, said the amendment could cause such large damage that it could be viewed in future as high treason, while Communist Party MP Kateřina Konečná said it could “wreck the state’s economic policy”.[17]

President Vaclav Klaus provided some hope to the amendment’s critics when he exercised his right to veto the law change. Klaus justified his veto by saying the amendment would deprive the country of an important energy policy tool and would facilitate land speculation. “The law abolishes the institution of expropriation. Unlike the current version of the Mining Act, it provides for a very risky and problematic conflict between landowners and the owner of this mineral wealth, which is the state,” said Klaus as part of his rationale. “One can expect that the land underneath which are deposits owned by the state and which in exceptional cases it will not be possible to expropriate , will be purchased for speculative reasons with an eye to recovering a large amount of compensation from the state.” [18]

Parliament, however, overturned Klaus’s veto and reconfirmed its original amendment to the Mining Act removing the expropriation clause. The amendment was supported by 120 MPs, including the government coalition, six opposition Social Democrats, all Věci veřejné (English: Public Affairs) MPs and two independent MPs. [19]

Pro-mining candidate wins Czech presidential elections

In January 2013, the Czechs elected Miloš Zeman, the former Social Democrat prime minister (1998-2002), as their new president in the first ever direction presidential election. Prior to the election, Zeman categorically stated that he was in favour of not only breaching the mining limits but expediting the whole process because it would help lower high unemployment in the region and the people of Horní Jiřetín would receive "decent" compensation for their property. "You can't let coal reserves lie dormant for 50 years ahead when our power stations would otherwise have to be shut down, or expensive coal would have to be imported from abroad," said Zeman.[20]

Curiously, despite such statements, the residents of Horní Jiřetín voted 60-40[21] for Zeman over his opponent Karel Schwarzenberg, who was known to have 'green' sympathies. A possible explanation lies in the fact that Schwarzenberg had made statements during the presidential campaign that called into question the immediate post-war Beneš Decrees which laid the basis for the expulsion of approximately three million Germans from Czechoslovakia. As Horní Jiřetín lies on the Czech-German border in what was formerly the German Sudetenland, it is likely that the local population viewed Schwarzenberg's alleged 'pro-Sudeten' statements more negatively than Zeman's pro-mining statements.

Resources

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[1] My government will not break the brown coal mining limits, Nečas promises. Hospodařský noviny, 3.12.2011.

[2] Communist Party member of parliament, Karel Šidlo, stated “The Communist Party decided to support the breaching of the brown coal mining limits as a necessary condition for ensuring the long-term energy security and independence of the Czech Republic, which is a basis for the further development of the Czech economy. Further reasons are the maintenance of job opportunities and reducing the unemployment rate in a region which has been for a long time one of the highest in the Czech Republic.”

[3] Kuba pushed for the maintenance of the state’s right to expropriate private property as part of negotiations over a draft amendment to the Mining Act in case a decision is made in future to breach the current mining limits. "Kuba wants to keep the option of expropriation because of coal mining." Deník, 28.2.2012.

[4] A group of environmental NGOs has also accused Kuba and his Ministry of continuing to push for increased mining beyond the limits by promoting a raw materials policy that is completely at odds with the draft State Energy Strategy 2012 which is based on maintenance of the current limits. See "Kuba’s draft energy plan doesn’t count on mining beyond the coal limits, otherwise it’s worth nothing". Greenpeace press release, 7 November 2012.

[5] Bureš is a member of the parliamentary subcommittee on energy who stated “Personally, I believe that breaching the limits is desirable, and the state, as the coal owner, should set conditions so that mining beyond today’s limits guarantees a supply of coal for an economically acceptable price for Czech heating plants”.

[6] The former deputy governor of the Ustí region for the CSSD, Pavel Kouda, is a well-known supporter of extended mining in the region, as is the CSSD district organisation in the city of Most. Kouda sent a letter on governor letterhead to the Ministry of Trade and Industry in late 2011 stating express support for the breaching of mining limits after 2014. "Usti region supports breaching of coal mining limits". ČeskáPozice.cz, 28 December 2011

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[13] Český rozhlas, 7.12.2010, "Jezeří again threatened by fissures".

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[19]'The end of expropriation for mining. MPs overturn Klaus's veto', Lidový noviny, 19 November 2012

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Discovery of a supposed extinct settlement species made at Königsmühle in the Ore Mountains

Petr Mikšíček

In one of my speeches on the Ore Mountains at the Green Network Conference in Dresden in 2011, I referred to the Ore Mountain region as a landscape full of footprints. Footprints left here by bygone generations of inhabitants as well as present-day footprints left by us. Footprints can be cast in plaster and preserved for future generations, or wiped out, hidden, erased from our memory. Both these approaches have been applied in the Ore Mountains. The preservation of these footprints clashes against the interests of land owners. The association DoKrajin, in which I work, tries to preserve the footprints, so I will gladly share with you a story of an ancient footprint that is on the brink of being wiped out.

Destruction of settlements in borderland areas

About two million people left their homes in the former Sudeten against their will in the 1940s due to the outcomes of the Potsdam Conference. Their homes were either completely or inadequately resettled. Remote locations in mountain areas often remained totally abandoned. At the same time, however, such places represent a traditional model of settlement familiar in the rural environment, which was the determinant for the development of our landscape until roughly the beginning of the Industrial Revolution. Essentially, these places represent the model of the struggle of man with nature, in which the feedback mechanisms of coexistence between human culture and nature's maternal system were formed. That is one of the reasons why these places are important for our culture and landscape. In the 1950s, the Czechoslovak armed forces began a planned destruction of the remains of these settlements that were not repopulated after the eviction of the Germans. Heavy machinery arrived and all visible signs of such villages, hamlets and populated places disappeared, masked by grass and nettles. Heritage conservation authorities had to write off these valuable assets and handed over the remaining territories to nature protection bodies. Some 3000 villages, hamlets and populated places were wiped out in the Czech-German borderland. Some 17,000 houses were demolished. This genocide of small settlements affected Bohemia, Moravia and Silesia. According to period reports around 1960, we had "cleared away" the ruins in the borderland and afforested the remaining areas. It seemed that not a single specimen of this settlement type survived.

Until 2012, I lived under the impression that no more than a few ruins of walls, visible approximately up to shoulder height, were left by some mistake in the demolished Czech-German borderland. However, I made a unique discovery during my rambles in May 2012 – the forgotten hamlet of Königsmühle, which survived the genocide "by mistake". It was not demolished as part of the plan, nor was the village interior destroyed. In short, the hamlet just aged and decayed.

Between July 2011 and the end of August 2012, I planned with a few colleagues on how to enter the abandoned landscape in the former Königsmühle valley. We discussed what the site would tolerate and what it would not. We trod cautiously among the fauna, flora and history. The entire encounter was one big experiment with an unclear outcome. However, we all treated the process very cautiously and, subconsciously,

most of the authors and organisers arrived at the same conclusion. We only managed to formulate that conclusion fourteen days after the exploratory work at Königsmühle was over.

Vulkanland Case Study: Transformative regional development

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Abstract

After being an economic backwater, the southeastern Austrian border region enjoys economic boom today. The decisive factor for the turnaround was a regional development process that had its first steps in 1995. The region was suffering from low education, had the national lowest income rate, no industrial development, no infrastructure, little self-esteem and a lack of job opportunity. The initiators of the project were thinking of a different way of measuring progress and started imagining a future built on different standards. Due to profound research activities, the initiators came to the conclusion that mega projects won't entail sustainable solutions or future-competence. Hence, they turned their focus to their habitat – their region. To in-valuate the living space, a new identity that was representative, gained recognition and reinforced the peoples self-confidence. In 2001 the new identity 'Steirisches Vulkanland' was born. The vision throughout the entire development process was to transform the border region with little chances into an innovative, worth living region 'Steirisches Vulkanland' within a period of 15 years. In 2010 their vision seems to be achieved, 79 municipalities together promote successfully local, green, self-sustaining businesses. Yet, the development process is still going on, heading for new, courageous, challenging visions like achieving energy independence by the year 2025.

Social learning in transnational projects – lessons from European territorial cooperation projects

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Abstract

Old industrial regions in Europe have undergone radical changes in the last decades. After downsizing or closure of predominant industries such regions usually face big challenges concerning their economic, social and ecological futures. One chance to master this transformation process is the identification and sustainable utilisation of potentials left by industrial production. Utilisation of regional potentials, commonly categorized as natural and cultural potentials, was the aim of two transnational cooperation projects ReSource and SHIFT-X, which were both funded by European Union's Development Fund (ERDF, INTERREG IVB).

The paper shows how the involvement of research partners in the projects supported and facilitated joint learning effects and knowledge transfer between all project partners. It is argued that on the one hand such an approach offers important mutual benefits for partners, while on the other hand the realisation of such

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benefits remains a challenging task in a transnational collaboration. In declining industrial regions, especially when characterised by small- and medium-sized towns, the capacities to act are scarce and any outside intervention is often seen more as an unwanted factor that additionally stretches resources and provides little advantages for such regions. Therefore one of the main aims in transnational collaboration has to be the establishment of a trustful and committed working relation between all partners. The engagement in the projects has shown that the joint work between regional actors and the external academic partners can create important transnational learning effects for all involved; nevertheless it has to overcome certain reservations on all sides before innovative ways can be pursued successfully.

The second life of Tuchomyšl: Local identity of displaced people from a strip-mined village

Ivana Růžičková

Abstract

The 20th century saw the obliteration of 106 towns and villages and ninety thousand people displaced as a result of brown coal mining in North Bohemia and the associated industrial development. Tuchomyšl was one of these villages; its population was resettled to newly built prefabricated housing estates in Ústí nad Labem and Chlumec. Based on an anthropological analysis of biographic interviews with the displaced people of Tuchomyšl, this case study demonstrates how the former Tuchomyšlers identify with the physical space of the village, today non-existent, and how they reflect on the forced eviction. As it turns out, the local identity of these resettled people is influenced by several factors, headed by the location of their new residence, their age during the obliteration, and the person's economic standing. These people continue to identify strongly with the social space of the obliterated village, which they keep alive with regular get-togethers even 35 years after the physical destruction of the village.

Debate about the Šumava National Park in the Czech Chamber of Deputies

Jan Skalík

Abstract

This study focuses on the content of the complete transcripts of parliamentary debates about National Park Šumava (ŠNP) in the Chamber of Deputies between 1990 and 2013. The study shows that politicians have been using the situation in the ŠNP to support their political strategies. During the parliamentary debates they refer to the regional atmosphere while highlighting peripheral character of the region and exclusion of local people from decision-making. They ignore plurality of conditions in the area and role of politics in the construction of the problem. The study also summarizes the legislative proposals relating to ŠNP through examination of evolution of accents and dictions in different bills and description of legislative process. Basic patterns and roles represented in the discussion are analysed, as well as the way they are reflected in the conceptual framing of the topic and accents of legislative proposals. The study concludes that scientific approach, reducing

political influence on the territory, gradually disappears from the content of parliamentary debates and from the mission statement of the bills on ŠNP.

Revitalisation of the Orlík Reservoir – a case study of a regional restoration project

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Introduction

The Orlík Reservoir is the Czech Republic's largest water body by volume, forming a step in the cascade of man-made impoundments on the Vltava River. Its dam was built in a deep valley of the middle stretch of the river approximately 90 kilometres upstream of Prague in the early 1960s. The impoundment extends 68 km along the Vltava River and additional 22 km and 7 km upstream its lateral tributaries, the Otava and Lužnice Rivers, respectively (Fig. 1). The total area of the Orlík Reservoir covers 2,733 ha and its maximum volume is 716.5 million m^3 (Kendík, 2008). Besides its main purposes, such as water accumulation for hydroelectricity production, improving the river flow downstream, or partial flood protection, the man-made lake soon became a famous destination for recreation, water sports, and angling. After two decades, however, a prosperous tourism business gradually declined due to massive water blooms at the Orlík Reservoir and then, during the next two decades, the regional tourism almost collapsed (Průša, 2009a).

Our case study focuses on both environmental drivers and socio-economic pressures of the half-century of the "reservoir ageing". We analyse how the construction of the Orlík dam has changed the surrounding region, how eutrophication and socio-economic transformation have impaired the regional tourism, and how public awareness has helped in solving regional problems and introducing sustainable tourism.

Historical background

Construction of the 91-metre high dam began in April 1957 and filling of the reservoir with water started in 1960. Long stretches of the Vltava River, as well as both the Otava and Lužnice Rivers, with their characteristic canyon-like valleys, were flooded with a vast amount of water until 1966. The huge water body has fundamentally changed the character of the surrounding landscape and life of the riverine population. Weirs and rapids disappeared. The rivers became silent. The lives of many people changed completely. Some residents had to leave their homes, flooded in the river valleys. Others were forced to change their employment due to a loss of traditional jobs, e.g., in a lot of original inns and pensions situated on the river banks. Building of the cascade of reservoirs also terminated the centuries-old tradition of timber transport using rafts on the Vltava River, as well as canoeing, which had become popular during the 20^{th} century. Abundant river ferries and fords disappeared and parts of historical trails and roads in the landscape were flooded and replaced with only a few bridges. Hence, people living on both sides of the new lake were separated more severely than in the past. On the other hand, the construction of the Orlík dam brought many positive opportunities to the region as well. New holiday resorts, hotels, and camping places started to grow on the lake shores. The area became popular for summer holidays, water sports, yachting, and angling. The Orlík Reservoir indeed was one of the most popular tourist destinations in Czechoslovakia in the 1970s and early 1980s. During that period, hundreds of thousands of domestic holidaymakers visited the region every summer

(partly due to the very restricted opportunity to travel abroad, e.g., to the sea). Thus, the region generated many new job opportunities that were, however, largely limited to the summer holiday season.

Unfortunately, the overall water quality in the Orlík Reservoir gradually deteriorated already during the 1980s, when water blooms occasionally appeared in the transition zones of both the Vltava and Otava inflows. Since then, the situation has been worsening further; regular occurrence of water blooms has extended in space and time depending on current weather, clearly showing an increasing trend in the eutrophication of the Orlík Reservoir. In consequence, the numbers of visitors started to decline from year to year. This trend has even accelerated since 1990, when the country opened its borders and the people changed their holiday preferences and destinations entirely. So did then abundant visitors from the former German Democratic Republic.

In response to this sudden drop in visitors' interests and overall socio-economic transformation, most of the regional holiday resorts, largely owned by state enterprises or trade unions, underwent a rather undirected privatisation process that, unfortunately, was not very successful (Průša, 2009a). Due to a lack of local capital, both privatisation and further operation of the tourist infrastructure was mainly funded and organised from outside the region; hence, any profit went out of the region, where the owners were settled. This also affected the quality of visitor services because most of the lessees were not much motivated for long-term care about their guests, who responded by changing destinations. Such a positive feedback has led to reduced income, antiquated tourist infrastructure, bankruptcies, and an increase in the regional unemployment rate. Local residents have been looking for work outside the region or have even moved out. Thus, the populations have been decreasing and ageing in many villages around the Orlík Reservoir.

Public awareness and project set up

The worsening of the natural conditions, i.e., water quality and phytoplankton blooms in the Orlík Reservoir, as well as the overall deterioration of tourism services and infrastructure have caused serious problems. In a similar way, socio-economic problems have affected the whole region surrounding the Orlík Reservoir, located astride the boundary of two autonomous regions, whereas the severity of environmental problems has decreased along a longitudinal gradient of surface water quality from the polluted tributaries to the reservoir dam. Heavy water blooms occurred more often in the tributary zones and usually lasted for longer periods than those in the middle part of the Orlík Reservoir, compared to usually milder water blooms in the lacustrine part near the dam (Liška et al., 2009; Duras et al., 2011). Therefore, much larger concern about poor water quality came from the South Bohemian Region than from the Central Bohemian Region. The latter indeed controls only about a quarter of the reservoir shoreline near the dam (see Fig. 1). This was why the representatives of 72 local municipalities from the South Bohemian Region, united in the Association of Písek District Municipalities, addressed their problems to scientists and regional politicians. After several meetings since the mid-2000s, a knowledge-based governance process has been launched for solving the regional problems.

The increasing eutrophication of the Orlík Reservoir was not surprising for limnologists, who had predicted this situation a long time ago. Its catchment area is 12,116 km^2, includes almost the entire South Bohemian Region, partly extends to the Plzeň Region, the Central Bohemian Region, and the Vysočina Region (Fig. 1). The total population exceeds 700 thousand people in the whole catchment. Almost 80% of its inhabitants are connected to municipal drinking water supply and sewerage systems (Hejzlar et al., 2010).

The experts have been well aware that such a sanitation progress causes, in particular, enhanced phosphorus loading of sewage and, if not effectively removed, increasing point-source pollution. Besides the overall growth of living standards (public water supply, sewerage, WC, washing machines, dishwashers, phosphate-rich detergents, etc.) during the past fifty years, intensification of both agriculture (use of fertilisers, livestock sewage, soil amelioration, erosion, etc.) and fishery (feeding, fertilisation, etc.) within the huge catchment area has contributed to the great eutrophication potential for the Orlík Reservoir. On the contrary, stream channelisation has impaired self-purification and nutrient retention in many of the reservoir tributaries. It was just a matter of time and favourable weather when massive water blooms would occur. Though the experts repeatedly tried to draw attention to this danger, their warnings were perceived neither by the public nor by decision makers.

Unfortunately, the experts' predictions have gradually become the reality – ugly green carpets have covered some parts of the reservoir surface every summer since more than two decades ago. It has discouraged tourists and thus also reduced job opportunities. Holiday resorts have been empty and fallen into disrepair. The region surrounding the Orlík Reservoir has become an inner periphery – a neglected region with minimum investment, decaying infrastructure, and a high unemployment rate (Musil & Müller, 2008).

In 2007, local representatives of the Association of Písek District Municipalities have initiated regional discussion and fruitful cooperation among experts from the Vltava River Authority, research institutions and universities, and representatives of regional stakeholders and the South Bohemian Regional Authority. This consortium organised the first conference on the Revitalisation of the Orlík Reservoir, held in the city of Písek in 2008, which reviewed major regional problems and suggested a framework for knowledge-based solutions and sustainable development of the region. A regional framework for the Revitalisation of the Orlík Reservoir project evolved in a bottom-up process under the governance of the Association of Písek District Municipalities. In 2009, the Association launched a scientific board that has coordinated and managed all the further project activities. Besides the Association of Písek District Municipalities, current members of the Scientific Board include the Institute of Hydrobiology of the ASCR Biology Centre, the Research Institute for Soil and Water Conservation, the University of South Bohemia in České Budějovice, the Vltava River Authority, the Fishery Corporation of the CR, and the South Bohemian Regional Authority. Regional governance of the project management warrants subsidiarity principles as major target groups are local people and municipalities, or regional stakeholders, who have been exposed to all the problems mentioned above.

Project strategy

Since the very beginning of the project, enhanced nutrients, particularly phosphorus concentrations in the tributaries, have been considered the superior cause of water blooms in the Orlík Reservoir, whereas internal phosphorus loading from the bottom sediments should not have a large eutrophication potential in the deep stratified reservoir. If sufficient inflow concentrations of nitrates prevent formation of hypolimnetic anoxia (cf. Liška et al., 2009), the bottom sediments are no important phosphorus source and their expensive excavation need not be considered. The first conference pointed out major eutrophication drivers and suggested miscellaneous sources of either point or diffuse pollution in the reservoir catchment. The Scientific Board then addressed the following questions: how much and from where? The experts agreed on a thorough revision of all existing data on water quality within the entire reservoir catchment and proposed a general Strategy of the Revitalisation of the Orlík Reservoir, which became public on the second conference in 2009 (Průša, 2009b).

The Strategy has included the following steps: (i) a Balance Study identifying and quantifying nutrient pollution sources in the catchment, suggesting alternative scenarios to reduce nutrient loading of the reservoir; (ii) a Feasibility Study, suggesting optimal measures to reduce major phosphorus sources in the entire reservoir catchment, and comparing efficiency and cost-benefit analysis of the scenarios, i.e., the alternative measures; (iii) selection (based on both the studies) and preparation of particular projects for implementation; and (iv) application of selected measures according to the projects. As a matter of fact, neither essential recovery of tourism nor regional development can be achieved without sustainable improvement of the water quality. The Strategy represents the procedure for how to achieve, within 10–15 years, the required target, i.e., good water quality allowing swimming in the Orlík Reservoir during every summer season. In addition, the Strategy is an efficient tool for implementation of the EU Water Framework Directive (WFD 2000) to the entire catchment territory.

Balance Study

First, the Institute of Hydrobiology performed a Balance Study, i.e., a balance of phosphorus and nitrogen sources within the Orlík Reservoir catchment (Hejzlar et al., 2010), funded by the Vltava River Authority. Hejzlar et al. (2010) applied current know-how and directly adapted new modelling methods to the conditions of the Orlík Reservoir and its catchment. They used all available data, including geographic information systems, or expert estimates related to the balance of phosphorus and nitrogen in any particular sub-catchment. To our

knowledge, this Balance Study is quite unique and likely represents the most detailed nutrient balance ever calculated for such a huge river basin. No similar study has been processed in the Czech Republic so far.

The results of the Balance Study are not surprising and confirm that eutrophication of the Orlík Reservoir is caused exclusively by the high level of phosphorus input from the catchment, whereas the influence of nitrogen is negligible. The annual phosphorus loading exceeds the retention capacity of the Orlík Reservoir three times. In other words, if we reduce the current phosphorus loading of the reservoir by about two thirds for a long time, we will ensure the required and sustainable water quality. The Balance Study exactly localised the vast majority of the nutrient sources in the sub-catchments of the entire catchment, quantified their size, and assessed their importance (Hejzlar et al., 2010).

The study distinguishes three types of phosphorus sources: (i) municipal sewerage systems, either releasing untreated sewage, or wastewater treatment plants operating without efficient phosphorus removal; (ii) abundant fishponds in some of the sub-catchments, releasing phosphorus under specific circumstances (e.g., anoxia, over-feeding, or over-fertilising); and (iii) several unknown local sources (i.e., lacking data on pollution sources in a sub-catchment) and some localities with either improper livestock sewage treatment, or agricultural releases (over-fertilisation, erosion, etc.). Excessive phosphorus release in some cases of each type may be caused by specific malpractices in, e.g., wastewater treatment, aquaculture and fishpond management, livestock and crop production. Indeed, corrective measures based on compliance with good practice would currently be the cheapest solutions. On the other hand, some sources, such as fishpond ecosystems, really need a deeper insight and further hydrobiological research to understand their current hypertrophic status. While most fishponds should retain phosphorus in theory, neither the Balance Study (Hejzlar et al., 2010), nor current fishpond monitoring (Potužák et al., 2010a,b, 2011) have confirmed such a general assumption. It can indicate too intensive aquaculture, insufficient primary production or its weak transformation along the food chain, high internal phosphorus loading, as well as enhanced phosphorus loading from an inflow.

In addition, the Balance Study considered several scenarios of how to achieve the reduced target phosphorus input. The consequent Feasibility Study should analyse technological, legal, or socio-economic feasibility of the particular scenarios, calculate cost-benefit analyses of their expenses, and suggest optimal measures to reduce the phosphorus sources.

Current progress

The Balance Study indeed suggests that phosphorus pollution is actually not similar across the entire catchment territory. For instance, the basins of the Lomnice and Lužnice Rivers belong to those most phosphorus-polluted sub-catchments. While small direct tributaries to the Orlík Reservoir represent negligible contribution to its total phosphorus loading, even such a little phosphorus supply causes local water blooms in adjacent bays. Therefore, present activities of the project follow not only the overall Strategy, i.e., current preparation of the Feasibility Study and its funding, but also include corrective measures for the recognised malpractices, if applicable, as well as local measures improving single pollution sources. Whereas the Feasibility Study requires efficient cooperation on a large scale that requires effective coordination by the South Bohemian Region Authority and/or the Vltava River Authority, the other measures rather require subsidiarity based on local solutions.

Thus, besides the focus on the entire catchment and its synergy in reducing overall phosphorus loading of the reservoir, the Association of Písek District Municipalities pays particular attention to the closest vicinity of the Orlík Reservoir. The municipalities have focused on building sewerage and wastewater treatment plants, the majority of which does not have proper technology, if any, and phosphorus removal. Even relatively large municipalities, such as Mirotice or Čimelice with more than one thousand inhabitants each, are still lacking any central wastewater treatment plant. The result is that wastewater, only partly pre-treated in septic tanks, directly enters the recipients in the most polluted sub-catchment of the Lomnice River (see Fig. 1).

Hence, the Association assists in preparing municipal projects of sewerage and wastewater treatment plants for its members, in particular the settlements surrounding the Orlík Reservoir. Three projects have been

successfully implemented during the Revitalisation of the Orlík Reservoir project and wastewater treatment plants with enhanced phosphorus removal are already in use in the municipalities of Zvíkovské Podhradí, Putim, and Kostelec nad Vltavou. Construction of two wastewater treatment plants, in Čimelice and Orlík nad Vltavou, is currently in progress (Fig. 1). Four other successful projects have recently been approved for funding in the near future. All these projects include enhanced phosphorus removal. On the other hand, even if all the villages surrounding the Orlík Reservoir built their sewerage and wastewater treatment plants, it would not ensure clear water in the lake. It should, however, make an apparent improvement of water quality in the adjacent bays.

In parallel, some preliminary work associated with the Feasibility Study has begun. Yet it has turned out that it is not easy at all to exactly specify its tasks for potential contractors. Some partial pitfalls have occurred that have slowed down further negotiations. Moreover, recent economic depression as well as political turbulences have complicated and delayed formal processing of the Feasibility Study.

Despite the serious environmental problems, however, the local people await an improvement to the socio-economic situation and sustainable life. The main targets of the regional framework project on the Revitalisation of the Orlík Reservoir are recovery of sustainable tourism and regional development. Though the current conditions of regional tourism remain bad (e.g., Průša, 2009a) and the remaining entrepreneurs have to face unstable economic and/or weather conditions, some of them eventually going bankrupt or even committing suicides, there is quite a great potential for improving the situation. The Association of Písek District Municipalities has initiated mutual co-operation among businesses to attract visitors back to the region, which requires acting together as one tourist destination. The Association has prepared some initial activities within the last three years, such as seminars informing entrepreneurs about available grants and other opportunities, common public relations, regional broadcasting, posters or flyers advertising summer cultural events, music festivals, etc. This cooperation has been appreciated and is further developed and improved as a crucial tool for regional tourism. Last but not least, the surroundings of the Orlík Reservoir offer much more than the lake, e.g., beautiful landscape, valuable nature, hundreds of kilometres of cycle tracks, abundant castles and other historical sights.

Conclusions

Our case study presents the unique, so far successful project framework of the Revitalisation of the Orlík Reservoir, which aims not only at the reservoir restoration as an essential prerequisite of sustainable tourism and regional development in the reservoir surroundings, but also effective implementation of the EU Water Framework Directive in the entire catchment, i.e., the whole South Bohemian Region, and even beyond. It is the largest and most complex attempt to improve water quality on the catchment scale in the country. The whole framework has been set up in a bottom-up process reflecting mutual trust of all parties, i.e., local and regional municipalities, multidisciplinary experts, and key regional and local stakeholders.

We believe it is a good example of “science-wise” governance of sustainable life based on subsidiarity. The Association of Písek District Municipalities helps with the preparation of the municipal sewage treatment projects with efficient phosphorus removal, which is even cheaper by an order of magnitude than building expensive nitrogen removal technology. The tradition of annual project conferences held in Písek largely improves overall public awareness of both environmental and socio-economic problems and prevents misleading temptations of “miraculous” technologies or products. Moreover, the Association coordinates joint activities of emerging tourism businesses. The project Scientific Board warrants knowledge-based solutions and will control the optimal measures suggested by both the Balance and Feasibility Studies. The South Bohemian Regional Authority, in cooperation with other neighbouring regional authorities, as well as the Vltava River Authority, should guarantee proper political and legal framework for application of optimal and efficient measures within the entire catchment. Last but not least, any desired success of the Revitalisation of the Orlík Reservoir requires certain political support of the Czech Government, in particular the Ministry of the Environment, the Ministry of Agriculture, and the Ministry for Local Development, as well as further funding from whatever available source, including the EU Cohesion Policy.

The Revitalisation of the Orlík Reservoir has a great potential and synergy for solving the socio-economic and environmental problems, and represents a good example of a sustainable win-win strategy for the region, local people, tourists, stakeholders, as well as water and agricultural policy.

Acknowledgments

This study was supported by the project OP VK CZ.1.07/2.4.00/17.0130. Stanislav Grill kindly designed the map.

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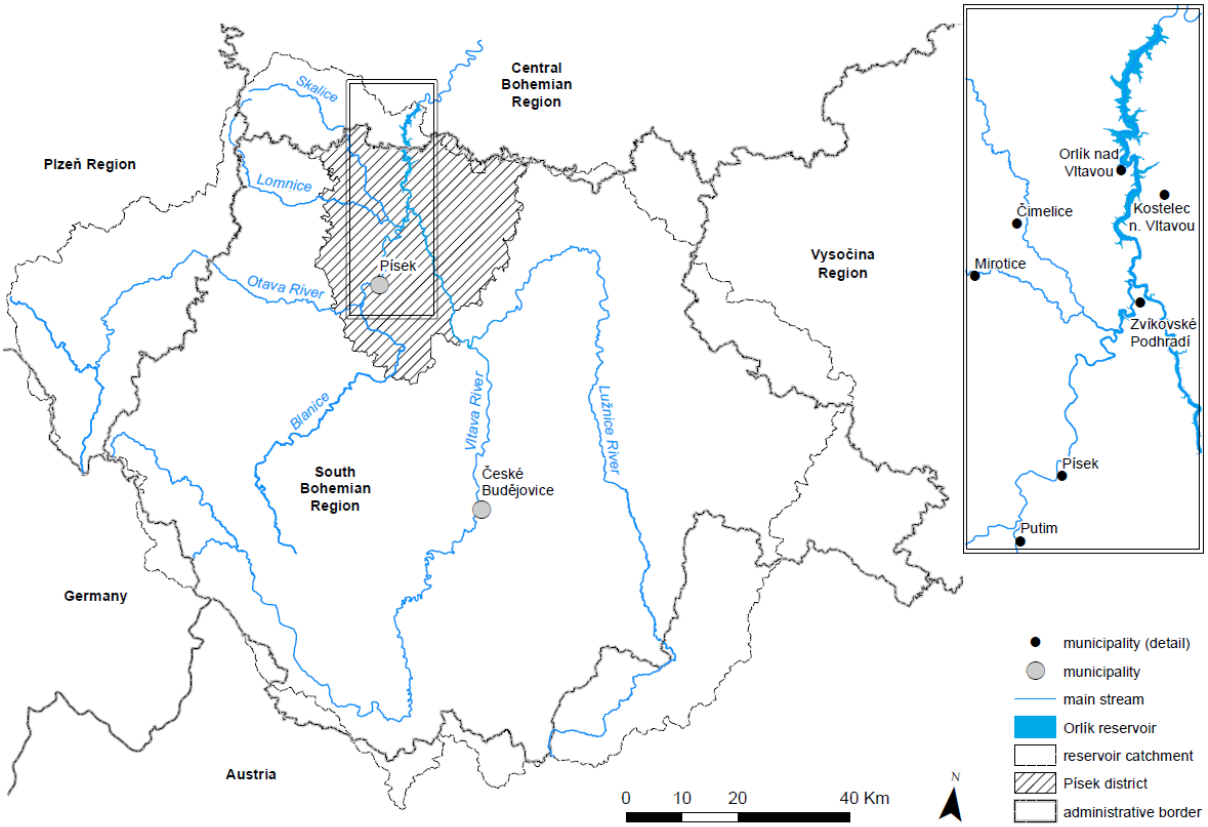

Fig. 1: Orlík reservoir – a schematic map of the entire catchment with major tributaries, overlaid with the South Bohemian Region (hatched area of the Association of Písek District Municipalities), and adjacent regions and/or countries; the reservoir area is inserted in detail.

Hradec Králové: Protecting Na Plachtě nature monument from development

A case study on the importance of public participation in environmental protection

Vendula Zahumenská, Arnika

Introduction

The Na Plachtě site at the south-eastern edge of Hradec Králové is a site significant in many aspects. It comprises sandbanks, fen meadows and moorland, groves and water bodies. It consists of three sites named Na Plachtě 1, 2 and 3. The first two sites, covering over 39 hectares, were declared nature monuments back in 1998, and both are protected as Sites of Community Importance.[2] The third part, covering 17 ha, which is also

[2] Na Plachtě 1 nature monument was declared by binding regulation of Hradec Králové Municipality no. 9/1998. A Site of Community Importance was declared in the extent of Na Plachtě 1 nature monument by Government Regulation 371/2009 Coll., coded CZ0523010. Na Plachtě 2 nature monument was declared by Ministry of the Environment Decree no. 81/1998 Coll. in March 1998. A Site of Community Importance was declared in the extent of Na Plachtě 2 nature monument by Government Regulation 371/2009 Coll., also coded CZ0523010. The code is shared by both the nature monuments

home to numerous protected animal and plant species, was only declared a specially protected site by an Ordinance of the Hradec Králové Regional Authority following many complicated meetings in June 2012; it has not become part of Natura 2000. Despite the significant support of local inhabitants, the site protection is not adequate, particularly because the Council did not support an amendment to the land-use plan some time ago and kept some parts in the developable area category. The question is, therefore, whether the land-use plan amendment can be achieved to provide Na Plachtě with quality protection.

This case study focuses on the issue of importance of public participation in environmental protection and a description of concrete options for influencing a case concerning environmental issues. The study deals with a description of the events that led up to the declaration of the Na Plachtě site as a nature monument, and examines in detail the possibility of an amendment to the land-use plan that would significantly increase the protection of the site from being developed.

Conclusion: analysis of stakeholder interaction in sustainability in regional issues and conflicts with a focus on the role of scientists

Jana Dlouhá

Abstract

The Czech Republic has a relatively long tradition in environmental or sustainability oriented programs and initiatives, especially within the educational system, including higher education (HE). Consequently, many environmental specialists are already working in different spheres of society, but something is obviously missing – in practice there are numerous conflicts between different social groups that occur in controversial environmental issues at the regional level which seem to have no solution. Typically, these social conflicts have damaging repercussions for the actors and their relationships, the environment, and the economy of the region – communication "deadlock" has a negative influence on many aspects of regional development and always results in limited, short-term and non-strategic solutions

The authors share their experience with a recently completed 3-year national-wide project aimed at fostering cooperation between four HE and two research institutions, two NGOs and one business representative organisation, the outcome of which are (besides numerous practical activities, see MOSUR) a database of case studies from different regions of the Czech Republic (and some from abroad) and a special journal issue elaborating upon the same theme. An analytical perspective of both focuses on the roles of actors in a dialogue on regional sustainability issues within cooperative or conflict situations, and describes some of the communication processes, especially at the science – policy interface. An analytical tool (actor analysis) is employed to explore network characteristics, the relationships of the actors involved and the process of the deliberation itself where different approaches to "nature", "environment", and/or "sustainable development" were conceived but often not agreed upon. In some of the cases, scientists speak in the name of non-human nature and environmental values and thus they act rather as knowledgeable activists; sometimes, conversely, their expertise is misused and/or misinterpreted in the name of other policy priorities. Under specific circumstances, the involvement of scientists might reinforce the momentum behind regional development as

registered as "Na Plachtě" Sites of Community Importance. See Na Plachtě 3 site vs. land-use plan amendment preparation. STATUTÁRNÍ MĚSTO HRADEC KRÁLOVÉ. *Hradec Králové: official website of the statutory city* [online]. [cited 2014-02-10]. Available at: http://www.hradeckralove.org/hradec-kralove/lokalita-na-plachte-3-vs-porizeni-zmeny-uzemniho-planu

they are (for example) able to identify and explicate its opportunities - for which some of the other cases provide evidence. In general, to agree upon workable scenarios and implement practical solutions at the regional level, the development of an appropriate communications framework is needed, and possibly also facilitation of a dialogue between the actors, as well as (scientific) reflection on the process itself – this is one of the experiences highlighted in the successful cases. As part of communication between actors from different backgrounds, a social learning process is likely to have the potential to transform viewpoints and approaches of those involved so that final agreement is made possible. A comparison of different cases helped to formulate a hypothesis that respect for actor diversity and their viewpoints, as well as a will to contribute to the "common good" is a rather implicit *sine qua non* for success – although it is exactly this that is still often missing in Czech society.

Regional development issues from the point of view of social learning. (Un)sustainable solutions within the stakeholder negotiation processes

Handbook of case studies

Charles University Environment Centre, Prague, 2014

Case studies have been collated with support of the European Social Fund and Ministry of Education of the Czech Republic (MOSUR project OP VK CZ.1.07/2.4.00/17.0130)

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