V. BIOSPHERE RESERVE – PLATFORM TO COMMUNICATE NATURE PROTECTION WITH LOCAL DEVELOPMENT (Šumava Mts., Czech Republic)

Jan Těšitel*, Drahomíra Kušová*, Vladimír Silovský** and Karel Matějka***

* University of South Bohemia in České Budějovice, Faculty of Agriculture ** Regional Development Agency Šumava *** IDS, Praha

1. Introduction

1.1. Nature protection and local/regional development

In recent Central European discourse, nature protection is obviously interpreted as a competition related to multiple use of a landscape. And the critical challenge it faces can be seen in the difficulty to reconcile the conflict between relative new, worldwide, conservation paradigm and historically formed local land-use practices. The notion of conflict is historically rooted in a stereotype of thinking, presuming nature protection measures to be a-priori in contradiction with socioeconomic development (e.g. Rolston, 1997)⁵. For conservationists, commoditization of nature is something "dirty", "not suitable" and thus not compatible with the nature protection ethos (Roth, 2007). On the other hand, nature protection has a poor image of a burden for regional socio-economic development, as obviously seen by the general public (e.g. van Kooten and Wang, 1998; Těšitel et al., 2005; Paiders, 2007).

History of nature protection has a different time span in particular European countries, following however a very similar scheme of development. In the line with a more general tendency of social development, manifested in gradual emergence of organised modernity (*Wagner*, 1995), nature protection, originally building on individual enthusiasm has been recently firmly embedded into a general legislative framework that makes it a part of a routine executed by state administration. On the one

hand, the process evidently led to the situation when nature protection has been officially recognised as a political issue and supposed to be guaranteed by the state. The same process, however, caused that nature protection lost its flexibility of individual's dimension. Being executed by state administration, nature protection has often adopted a position of an agent defending interests of centre in the process of negotiation of future development of particular locality. As such, it is obviously perceived as an extra-local force, an alien to local conditions (*Těšitel et al., 2006*).

When discussing social acceptance of activities executed by the state nature protection bodies, direct comparison with other similar structures of state administration, specialized in other fields of expertise but facing in fact situations of the same type (decisions, approvals, imposing fines, inspections, etc.), such as the Police of the Czech Republic, Czech Trade Inspection, Hygienic service, and others may be misleading. Activities of these institutions, though frequently criticized, are socially accepted as self-evident. Nature protection bodies are facing a more complex situation as they defend a standpoint that does not match the value system of a majority of the society. Their position is only poorly defined a-priori. Communication of nature protection interests in a locality depends, thus, to a great extent on a concrete situation and particular people who are engaged in the process of consensus building.

1.2. UNESCO biosphere reserve

The concept of the new UNESCO biosphere reserves was articulated in the Seville Strategy and reinforced in the Madrid Declaration *(UNESCO 1996, 2001, 2002, 2008)*. The concept is being applied worldwide. Currently, biosphere reserves form a network composed of 610 sites located in 117 countries⁶. Each of them is used to test in situ the chance of finding ways in which local people can live in peace with nature. Territories having a status of biosphere reserves are supposed to have four missions – protection of biological diversity, enabling research and education while supporting sustainable economic

⁵ The contradiction is sometimes taking as granted. To introduce at least one practical example, we could use the seminar organized by the Czech Ministry of Environment in autumn 2004 as an event accompanying the film festival titled "Ekofilm", the festival devoted to problems of environment, annually organised in the towns of České Budějovice and Český Krumlov. Relation between nature protection and local socioeconomic development was subject of discussion. As that organizers, representing official position of the top administrative body of the state nature protection, titled this event Nature protection contra socio-economic development of local communities, atmosphere of conflict was introduced since the very outset between representatives of nature protection and local mayors participating in the seminar.

⁶ http://www.unesco.org/new/en/natural-sciences/environment/ ecological-sciences/

activities. Hence, biosphere reserves are called learning sites for sustainable development (Kušová et al., 2009). By promoting the idea that the management of each biosphere reserve should be essentially formulated as a 'pact' between the local population and the society as a whole, the concept invites all interested groups and sectors for participation in a partnership approach. Doing so it acknowledges the fact that the capacity (e.g. knowledge, power and resources) to solve the complex problem of implementing the biosphere reserve concept is often widely dispersed among a set of actors located on different scales (e.g. Imperial, 1999). Such an approach seems to fully reflect the general tendency of the last decades embodied in the gradual shift from government towards governance, where responsibility for policymaking spans public and private sectors, promoting thus an increased interest in networks as an organizational concept when conducting joint action (Murdoch, 2000; Hajer, 2003a; Parto, 2005; Saxena, 2005; Dredge, 2006), often supported by "soft law" such as conventions or agreements (Lowe, 1988; Hajer, 2003; Tait and Lyall, 2004). Biosphere reserves, fundamentally concerned with whole-of-landscape processes, across a variety of land tenures and uses can be thus seen as institutions appropriate for managing the social and cultural processes at multiple scales (Amin and Thrift, 1994; Storper, 1997; Maskel and Malmberg, 1999; MacLeod, 2001; Brunckhorst, 2001).

Biosphere reserve has not been recognized as a legal category of protected areas by the Czech environmental legislation. The Nature Conservation and Landscape Protection Act does not include biosphere reserve when defining six national protected area categories: national park, protected landscape area, national nature reserve, national nature monument, nature reserve and nature monument. Biosphere reserve is then perceived as an international label, stuck on an area already protected according to the national environmental legislation, that does not have any legal support (Urban, 2006) though institutionally associated with the administration of a protected landscape area, or national park. Lack of legal support makes an ambiguous situation which has its pros and cons. On the one hand, state administration has only limited space to manoeuvre, as well as it is only poorly motivated when trying to implement the concept into practice (Kušová et al., 2008). On the other hand, the apriory undefined legal position opens space for local initiatives. In other words, such a situation can encourage building of local arrangements ready to take the chance of using the concept pragmatically for their purposes. Identification of consensual activities, i.e. activities "compatible" with the nature conservation interests and, at the same time, directly or indirectly contributing to socio-economic development of a territory, is suggested as an efficient way how to start the process of building a communication platform, the key element of the biosphere reserve concept.

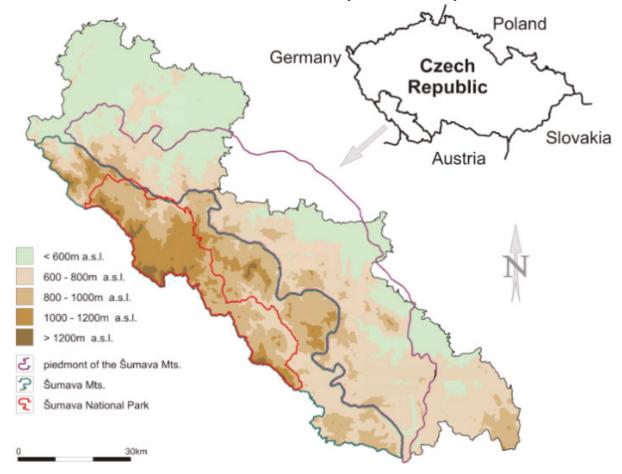


Fig. 1: Map of the Šumava Mts.

2. Šumava as the pilot

The Šumava Mts. region is represented by a mountain range situated in the south west part of the Czech Republic (Fig. 1 – Map of the Šumava Mts.; Fig. 2 – Šumava Mts. scenic view). Thanks to its geographical position this area retained its natural character almost by the end of the first half of the 20th century. Settlements and natural resources exploitation, however, were there for centuries - particularly glass making and wood processing industries - and were leading to a long tradition of harmony between man and nature. The post war period of development was characterised by an ethnic shift in 1946. Establishing of the "iron curtain" and military training areas were other specific phenomena the territory was famous of. Location on the border separating the East and West European political alliances, distance from political-economic and cultural centres and a predominantly rural landscape were the main factors maintaining the region economically marginal. On the other hand, natural beauties of the area sustained and were preserved. As a result, large-scale nature protected areas were proclaimed there - the Šumava Protected Landscape Area in 1963 and the Šumava National Park in 1991. The extending quality of nature was internationally recognized as well internationally and since 1990, most of the mountain range has a statute of the UNESCO biosphere reserve. Political change that took place in Central and Eastern Europe in 1989 introduced a quite new situation. By this process the Šumava Mts. region was plunged immediately into European context having

thus a chance of ceasing to be marginal. Since the beginning of the nineties, tourism has been expected to become the most important factor forming the future of the region (*Těšitel et al., 1999*). Its form, intensity and spatial distribution within the territory have become a very important subject of discussion between nature protection bodies and local people.

In the case of the Šumava Mts., the biosphere reserve was institutionally associated with the Administration of National Park and Protected Landscape Area, i.e. with the state administration. Hence, the state administration was supposed to execute or at least to coordinate the execution of all the three biosphere reserve missions. The analysis of strong and weak points of the biosphere reserve institutional setting suggested, however, that the current institutional model ensures the protected area administration can actively participate in only three of four BR missions - biodiversity protection, education and (to some extent) scientific research. The fourth function support to sustainable development through participation in activities improving the socio-economic standard of local communities – could be accomplished only partially and indirectly. Active participation of protected area representatives in development activities, though sustainable, proved to be hardly possible mainly due to the huge administrative barriers (Kušová et al., 2008, 2008a). An institutional model of biosphere reserves like this appeared then to be not an adequate basis for the building of an efficient communication platform between nature protection interests and aspirations of local inhabitants



Fig. 2: Šumava Mts. scenic view

Consequently, there was an effort to establish a networkbased model biosphere reserve in the territory emphasising the developmental mission of the concept that would include, besides nature protection bodies, as wide a range of stakeholders as possible, engaged in sustainable development of the region. The effort was financially supported by several projects, the one titled Conservation and Sustainable Use of Biodiversity through Sound Tourism Development in Biosphere Reserves in Central and Eastern Europe, funded by UNEP-GEF in the period 2005–2008, was the initiator.

The project was designed as an international one, addressing the situation in three biosphere reserves -Babia Gora in Poland, Aggtelek in Hungary and Šumava in the Czech Republic – with the aim to demonstrate the possibility of using sound forms of tourism as a tool for nature protection. In other words, it aimed to relate nature protection to local economic tourism-based activities. Doing so the project explicitly referred to the concept of UNESCO biosphere reserve as a platform of communication. Particular biosphere reserves involved in the project differed from each other in terms of a general milieu they operated in (national economy, legislative system, etc.), as well as in local situations, and so different activities were supposed to be done by the project in individual biosphere reserves. With the aim to introduce project activities that would match local needs as much as possible, local stakeholders were invited to participate since the phase of the project proposal formulation in all three biosphere reserves. It yielded two-fold benefits - project activities matched local needs at a reasonable level, and those who formulated them became engaged, feeling responsible for the realisation of particular activities.

In the Šumava case, the project was rephrased as "Sound Tourism – A Chance for the Šumava Biosphere Reserve". When defining its activities, we followed the line of the whole project and cooperated closely with representatives of all local interest groups since the very beginning. The already existing Concept of Tourism Development in the Šumava Mts. region was used as the point of departure. Appropriate activities were commonly selected from it, discussed and prioritized. In the end, the project proposal emerged, that was composed of nine interlinked activities spanning from those having very practical outputs to activities producing strategic materials to be used in landuse planning (Kušová et al., 2008, 2009). "Establishment of a System of Cross Border Tourist Trails", "Training of Local Guides" and "Identification of a Potential of the Šumava Biosphere Reserve for New Touristic Activities" can be seen as the most practical outputs of the project, having immediate impact on the territory. There were two activities within the project directly supporting sustainable forms of tourism - the "System of Financial Incentives", having a form of local grant schemes aimed primarily at improving small scale touristic infrastructures, and the "System of Certification of Local Products and Services". Among the strategic activities we can count the participation of the project in preparation of the "Concept of Sustainable Tourism Development in the Šumava Region", "Institutional Analysis of the Šumava Biosphere Reserve" and designing of an electronic "Database on Cultural Heritage of the Šumava Biosphere Reserve". The designing of a platform for information exchange among local mayors, representatives of nature protection authorities and other key stakeholders became an inseparable part of the project, manifested in a series of round tables and training courses.

The participatory principle was applied as well in the project management. The project was supervised by the Local Steering Committee composed of local key stakeholders, mostly of those who participated in the project formulation. Hence, the project was under both control and auspices of the local community.

The scope of the project appeared to be too complex to be executed by one expert or institution. As a result, one of its main "social by-products" was the establishment of several social networks, partly overlapping, by use of which particular project activities were realized. Šumava Protected Landscape Area National Park and Administration, Regional Development Agency Šumava, Regional Environmental Centre Czech Republic, as well as NEBE Agency formed a core of these networks, coordinated by our team⁷. In parallel to forming social networks, a network of projects emerged around individual activities. In this manner, the UNEP-GEF project was linked with two INTERREG-type projects -PANet (Protected Areas Networks - Establishment and Management of Corridors, Networks and Cooperation) and Certification of Local Products in the Šumava Mts., pooling thus experts, know-how and financial resources with the aim to use them effectively (Těšitel et al., 2007; Kušová et al., 2009).

The network of projects fulfilled two types of expectations – it produced outputs useful by themselves, and at the same time contributed substantially to the discussion on the notion of the biosphere reserve in the region, in fact introducing the term into strategic planning documents as well as into more practical discussions around tables.

The projects allowed us to conduct the analysis on the present biosphere reserve institutional model. However, there were neither financial sources nor time enough to continue in terms of implementation (institutionalization) of the suggested model in the Šumava Mts., which was supposed to be network-based. We only managed the first step – a Memorandum of Understanding was formulated between the Administration of the Šumava National Park and Protected Landscape Area and Šumava Regional Development Agency as to the cooperation in implementation of the biosphere reserve concept. The Memorandum, as it was formulated, represented an

⁷ At that time, we were affiliated with the Institute of Systems Biology and Ecology AS CR; nowadays we are staff members of the Faculty of Agriculture, University of South Bohemia.

efficient model of shared responsibility about the region in favour of it as each partner had its niche of activities which did not overlap with the niche of the other, but complemented it. The Memorandum however was not signed by parties, mainly due to the fact that the NP and PLA director of that time preferred to pursue its own vision of the biosphere reserve, which was based on the dominance of nature protection and massive financial support from the state and EU funds.

Since, the situation has changed. The vision of the statesupported biosphere reserve was not realised, due to many factors, lack of financial sources available and notwell-done management being two of them. Subsequently, the director National Park and Protected Landscape Area was replaced by a new one, more open to the idea of building local/regional-network-based communication platform, based on a partnership approach. In order not to lose the momentum, we started to discuss the concept of the UNESCO Biosphere reserve again with pertinent representatives on nature protection and reached the point when the concept started to be considered an acceptable tool for the NP and PLA Administration to facilitate their communication with the other stakeholders. As a result, the Memorandum was signed in June 2011 and the Regional Development Agency took initiative in implementing it, having the Administration of NP and PLA as a partner in this process.

The practical implementation of the concept started to be realised with support of the Vital Landscapes project, in terms of both expertise and financial support of particular activities. It appeared necessary to address two levels in this process. The first one is general, in fact external to the region. As the UNESCO biosphere reserve is a worldwide concept, it is a subject of international agreements, with the Czech Republic being one of the signatory countries. All the changes in structure or institutional affiliation had then to be approved, in the first step by the Czech MaB Committee and subsequently by UNESCO Paris. We passed both the steps and the new structure and affiliation were approved. The Czech MaB Committee even expressed appreciation, that we "test a new institutional model of BR, which is of high value not only for the region, but for the development of the concept".

The second level addressed was the region itself, more precisely people living there. In fact, the local/regional level was the crucial one and was given most attention. The general goal was to get people engaged with the idea and motivate them to cooperate in its implementation.

3. Activities realised

As stated earlier the relationships between nature protection executed by state administration, and local development is mostly perceived in an ambiguous way. Communicating this issue among parties appeared thus to be an essential part of the process of defining or at least negotiating future development of the Šumava Mts. region. The concept of the UNESCO biosphere reserve was used with the aim to facilitate and structure the communication. The idea to use it this way was officially introduced to local and regional stakeholders at a regional workshop.

The stereotype of thinking presuming an a-priori contradiction between nature protection and socioeconomic development is mostly based on guessing, but rarely supported by objective data. To prevent the situation of personal speculations, prior to the workshop three analyses were conducted with the aim to provide an objective description of the situation in the region. The outputs were presented at the workshop where they made a very good input for the subsequent discussion.

3.1. Spatial Analysis of Quality of Life

The analysis challenged the hypothesis that protected areas should be a-priori considered territories socially and economically handicapped, compared to unprotected areas. As quality of life has been acknowledged as one of the important indicators measuring sustainability, on local to national scales (e.g. Collados and Duane, 1999; Wilson et al., 2007) the concept was applied as a theoretical frame when defining appropriate variables for the analysis. Data provided by the Czech Statistical Institute were analysed to describe the status of quality of life of people living in the Šumava Biosphere Reserve and two other Czech biosphere reserves, Křivoklátsko a Třeboňsko, which were used as reference areas. We tested a question asking if areas being under a special regime of management due to nature protection do differ significantly from the surrounding areas, concerning the socio-economic milieu concerns. For the purpose of the analysis, the model areas were extended to include also municipalities that represent their "surroundings" - a 20km zone around the studied protected areas. Municipalities of interest formed then three groups lying completely within the protected areas (A); being in between, i.e. intersected by borders of protected areas (B); and those having their cadastral areas completely outside the protected areas (C) (Fig. 3 - Model areas).

The analysis was carried out in two steps. The first one was applied in all three model areas (Šumava, Třeboňsko and Křivoklátsko) and their surroundings (*Kušová et al., 2008a*). Following calculations were done:

• Analysis of land use (area of estates in different categories, e.g. arable soils, orchards, grasslands, forest, built-up areas, etc.) was done by use of the principal component analysis (PCA) ordination. The first two ordination axes (PCA₁ and PCA₂) were used. These axes account for 41% of variability of the data set. Two new parameters were calculated - "degree of urbanization", URBA = PCA₁ + PCA₂ - describing a gradient from rural to urbanized areas, and "share of agriculture" AGRI = PCA₁ - PCA₂ – quantifying the position on gradient between prevailing forested areas to prevailing agricultural land. An arbitrary division of the space of these variables was then used as a basis for municipality classification. See for details in

http://www.infodatasys.cz/vav2003/statistika/LandUs e.htm. The result is possible to interpret as distinguishing different parts of landscape according their environmental conditions.

- The socioeconomic data were processed in an analogical way. One third of data variability was described by the first ordination axis (PCA₁), while the second one (PCA₂) accounted for the next eleven per cent. The further decline was smooth and continuous. Two factors appeared to explain the position of a municipality in the ordination space formed by the two first axes level of education and age structure of the human population. Four arbitrary classes were identified on this basis. See http://www.infodatasys.cz/vav2003/statistika/PCA.ht m. This analysis shows differences according to socio-economical features in the human population living in the landscape.
- The calculation of the normalized socioeconomic status was based on two principal presumptions. Firstly, we presumed that land use types were related to the nature conditions of a particular locality and the character of a municipality (formed by prevailing economic activity in both contemporary and historical perspectives), and secondly that the socioeconomic conditions were influenced by land use practices. The relationship between land use and socioeconomic parameters was searched for using correlations among several first axes for both above-mentioned ordinations. Thanks to the statistically significant dependence between the first ordination axis of the socioeconomic parameters (PCA₁) and degree of urbanization (URBA), it was possible to use, instead of the score of the first ordination axis, the difference between its value and the value expected, which was calculated by use of the linear regression model (for i^{th} municipality): PCA_{1,i} = (a + b URBA_i) + e_i, where

"a" and "b" are regression parameters and "e" is an error. Differences between real and expected values were then calculated as values of the variable DIF $PCA_1 = PCA_1 - (a + b URBA)$, that we called "normalized socioeconomic status" of a municipality. The higher its value, the better living conditions occur in a municipality. See http://www.infodatasys.cz/ vav2003/statistika/dif pca1.htm for details. The difference between values assigned to municipalities inside the protected areas and those lying outside, was tested by F-test in analysis of variance with a threelevel factor: municipalities within the protected area (group A), on the border of this area (group B) and placed completely outside the protected area (group C). The difference proved to be statistically insignificant. Based on this we can suggest that protected areas do not differ from the "normal" surrounding areas as to socioeconomic conditions (Fig. 4 – Normalized socioeconomic status – spatial distribution).

The goal of the second analysis was to specify differences between municipalities in the protected areas and in their surroundings. This processing was concerned in the Šumava region only. The influence of the municipality location within zones A - B - C was tested by use of the redundancy analysis (RDA). To summarize briefly the outcomes of the analysis, we can say that the fact that a municipality is located in a protected area accounts for 7.9%. The sharp environmental distinction exists between protected areas (National park and PLA) in mountain surroundings piedmonts region and in (http://www.infodatasys.cz/proj004/socekonregions2012. pdf). Nevertheless, it can be explained by general geographical and environmental conditions (mountains versus piedmonts), rather than by the fact of application/non application of nature protection measures.

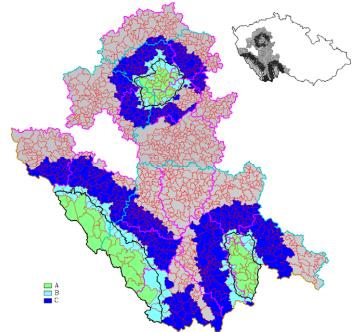


Fig. 3: Model areas

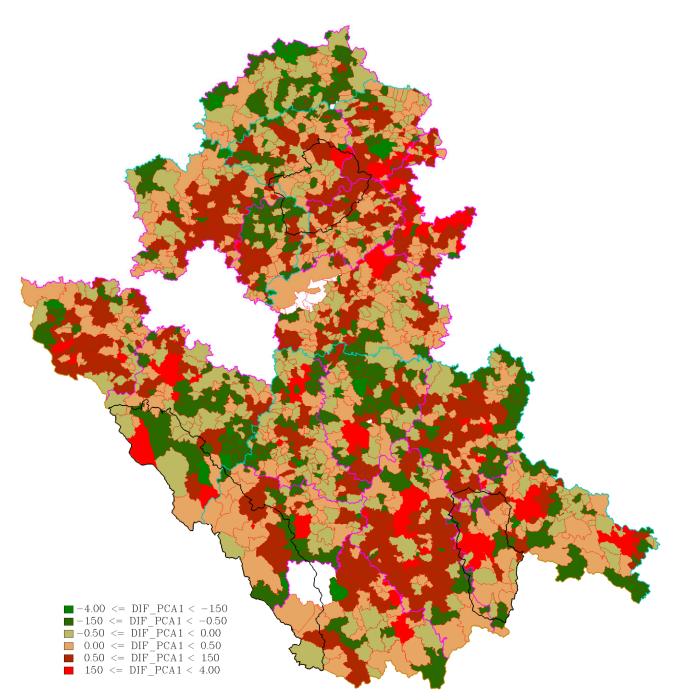


Fig. 4: Normalized socioeconomic status – spatial distribution

3.2. Content Analysis of Regional Periodicals

Application of The content analysis of regional periodicals to identify the medial image of the relationships between nature protection and local development was based on the general presumption that the press reacts to real-life problems, and is also an intermediary of social control over the institutions which are in charge of it. Medial image is then supposed to represent a reflection of expected interests of the public in particular problems (*e.g. MacLuhan, 1991; DeFleur and Ball-Rokeach, 1996; Blažek, 1998)*. Quantitative analysis, identifying frequency, ratio and context of a pertinent messages in selected media, is obviously complemented by qualitative content analysis that offered a more

detailed interpretation of the process in which media constructed reality in relation to problems at hand *(Disman, 1993)*. By use of this technique, comparative monitoring of the regional periodicals was carried out in the three above mentioned model areas – biosphere reserves Šumava, Křivoklátsko a Třeboňsko.

As context units for the content analysis the following regional daily newspapers were used: MF Dnes-Jižní Čechy, MF Dnes-Plzeňský kraj, MF Dnes-Střední Čechy, Českobudějovický deník, Českokrumlovský deník, Jindřichohradecký deník, Prachatický deník, Táborský deník, Plzeňský deník, Klatovský deník, Kladenský deník, Rakovnický deník a Berounský deník. The period in which the mentioned articles were published was January 2005 to October 2011. The main aim was to document the medial presentation of the relationship between nature protection and communal development. It was made operable by use of the following key words: Třeboňsko PLA, Křivoklátsko PLA, Šumava PLA Šumava NP, Biosphere Reserve, communities, enterprise, cooperation, support, coexistence and conflict. As recorded units entire articles were used that contained the name of particular PLA or NP together with at least one of the remaining key words.

The monitoring was done by use of the Anopress IT, the full-text database of newspaper articles. The medial image for particular model areas was identified, based on information primarily existing in the above mentioned periodicals. Quantitative analysis was complemented by the qualitative typology of news.

Altogether 767 contextual units were found for the whole analysed period. They appeared to be unevenly distributed among particular areas, similarly as they were in the previous study (*Kušová et al., 2009*). The incidence of problems related to the Šumava NP is several times higher, compared to the remaining two areas, Křivokátsko and Třeboňsko (*Fig. 5 – Number of articles matching the key words (2005 – 2011)*. The high number reflects the never-ending clashes related to the žumava NP and the management of the bark-beetle calamity.

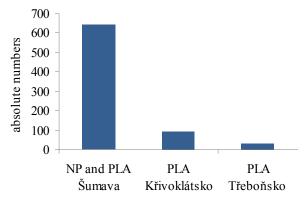


Fig. 5: Number of articles matching the key words (2005 - 2011)

The frequency analysis proved that nature protection is attributed by low importance in public space, with the exception represented by the Šumava National Park, where, furthermore, nature protection is associated primarily with negative connotations. In the other protected areas, examples of cooperation are largely publicised and published examples of disagreements concern the execution of administrative routine.

3.3. Interview with Key Informants

Key informant interviewing was applied with two aims. Firstly, by use of this method, we supposed to identify individual interpretations of particular cases of cooperation or conflicts between protected area administration and local communities in the Šumava Biosphere Reserve. Secondly, as mentioned earlier, the Memorandum of Understanding between the Administration of the Šumava NP and PLA and Regional Development Agency Šumava was signed in July 2011. By signing it, both parties formed, at least potentially, a regional platform where interests of nature protection and regional development could be communicated. Therefore, expectations of key personalities which role this platform could play in the region, and their willingness to participate in forming and keeping it, were surveyed as well. The survey had a form of semi-standardised interviews conducted in the period of September to December 2011 on the territory of the Šumava NP and PLA. Thirty five key personalities were addressed, 18 mayors of local municipalities, 10 entrepreneurs in tourism, and agriculture, 3 representatives of NP and PLA Administration, 2 of the Šumava Regional Development Agency, and 2 experts from local museums.

Based on the information gained we can state that, the NP and PLA Administration was perceived as an institution having a great potential to support development of the region which, however, was seldom used in favour of the region. Mayors as well as entrepreneurs appreciated activities the Administration did for visitors to the region (information centres, information materials and educational trails). These activities, however, were seen as not directly contributing to the economy of the region itself. Communication of the Administration with local people (and municipalities) was attributed by a low rate. Administration was seen as a self-oriented institution, the one behaving mostly in a directive manner, applying an unequal approach to particular parties, and having in fact low empathy with the region. The Biosphere reserve as a permanent and facilitated communication platform is then seen as a chance to break the stereotype "by levelling all partners and bringing them to round table". In parallel, the biosphere reserve was considered to be potentially a very good trade mark to be used in the marketing of the Šumava Mts. region as a whole.

3.4. Regional Workshop with Key Stakeholders

The workshop with local and regional stakeholders was aimed to "officially kick-off" the regional communication platform in the Šumava Mts. region. It took place in the township of Stachy in February 2012. The agenda was simple - to discuss the potential of the Regional Development Agency Šumava as the "facilitator" of regional communication among interested groups, including nature protection bodies". Ultimately, the discussion, supported by outputs of the previously conducted analyses, resulted in the identification of the most adequate activities, the biosphere reserve should start with. In other words, the niche of the biosphere reserve in local and regional development was suggested.

3.4.1. Coordination of projects

As a matter of fact during the last twenty years we have been witnessing a lot of locality-focused activities in the

Šumava Mts. region realised by particular subjects of varied nature (municipalities, micro-regions, local action groups, associations, Regional Development Agency, as well as state administration in nature protection, etc.). In short, there has been a lot of interesting and relevant activities going on, but one obviously running without taking the others into account, sometimes even interfering with them, at the expense of time and money invested. In parallel, the opinion prevailed among participants of the workshop that support of already running activities to continue in a sustainable way is more important than generating new activities at any costs. The activities are frequently attributed with the notion of "tradition", if run for a reasonable long time, the notion which is highly searched for and appreciated by visitors to the region. Given these facts, coordination of already running local projects was suggested as the initial activity the biosphere reserve should start with. In this context, two projects attracted the attention - keeping the Šumava-wide network of cross-country skiing trails (White trail), and running the system of certification of local products and services (Šumava original product).

3.4.2. Raising awareness on home-landscape

As stated earlier, tourism was identified as the key factor to drive development of the Šumava Mts. region as early as at the beginning of the 1990ies. Since, the cultural landscape there has been heavily promoted as a space designated primarily to host relaxation, leisure, sport and touristic activities enjoyed by the urban population coming from the towns nearby. Hence, the Šumava landscape, result of a centuries-long cultivation done by local people, became gradually perceived as a bare coulisse for tourism-related activities, not only by visitors to the region, but by local people themselves. Therefore, raising awareness among locals on the way how present landscape has emerged as a result of everyday routine and hard work of our ancestors was identified as a very important, if not crucial activity to be realised in order to strengthen the bond of people to the place they live – and the perfect activity for the biosphere reserve.

As we were aware of the fact, that place attachment builds on emotions rather than on rational discourse (e.g. Rollo, 1993), and that images are better in this context than words, we organised a photo-competition on the theme "The place I live – history and presence" for pupils of grammar schools situated on the territory of the Šumava Biosphere Reserve. The participants were asked to compare historical images (photo, postcard, ..) of a place and people working there with a present one he/she produced himself/herself on the same place depicting the same activity (Fig. 6 – photos-example). Comments on how the place and activity changed during the time and reasons why they think it had happened was also a part of the material participants were supposed to produce. This activity appeared in the end to be more interesting for children from schools located in small municipalities, than for children living in towns.



Fig. 6: Photos-example

Place attachment is supposed to be closely related to symbolic aspects of a place (e.g. Černoušek, 1986). Hence, building a symbolic representation of a landscape, its image in human minds, is another way to raise awareness on the place. In this context, the idea of a logo symbolising the Šumava Biosphere Reserve appeared and subsequently was realised. The logo was designed by a combination of the already existing logo of the Šumava Mts. used by the destination management of the region complemented with the headline "Šumava Biosphere Reserve" (Fig. 7 – Logo of the Šumava biosphere reserve). Relating the biosphere reserve with the already known tourism-related symbol was supposed to facilitate acceptance of the new concept in the regional context.



Fig. 7: Logo of the Šumava biosphere reserve

3.4.3. Promotion and information exchange

To define an appropriate method or tool to be used in addressing the desired target group(s) can be considered the key point when designing any communication strategy, and so we aimed at the promotion of the biosphere reserve. Given the fact that the intention was to address a relatively broad array of actors, we used the combination of a more traditional method with one using the advantage of the Internet. The newspaper "Doma na Šumavě", regularly issued by the Regional Development Agency twice a year and distributed free of charge within the territory, familiar to people living there, was used to the information flow addressing facilitate the "conservative" part of the population (Fig. 8 – Regional newspaper Doma na Šumavě). The campaign was launched by use of special ad hoc attachment to the two issues of the newspaper - Summer and Winter 2012. To finance the attachments the model of shared costs was applied composed of contributions granted by the National Park Administration, Regional Development Agency and Vital Landscapes project. The scheme is expected to continue in the future as well forming thus one of the important permanent links between both partners responsible for implementing the biosphere reserve.



Fig. 8: Regional newspaper Doma na Šumavě

In nowadays society it is normal that people use IT technologies to communicate. Demand to have a web representation of the biosphere reserve, articulated at the workshop, was then not surprising. The idea was realised in June 2012 when the new webpage appeared (*www.br-sumava.cz - see Fig. 9*). A two-stage process is applied in building and using the webpage. In the current stage of its

existence the webpage supports a one-way information flow - it provides the interested public with information on the activities the biosphere reserve realises. In the next step, the webpage is supposed to serve as a platform of information exchange among interested parties, e.g. when new project proposals will be formulated.

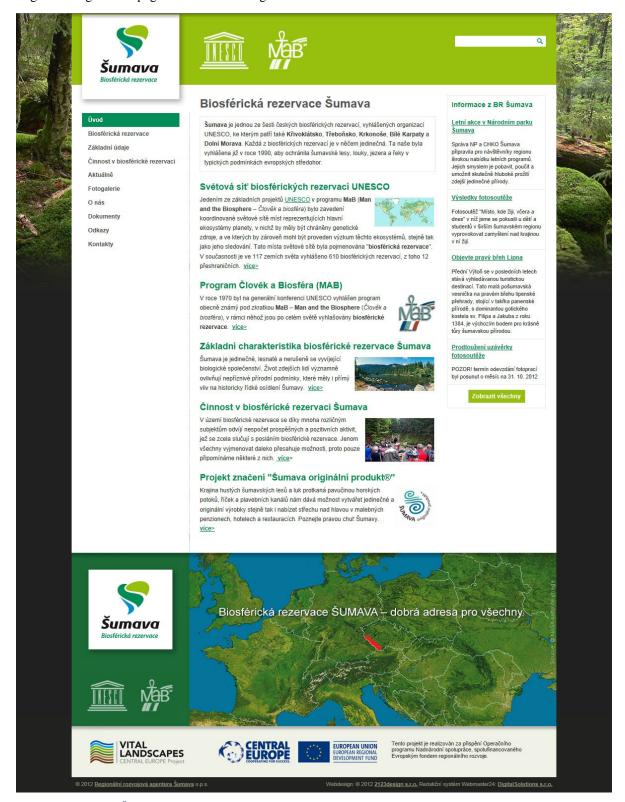


Fig. 9: Website of the Šumava biosphere reserve

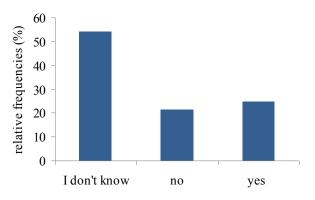
4. Conclusions

Building a communication platform is a run for a long distance, as it needs to be based on trust shared among participants. It is a process, not an action. In the Šumava Mts. the process started as early as in 2005. The project Vital Landscape represents one of the subsequent steps in it. Its contribution can be seen on two levels.

Firstly, within the project, the communication platform was institutionalized by use of the concept of the UNESCO biosphere reserve. Hence, the territorial model of management was introduced, based on the principle of shared responsibility for the given territory. It introduced a quite new, not easy, situation for both National Park and Protected Area Administration and Regional Development Agency in terms of a challenge their employees are facing, namely the problem how to identify themselves with the newly established institution, activities which partly overlap with activities traditionally executed by either NPS or RDAS. The introduction of the new institutional setting caused that the biosphere reserve, originally associated with the Administration of NP and PLA, was transferred to form a part of the organisational structure of the RDAS. Under this scheme, the Administration of NP "lost" its leading role and became a partner. Furthermore, developmental activities became more pronounced, compared to the previous model. Fortunately, the concept of the biosphere reserve appeared to have the potential to facilitate the situation. The concept was invented within the nature protection sphere as one of modern approaches, nature conservation has adopted recently. As it is in fact based on the strategy of "conservation by use" the concept could be considered as a promotion of participatory policy in protected areas management. Referring to the concept allowed representatives of state nature protection to better manage the new role of a partner and "not to lose their face" when discussing "developmental issues" with other stakeholders.

As mentioned earlier, Šumava Mts. is a very active territory in terms of local to regional initiatives realised by a broad range of actors with the aim to commoditize landscape heritage. As well, networks of interest linking particular municipalities and businesses started to be gradually built since the 1990ies, when the general political situation changed. The statement saying, that the project Vital Landscapes initiated network building within the area would thus hardly be justified. However, permanent the project initiated the network/communication platform reaching a regional scale that involves key stakeholders, including representatives of state nature protection as partners, which can be seen as the main contribution of the project.

The official establishment of the platform appeared to be the condition necessary, but not sufficient. In order to put it into real life, the idea (the institution) had to be actively publicised. The association of the notion and the logo of biosphere reserve with concrete activities appreciated by local/regional people proved to be the most efficient approach how to do it. Therefore, concrete activities were identified by the stakeholders themselves at the regional workshop, and subsequently realised – coordination of particular projects having attributes suitable for being activities of the biosphere reserve (region-wide, multiple partnership), building a webpage as an electronic complement communication platform, and raising awareness on the region and the idea of the biosphere reserve.





Each of these activities addressed particular target groups. As they were realised only recently, there are not yet reliable data which would enable us to correctly evaluate their impact to the territory. At this moment we only have the data depicting the awareness of the public on the existence of the biosphere reserve (Fig. 10 – Awareness on the biosphere reserve). The data were gained in 2012, defining the reference point that could be used in future evaluation of the role of the biosphere reserve in the territory. Based on the current figures it is evident that the situation when the biosphere reserve is recognised by the region, is still far away. Nevertheless, thanks to the activities realised, the idea of the biosphere reserve has already been incorporated into strategic landscape planning documents of the South Bohemia Region and the actually prepared Management Plan of the Šumava National Park. We are, therefore, convinced that all the activities can be seen in terms of "seedlings" that can grow if the initial activities of the biosphere reserve will continue in the future, when the life time of the Vital Landscape project will be over and hence its financial support. Therefore, we try both to embedd more firmly the biosphere reserve into the institutional structure of the Regional Development Agency and to simultaneously to initiate the preparation of followprojects, together with all the stakeholders engaged in keeping the platform alive.

Acknowledgements

The study is based on data gained in two projects, namely "Valorisation and Sustainable Development of Cultural Landscapes using Innovative Participation and Visualisation Techniques – VITAL LANDSCAPES", financially supported by the CENTRAL EUROPE Programme, and "Protected Areas – Social Deal on Nature Protection", financially supported by the Czech Science Foundation.

5. References

- Amin, A., Thrift, N. (1994): Living in the global. In: Amin A., Thrift N. (Eds.): Globalisation, institutions and regional development in Europe. Oxford University Press, Oxford.
- Blažek, B. (1998): Venkov, města, média [Countryside, cities, media]. Praha, SLON, 362 pp. (in Czech).
- Brunckhorst, D. (2001): Building capital through bioregional planning and biosphere reserve. Ethics in Science and Environmental Politics, p. 19-32.
- Collados, C., Duane, T. P. (1999). Natural capital and quality of life: a model for valuating the sustainability of alternative regional development paths. Ecological Economics, 30 (3), p. 441-460.
- Černoušek, M. (1986): Psychologie životního prostředí [Psycholgy of the environment]. Horizont, Praha, (in Czech).
- DeFleur, M., Ball–Rokeach, S. (1996): Teorie masové komunikace [Theory of mass communication]. Praha, Karolinum, 363 pp. (in Czech).
- Disman, M. (1993): Jak se vyrábí sociologická znalost [Way to produce a sociological knowledge]. Karolinum, Praha, 374 pp. (in Czech).
- Dredge, D. (2006): Policy networks and the local organisation of tourism. Tourism Management, 27, p. 269-280.
- Hajer, M. (2003): Policy without polity? Policy analysis and the institutional void. Policy Sciences, 36, p. 175-195.
- Hajer, M. (2003 a): A frame in the fields: policymaking and the reinvention of politics. In: Hajer, M., Wagenaar, W. (Eds.): Deliberative Policy Analysis, Cambridge University Press, Cambridge.
- Imperial, M. T. (1999): Institutional Analysis and Ecosystem-Based Management: The Institutional Analysis and Development Framework. Environmental Management, 24 (4), p. 449-465.
- Kušová, D., Těšitel, J., Bartoš, M. (2008): Biosphere reserves - learning sites of sustainable development? Silva Gabreta, Vimperk, 14 (3), p. 221–234.
- Kušová, D., Těšitel, J., Matějka, K., Bartoš, M. (2008a): Biosphere reserves – an attempt to form sustainable

landscape (A case study of three biosphere reserves in the Czech Republic). Landscape and Urban Planning, 84 (1), p. 187-197.

- Kušová, D., Těšitel, J., Bartoš, M. (2009): Biosphere reserves as learning sites for sustainable development (a case study of the Czech Republic). In: Elling, L. R. (Ed.): Social Development. Nova Publishing, New York, pp. 87-124.
- Lowe, A. (1988): Small Hotel Survival: An inductive approach. The International Journal of Hospitality Management, 7 (3), p. 197-223.
- MacLeod, G. (2001): New Regionalism reconsidered: Globalisation, regulation and the recasting of political economic space. International Journal of Urban and Regional Research, 25, p. 804-829.
- MacLuhan, M. (1991): Jak rozumět médiím. Extenze člověka [To understand media. Human dimension]. Praha, Odeon, 348 pp. (in Czech).
- Maskell, P., Malmberg, A. (1999): Localised Learning and Industrial Competitiveness. Cambridge Journal of Economics, 23 (2), p. 167-186.
- Murdoch, J. (2000): Networks a new paradigm of rural development? Journal of Rural Studies, 16, p. 407-419.
- Paiders, J. (2007): How nature protection restrictions affect economic development? An example of municipalities from the North Vidzeme Biosphere Reserve, Latvia. Working paper, University of Latvia.
- Parto, S. (2005): "Good" Governance and Policy Analysis: What of Institutions?. Maastricht Economic Research Institute on Innovation and Technology. MERIT-Infonomics Research Memorandum series 2005-001. Patton, M. Q. (2002): Qualitative Research and Evaluation Methods. Sage Publishers, London.
- Rollo, V. (1993): Emocionalita a racionalita [Emotionality and rationality]. SLON Publishhers, Praha, (in Czech).
- Rolston, H. (1997): Feeding People versus Saving Nature. In Gottlieb, R. S. (Ed.): The Ecological Community. Routlege, New York.
- Roth, S. (2007): Summary of Outcomes of the Workshop on NATURA 2000 and Tourism. Bonn: Ecological Tourism Europe (ETE).
- Saxena, G. (2005): Relationships, networks and the learning regions: case evidence from the Peak District National Park. Tourism Management, 26, p. 277-289.
- Storper, M. (1997): The regional world: Territorial development in a global economy. Guilford Press, London.
- Tait, J., Lyall, C. (2004): A New Mode of Governance for Science, Technology, Risk and the Environment? Innogen Working Paper 17 (November 2004).

- Těšitel, J., Kušová, D., Bartoš, M. (1999): Non marginal parameters of marginal areas. Ekológia (Bratislava), 18 (2), p. 39–46.
- Těšitel, J., Kušová, D., Matějka, K., Bartoš, M. (2005): Protected landscape areas and regional development (the case of the Czech Republic). In: Florianczyk, Z., Czapiewski, K. (Eds.): Rural Development Capacity in Carpathian Europe, European Rural Development Network, Institute of Agricultural and Food Economics, Institute of Geography and Spatial Organization, Polish Academy of Science, Warsaw, p. 113–126.
- Těšitel, J., Kušová, D., Bartoš, M. (2006): Rural areas development – local needs and external forces. In: Florianczyk, Z., Czapiewski, K. (Eds.): Endogenous Factors Stimulation Rural Development. European Rural Development Network, Institute of Agricultural and Food Economics, Institute of Geography and Spatial Organization, Polish Academy of Science, Warsaw, p. 87-97.
- Těšitel, J., Kušová, D., Bartoš, M. (2007): Šetrný turismus v biosférických rezervacích – nástroj formování sítí spolupráce: případová studie Biosférické rezervace Šumava. [Sound tourism in biosphere reserves – a tool to form a network of cooperation: a case study of the Šumava Biosphere Reserve]. Government of Carinthia, Klagenfurt, (in Czech).

- UNESCO (1996): Biosphere Reserves: The Seville Strategy and the Statutory Framework of the World Network. UNESCO, Paris.
- UNESCO (2001): MAB Report Series No. 69. Seville+5 International Meeting of Experts in Pamplona (Spain, 2000). Proceedings. UNESCO, Paris.
- UNESCO (2002): Biosphere reserves: Special places for people and nature. UNESCO, Paris.
- UNESCO (2008): The Madrid Declaration. UNESCO, Paris.Vayda, A. P. (1969): Environment and cultural behavior; ecological studies in cultural anthropology. Natural History Press, Garden City (NY).
- Urban, F. (2006): Institutional and management frameworks in the Biosphere Reserve Šumava. ETE, Bonn.
- Van Kooten, C. G., Wang, S. (1998): Estimating Economic Costs of Nature Protection: British Columbia's Forest Regulations. Canadian Public Policy – Analyse De Politiques, 24 (2), p. 63-71.
- Wagner, P. (1995): Soziologie der Moderne [Sociology of modernity]. Campus Verlag, Frakfurt am Main.
- Wilson, J., Tyedmers, P., Pelot, R. (2007). Contrasting and comparing sustainable development indicator metrics. Ecological Indicators, 7 (2), p. 299-314.