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Tax analysis for the model regions of protected landscape areas and national parks in the Slovak Republic

O. MAHÚT[1] and A. CHUDIVANIOVÁ[2]
[1]Institute of the High Mountain Biology, University of Žilina, Tatranská Javorina 7, 059 56-SR, Slovak Republic, [2]Revolučná 3, 010 01-SR Žilina, Slovak Republic

Introduction

The aim of the work is to analyse the system of financing national parks and protected landscape areas in Slovakia. Financing national parks and protected landscape areas in the Slovak Republic stems from the legal basis and organisations of nature protection. On the basis of comparing the current state in Malá Fatra National Park model area in Slovakia and globally, an analysis is conducted in the work of levy levels for the model area. At the same time the system of financing in these areas is evaluated and on this basis a new model is proposed with respect to legal definition, total financing, cooperation with the region and checks.

The system of financing nature protection must in principle react flexibly to the pace of development in all areas. Politics in the area of financing nature and landscape protection is the area of decision-making at the highest level of the state, which represents a summary of specific activities and measures with which the state influences the relationship of the populace to it.

An economic approach in nature protection and regional development has found its place in developed economies. It is part of a democratic decision-making process. One of the possibilities of how to deal with an immature public sector, weak functioning of owner relations, mainly with state ownership, negative factors of the functioning of the market mechanism, checks and respecting the law is the adoption of a new economic principle in nature protection.

Analysis of levy levels in NPs and PLAs in Slovakia

The value of model area Malá Fatra NP

In recent times not only experts and scientists the world over but also the public have been considering the value of NPs and PLAs and this in connection with environmental protection and conservation of biodiversity for present and future generations. The present work focuses on the basic elements of the NP: forest and water. From a purely economic point of view the value of wood at harvest represents 24 Euros per m^2. But this value in and of itself is not final in that we do not want to fell all trees. The value of the NP for human society and other living organisms can be compared with a price for "production". We can also consider the function of the NP.

Water. Favourable climatic conditions, an abundance of precipitation and geo-morphological conditions create conditions for substantial outflow from the area. The territory of Malá Fatra belongs to the Váh catchment area. A characteristic sign of water courses in Malá Fatra is deep cutting into the mountains, rapidity of descent and a mostly torrential character of mountain brooks and streams. Their gradient varies with altitude above sea level and geological foundation. In several places, especially in areas where there is limestone bedrock, many waterfalls have arisen, such as for example Šútovský Waterfall, which is 38m high. The rapidity of descent and formation of waterfalls is connected with the relatively large vertical difference: between the highest and lowest points this is more than 1,300m. The main sources of water in surface water courses are rain and snowfall and in areas with extensive occurrence of limestone bedrock also underground water. The longest river in the area is the Varínka, which reaches a length of 24.7 km.

The territory of Malá Fatra is an infiltration zone of some mineral and thermal springs which emerge in the neighbouring basins - Rajecká and Turčianská.

Development of price of water

The price of water is based on 1 m^3 i.e. 1,000 litres of water:

- one litre of water costs the consumer 0.0010 euros (0.03 SKK)
- one litre of bottled water costs 0.3320 euros (10.00 SKK)

Development of price for production and supply of drinking water in the years 2005-2009 is in Table 1 and price for the production, distribution and supply of drinking water via public water is in Table

	2005	2006	2007	2008	2009*	2009**
Price of water	21.85	22.40	19.58	22.20	22.20	24.70

* till 12.3.2009, ** from 13.3.20098

Table 1. Development of price for production and supply of drinking water in SKK/m^3 without VAT. Source: Liptov Water Company.

	Price per m³ without VAT in EUR	with VAT in SKK	in EUR	in SKK
Maximum price for production and supply of drinking water	0.8199	24.70	0.9757	29.39
Maximum price for distribution of drinking water for municipal water companies	0.4315	13.00	0.5135	15.47
Maximum price for drainage and cleaning of waste water	0.8886	26.77	1.0574	31.86

Table 2. Price for the production, distribution and supply of drinking water via public water mains and for the drainage and cleaning of waste water via the public sewage system. Source: Liptov Water Company.

2. Water consumption per resident in litres/person/day was 72.5 l for the year 2008 and in comparison with 2007 it fell by 12.0 l (84.5 l in 2007).

Comparison of growth in water prices for 2009/2008 calculated according to specific consumption in litres per person and a 4-member household is in Table 3.

In western Europe the price of water is 0.05 euros per litre. It is anticipated that Slovakia will continue to approach this level. Development of charged water supply in the years 1990 - 2007 is illustrated in Fig. 1 and development of costs and average water prices in 2003 - 2007 is illustrated in Fig. 2.

Forest. In Malá Fatra National Park forests take up 70% of the area. Today's composition and extent does not represent the original forest. The original area of forest was much bigger. The highest situated forest stands reached an elevation above sea level of 1,450m a.s.l. and above them a contiguous zone of dwarf pine extended. In the 16th century, in the period of Wallachian colonisation, the upper timber line was markedly lowered under the influence of grazing domestic animals. Shepherds cut and burned the forest and extended areas of pasture. The upper timber line was thus lowered in places by up to 450m. The negative activity of man also had an influence on tree composition. Original mixed forests in Vrátna, Kúrska Valley and other places were replaced by spruce monocultures. In the vicinity of Belá and Bránice mixed forests were replaced by purely beech forests. Such changed forests are much less stable compared to the original mixed forests. Original mixed forest in this area is composed of the so-called Carpathian mix: beech, spruce and fir, with an admixture of other trees, such as sycamore, larch, hornbeam, ash, birch, pine and others. At the present time deciduous trees (60%) predominate over coniferous ones (40%). The most widespread species is beech (55%), followed by spruce (30%), fir (6%), dwarf pine (3%) and sycamore (2%). Less represented are sessile oak, ash, birch, lime, alder, pine, larch and yew. In rugged terrain with rocky terraces there are communities of Scots pine, the remnants of formerly

	Growth/ person/ month	Growth/ 4-member family/ month
Price of water	0.2144 euros (6.46 SKK)	0.8576 euros (25.84 SKK)

Table 3. Comparison of growth in water prices in 2009 and 2008. Source: Liptov Water Company.

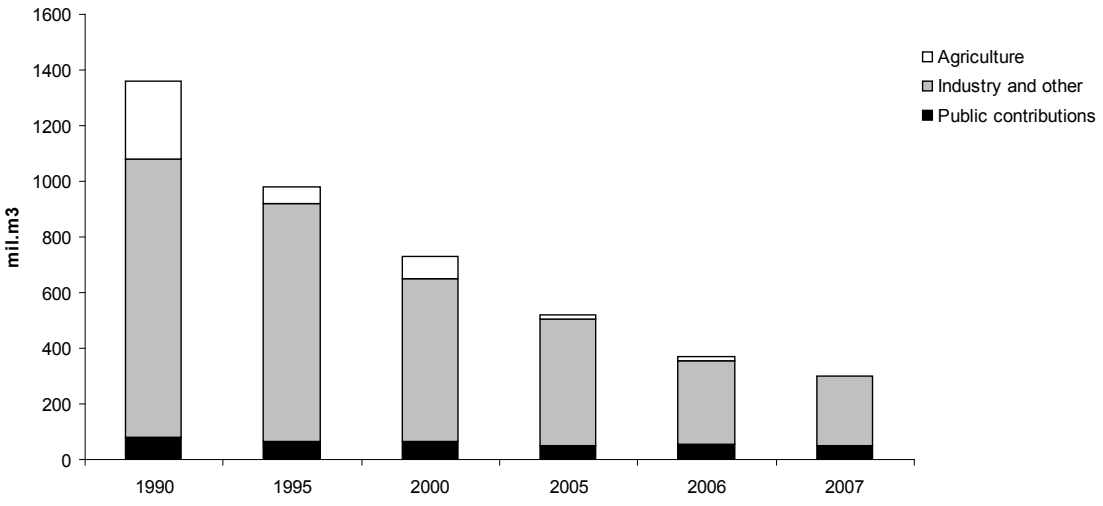

Fig. 1. Development of charged water supply in 1990 - 2007. Source: Water Research Institute (WRI) in Bratislava, annual report 2008.

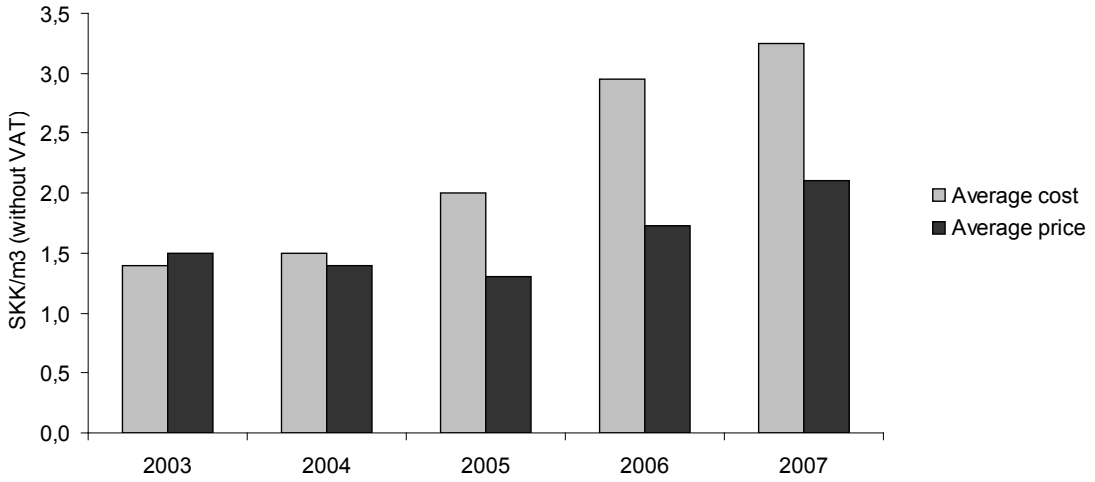

Fig. 2 Development of costs and average water prices in 2003 - 2007. Source: Water Research Institute (WRI) in Bratislava, annual report 2008.

more extensive stands. In places with a milder climate, for example near Starý hrad, communities of acidic oak-beech forest have been preserved. This is the northern limit of its range in Slovakia. There are zones of dwarf pine preserved in the regions of Malý Kriváň, Veľký Kriváň and Chleb. The most preserved forest communities have been declared as small area protected areas.

The health status of forests in Malá Fatra National Park at the present time is influenced by several negative factors. The main negative is tree composition, or forest composition, which is markedly altered compared to the original tree composition. In the past a mixture of beech, spruce and fir was typical for forests of the national park, with an admixture of other trees. The proportions of individual trees in forest stands varied in connection with site conditions, but the character of mixed beech-spruce-fir forest, i.e. the so-called Carpathian mix, which is typical for the whole of the Western Carpathians, was basically always maintained. Human activity had a marked influence on the change in tree composition. Original mixed forests in Vrátna, Kúrska Valley and other places were, after logging, replanted with spruce monocultures. In the vicinity of Belá and Bránice mixed forests were replaced by purely beech forests, which are more stable than spruce monocultures but also have lower resilience than mixed forests. Commercial forests on the territory of the national park more and more took on the appearance of monocultures. Stands so changed had much lower stability and resilience against abiotic and biotic agents. Gradually a negative tree composition of stands began to appear which brought substantial losses for forestry management. In the second half of the twentieth century a second negative factor was added to this state in our forests: air pollution. Forest stands, mainly in the upper parts of the mountains, were to a marked extent damaged mainly by long-term movement of emissions. Under their influence the stability and resilience of forest ecosystems was even further reduced and their susceptibility to damage was increased. The health status of forest communities systematically worsened under the influence of these negative conditions. Such damaged and weakly resistant forest has at the present time been given an additional, very powerful enemy: the bark beetle. This mainly attacks freshly felled trees, those with a weakened state of health or otherwise damaged individuals.

At present individual negative influences overlap and accumulate to a maximum negative effect on the health status of forests. Malá Fatra National Park Administration seeks to promote the planting of forests in the original tree composition and the use of local saplings, which are more resistant and adaptable to the climatic conditions in Malá Fatra, a more structured forest more resistant to wind and snow rather than a single-storey forest which is less resistant.

Production of oxygen during the vegetation period in our conditions is, according to tree species, from 5 to 13 tonnes per 1 ha of forest or park stand. A forest enclave in summer contains the maximum amount of oxygen at around 15.00. A hundred-year old beech 25m tall and with a crown diameter of 15m produces 1.7 kg of oxygen per hour, which represents the average consumption of 3 people for one day.

The functions of the NP are also connected with additional functions such as:

- Mediating climatic extremes
- Gene bank
- Protection from wind
- Anti-flooding defence
- Recreation
- Education
- Public health
- Heritage for future generations

These functions serve to support the whole economy. It is hard to imagine the real financial value of aesthetic or spiritual experience. At present, however, we are far from knowing all the functions of the NP. The production and services which natural ecosystems provide and ensure every year have in economic terms the value of many billions. The prosperity of the

whole of society and its survival directly depend on natural ecosystems. Price calculations of the value of individual components of nature are derived from an awareness of what is valuable in nature. When we realise that protection of diversity in nature can have a higher value than its destruction, then it can be saved.

1 hectare of coniferous forest per year:
- filters 18 mill. cubic metres of air, by which it traps 30–80 tonnes of dust;
- reduces noise by 20 to 30 dB;
- produces oxygen for the annual consumption of 10,000 people;
- produces 1,500 kg of fungicidal compounds.

It has been shown that during the vegetation period a birch tree can vaporise 7,000 litres of water and an adult beech tree even 9,000 litres.

Influence of forest on air composition:
- 1 ha of vegetation absorbs an average of 900 kg of carbon dioxide in 24 hours and emits 650 kg of oxygen. In a forest, there is more oxygen, with a carbon dioxide concentration of about 0.03% compared to up to 0.1% in a town.
- In 1 m^3 of air in a coniferous forest there is 60–70 x 10-6 of ozone (beneficial effect on the body).

Fifteen employees with a budget of 6,236,000 SKK, which at present represents 206,997 EUR, take care of these values in MF NP. This budget includes salaries, contributions for employees, running costs and capital expenditure. The average gross monthly salary in 2008 was 19,583 SKK (650 EUR). The budget for running Malá Fatra NP in 2008 was 271,100 SKK (89,987 EUR).

Comparison of village income

Cooperation with local residents in the particular area and region is a prerequisite for the functioning of a comprehensive model of nature protection. Such cooperation brings to the region employment, maintenance of traditional values of culture and family and financial benefits for individual villages and the region. On the other hand it also brings voluntary nature conservation, public involvement in events in the region and controllability.

By being unique and protected, nature brings, in addition to other benefits, also economic benefits. As an example of the positive externality of nature protection we chose a comparison of the budgets of model areas for MF NP village Terchová and the village of Komjatice, where there is no such externality. Both villages have a comparable number of residents and state transfers. We selected comparable data from the individual budgets of the villages in the following fields:
- Tax on accommodation
- Tax on use of public space
- Tax on communal waste
- Tax on construction

Terchová

The country under majestic Mních, embellished with many puzzling legends and myths. Over the years they have succeeded to create the impression of a piece of our world where magic secrets reign. The fact is, however, as in similar cases, prosaic. Similarly, roots of inquiry into the legends or myths. A local man, "bandit captain of mountain lads", Juraj Janosik, "took care" of the fundamental mythological understanding of Terchová. Legends spread about his incredible pieces, or rather pieces, of which most were attributed to the immediate context of the outlaw's birthplace.

Besides Janosik, the phenomenon of a beautiful natural location in the picturesque scenery of the Malá Fatra range contributed substantially to the magical understanding of Terchová. And perhaps just such tales, famed for mountain valleys, rivers and peaks, helped to define Terchová Man. A being in which the roughness of difficult living conditions combines harmoniously with the romantic beauty of surrounding natural spots. On the one hand challenging daily work, on the other sensitive vision and feeling the world around. This constellation allows some of us to recast the harmony mentioned into unforgettable Terchová folk art. The local populace is particularly proud and sensitive of the legacy of their forefathers. Terchová folklore, characterised by original vocal and dance components, is a significant manifestation of the relationship to the past.

The large protected area of Malá Fatra National Park lies partly on the territory of Terchová village.

An overview of individual accommodation and catering options is included in the following Tables 4 - 5.

Komjatice

With its position and natural conditions the village of Komjatice was an advantageous place in which our ancestors developed their life from ancient times. It has a rich history. The village was already settled in pre-Christian times, leaving evidence behind, as confirmed by the archaeological finds on display in the museum. Roman legions also camped near Komjatice. Missionaries Cyril and Method passed through Komjatíce lands to nearby Pribinov Castle in Nitra. The village is connected with the important Forgáč dynasty, which took an active part in the war against the Turks, maintained their own army and the most important role was played by Žigmund Forgáč from Komjatíce, who became the king's palatine and organised an army against the Turks. At the same time, however, like most castle lords, he was also responsible for maintaining Komjatíce Castle. At the present time, Komjatice's residents have created a dignified place in the Slovak Republic and it has the chance to become a modern village (small town) within the European Union. Their toughness so dictates. Komjatice has its rich history, in every time and in every period its residents were home, a place of historical links, family ties, cultural and social relations, folk traditions, ethical and religious principles. It is a place where entire generations return – in reality and in the heart – because it is embedded deep within them. Most residents are involved in agriculture.

On the basis of a comparison of income from local taxes for the villages of Terchová and Komjatice, which is shown in tables 17 and 18, the positive externality in the village of Terchová for 2008 was a total sum of 3,724,000 SKK which is 123,714 EUR.

Type of accommodation	Number
Hotels	19
Guesthouses	14
Cottages	37
Private accommodation	26
Campsites	1
Total	97

Table 4. Accommodation options in Terchová village.

Type of refreshment	Number
Restaurants	18
Pubs	1
Wine bars	1
Pizzeria	1
Bars	4
Total	25

Table 5. Catering and refreshment options in Terchová village.

Analysis of turnover in MF NP model area

According to a personal survey in the region, in publicly available registers, in the trade register and the register of companies operating in the model area of MF NP, there are more than 300 commercial entities.

Commercial activity is focused on two main fields: tourism and forestry and water management.

A. The tourism field is represented by restaurants and accommodation facilities, ski-lifts, sports equipment hire, guiding services and the like.

B. The forestry and water management field - the majority of land is in private ownership. In the field of water resources, which at present are used by private companies, this concerns payments which represent protection of the environment where they occur and their capacity.

Definition of problems in model NPs and PLAs in Slovakia

Nature and landscape protection is in the public interest. In Slovak societal conditions, we include imperfect functioning of property rights, especially the state, in conjunction with an immature public sector, among the most pressing problems. Aggressiveness in promoting economic interests and the helplessness of checks on observance of the law represents a call for the only possibility for an active approach to solving the problems. On the basis of the preceding analysis of the state of nature protection in Slovakia and in other countries, the starting point in this situation is the adoption of new legislation and an economic approach in nature protection. The fundamental difference between our NPs and NPs in other countries is in the authority of NP administrations.

In real terms nature protection in Slovakia must stem from the following facts:

- Inadequate financial, material and securing provision
- Incomplete and outdated management plans for protected areas
- Lack of respect of landowners' rights, their management and handling of use
- Centralised state legislation in the management of NPs and PLAs
- Low awareness and motivation of the regions concerned
- Overlap of unclear responsibilities in nature protection

On the basis of this reality the preparation of new management plans for protected areas, with clearly defined priorities in particular areas and the method of their provision, including human and financial resources, is essential. The process of preparing the plans must be public, based on decisions of local government and protection of nature and integrated financing. An economic approach in nature protection and regional development found its place in developed economies long ago. It is part of a democratic decision-making process, taking into account the value of biodiversity.

Proposed model of functioning of NPs and PLAs in Slovakia

Nature and landscape are part of the national wealth and on them depend, directly or indirectly, our economic and cultural stature. According to the

	Size in km²	Number of residents	Population density per km²
Terchová	84.5	4,264	48
Komjatice	30.7	4,263	139

Table 6. Comparison of Terchová and Komjatice villages – size, no. residents, population density.

		Total budget	Accomm. tax	Tax from use of public space	Tax from waste tax	Property tax	Construction
2008	Terchová	51,154	1,05	600	2	789	1,78
	Komjatice	42,288	0	11	1,05	2,42	645
2009	Terchová	51,16	800	600	2,2	700	1,8
	Komjatice	42,326	0	11	1,05	2,422	648

Table 7. Comparison of budgets for the villages of Terchová and Komjatice. Source: Annuals reports of Terchová and Komjatice.

Development Strategy of the Stature Nature Conservancy in Slovakia with a view to 2013, among the values of strategic importance for human society belong the maintenance or increase of biological diversity, maintenance and renewal of the natural functions of ecosystems and balancing functional land use and protection of its natural and cultural values.

Simplifying and streamlining operation of the state administration of nature and landscape protection and bringing it closer to citizens also belong among the strategic aims. Next is especially the transfer of part of the authorisation proceedings from the state nature and landscape protection administration authorities to expert organisations of nature and landscape protection (Jusková 2006).

For financial instruments to be able to function in nature protection in the first instance it is necessary to determine fundamental rules of legislation and authority.

We divided the proposed model into four basic areas:

1. Legal definition
2. Financing
3. Cooperation with regions
4. Checks

Legal definition

In the field of legislation it is essential to secure authority in decision-making and subsequent responsibility. The final report of the IUCN mission in 2005 states on this matter that no overall management authority exists in TANAP, there is no unified strategy or management plan and the formal conditions for it are not fulfilled. The Council of the Association of Non-state Forest Owners of Slovakia, in an open letter to the minister dated 2.9.2008, has also drawn attention to unclear conceptual questions of the relation of nature protection and forest owners. On the basis of experience abroad and the present situation in Slovakia we propose that legal power be moved from the State Nature Conservancy of the Slovak Republic and county and district environment offices to individual NPs and PLAs. This trend was already started in 2008 by a change of individual NPs and PLAs to contributory organisations. These contributory organisations are, however, still attached to a central model of the SNC SR. A prerequisite for the transfer of authority in the field of decision-making is their legal entity. It is not possible to build nature and landscape protection on protection alone. The basis of protection is also decision-making and the definition of an equal and responsible partner at the regional level.

Protected area administrations in other countries are, as a rule, separate independent expert units. With the obligation to observe the legislation they are the upholders of continuity of nature protection in the region. Slovakia, unfortunately, went the opposite way: instead of simplifying the structure, in 2007 the State Nature Conservancy was reorganised from a two-tier organisation to a confusing tangle of centres and administrations with three-tier management (Uhrin 2007).

Globally a NP management strategy has proven itself in which the NP director is proposed within the given region – residents through regional self-government and owners through the weight of their ownership for example municipalities, cooperatives, communities, individual physical and legal persons. On the basis of such a proposal the Environment Ministry, as the immediate superior authority of the state administration, then directly approves his appointment to the post. The same principle is maintained for his removal. A NP or PLA board should be established as the initiating, approving and consulting authority for matters of the NP or PLA concerned. Board members should be delegated representatives of municipalities, the most important business people from among the legal and physical persons on the territory of the NP or PLA, mainly from the fields of agriculture, forestry, tourism, experts from the field of nature protection, scientific workers and other workers from the public and state administration. As generally in the world, in accordance with international practice and the importance of NPs and PLAs, their directorates should be a separate legal entity in terms of authority directly linked to the Environment Ministry. So only the Environment Ministry should be a second tier authority in matters of nature protection. In this way regional participation in management in the field of nature protection will be secured. Enactment of jurisdiction in the sense of decentralisation of the state administration in this field allows NPs and PLAs to overcome a period of ecological and economic crisis and to secure permanently integrated nature protection in Slovakia. NP and PLA jurisdiction must extend at least to the whole area of the NP or PLA including its buffer zone. The proposed model brings a reduction in administration and speeding up of the decision-making process in the execution of the state administration in proceedings of the business environment i.e. transfer of authority from SNC SR and the Environment Ministry, county and district environment offices and State Forests. This model has great potential in the field of development of small private enterprises – self-employment – which remains in a given region. In NPs and PLAs there is relatively large activity in tourism, recreation, commercial and sporting activity, which from the point of view of fulfilling the functions of NPs and PLAs is necessary to direct towards the pertinent laws.

On the basis of an analysis of interest groups in the case study of Slovenský raj NP it followed that 83% of respondents support an integrated park management focused on sustainable development and co-financing of the park (Kluvánková-Oravská 2002).

A public institute (the model for the functioning of universities) at present represents the most advantageous model for NPs and PLAs. According to an evaluation of the preceding analysis, it is not possible to save Slovak nature protection without changes in the field of legislation.

The government, as the responsible authority for a NP, has an obligation to ensure that its management is not disrupted by pressure from the surrounding area (Vološčuk et al. 2006).

Financing

In the current difficult economic situation in the state budget, caused partially by the global economic crisis, a re-evaluation of the financing of na-

ture protection in Slovakia is a huge challenge to solve problems for present and future generations. Financing NPs and PLAs in Slovakia up to now has been based solely on state contributions. This method of financing is long outdated globally and on the basis of its benefits it is considered the least advantageous and least effective.

On the basis of the preceding analyses in the field of financing nature protection globally the financing of NPs and PLAs is based on a model composed of several sources. The most common model in use is based on a proportion of finance from the state, from private sources, from own financing and from EU financial sources.

In Slovak conditions financing nature protection is centralised, under-dimensioned – a marked part goes on administration – and, for this reason, at the edge of society's interest. As we can see in the following table and graph, financing protected areas in Slovakia has a downward trend compare to the total budget of SNC SR.

We can see the enormous potential in, for example, Germany. A change in the concept of nature protection in the Bavarian Forest NP has brought positives for tourism. Using the forest in a commercial way would bring, according to the estimates of local politicians, a profit of five million euros. At present the profits from tourism based on that particular national park, which has more than 330 kilometres of hiking trails, represents almost 50 million euros.

On the basis of the foregoing analysis in the field of financing nature protection abroad and in Slovakia we anticipate that the most advantageous model of financing NPs and PLAs in Slovakia is multiple-source financing.

The proposed model represents financing in the proportion of one third from the state budget and the budget of regional self-government and municipalities, one third from own sources and one third financing from the European Union.

Proposed configuration of financing NPs and PLAs: Sources of financing NPs and PLAs:

1. State contribution
2. Own income (percentage of turnover, own income, flat fees)
3. European Union

A fundamental prerequisite for the functioning of this system is status as legal entities of individual NPs and PLAs and their cooperation with regional self-government and the business environment in the given region. A NP and PLA statutory must have the attributes of a manager, which in most cases does not sit with political nomination, as at present.

A comparison of financing in one year in a NP abroad and in Slovakia is show in the Table 9.

The anticipated financial requirement for Slovak conditions represents a minimum of 4,200 EUR per year and km^2.

At the present time the total expenditure on NPs and PLAs in Slovakia is 3,981,000 EUR. The total area of NPs and PLAs in Slovakia is 8,404 km2.

On the basis of the proposed model the total expenditure on NPs and PLAs would represent a sum of 35,296,800 EUR. For the one third from the state budget this represents a sum of 11,765,600 EUR. At the same time, however, the proposed model brings a saving in the state budget because of the transfer of authority in the field of decision-making by the abolition of county and district environmental offices and the SNC SR.

	2006	2007	2008
SNC SR budget	183,926	249,812	484,089
NP and PLA spending	113,689	110,136	119,944

Table 8. Comparison of the budget of SNC SR and spending of NPs and PLAs. Values are given in 1,000s SKK.

- SNC SR annual budget – (SNC budget 484,089,000 SKK – expenditure on NPs and PLAs 119,944,000 SKK) / 30.126 = 12,104,000 EUR
- County and district environmental offices – 2008 expenditure 422,032,000 SKK / 30.126 = 14,009,000 EUR

A saving would already be achieved by the abolition of SNC SR, with the transfer of authority to the NPs and PLAs.

In the MF NP model area, financing is presently at the level of 916 EUR per km2. According to the proposed model, at a requirement of 4,200 EUR per km2, for the given NP this would represent a budget of 949,200 EUR.

- One third, a sum of 316,400 EUR, would represent the state contribution.

- The second third would be composed of income: from the contributory sale of trademarks – use of the NP logo, a percentage of turnover from commerce in the NP environment and the remainder from own sources

A. We propose a contributory fee of 100 EUR. The proposed figure accounts for current level of income and does not represent a large burden in that at present the possibility already exists to write off the given sum against tax. On the basis of a survey of the wider region in question, in publicly accessible business and entrepreneurial registers, we anticipate that in the region in question approximately 300 entities run commercial activities. This represents a sum of 30,000 EUR.

B. A percentage of revenues from trading in the NPs or PLAs represents payment for using the services of nature protection. Providing these services (externality, which arises from protected areas) incurs certain costs and should be charged. If this externality did not exist, then even a businessman in the area concerned would have no profit from it (e.g. recreation). The business activity of these entities is focused on two main fields: tourism and forestry and water management.

On the basis of analysis of the business environment in the MF NP model area tourism revenues total 10,850,500 EUR.

In the field of forestry and water management revenues amount to 2,909,500 EUR.

Together this represents a sum of 13,760,000 EUR in revenues (Pogányová 2009).

	2008 budget in EUR	Total area km²	fin. in EUR/km²
Abruzzo, Italy	69,972,950	1,235	56,658
Šumava, Czech Republic	2,897,300	680	4,261
Bavarian Forest, Germany	12,640,000	240	52,666
MF NP, Slovakia	206,997	226	916
TANAP, Slovakia	598,851	1,045	573

Table 9. Comparison of the budget of same European national parks.

The levy level from revenues of business entities to preserve and further secure the functioning of MF NP represents 1.5%.

Levies would in this case represent a sum of 206,400 EUR.

C. Own income is composed of resources from own activity such as for example charges for preparing environmental impact assessments, guiding activities etc. On the basis of the transfer of authority, we anticipate possibilities for providing services and sales of own products totalling 80,000 EUR.

- The final third would depend on the NP's own activity in justifying support of NPs and PLAs in the EU: use of EU funds. This finance should be used on particular projects within the operation and activity of individual fields on nature protection.

Cooperation with the regions

The use of environmental resources is key for the development of local communities, so they represent many opportunities for income and employment, through which they develop the region. NPs and PLAs should be the engine in the development model, which enhances and utilises local resources in terms of both people and materials and with regard to protection of the environment. Comparison of the budgets of model communities clearly shows the benefit of externality of NPs and PLAs for the community budget.

Experience shows that without regard to the type of ownership, success in management depends on good consultation and communication between the managing authority and other owners and also on sufficient financial resources for NP management (Vološčuk et al. 2006).

More active cooperation between self-governments, local companies and non-profit organisations is one of the possible solutions to the problems of the regions of Slovakia. "These possibilities were also discussed at a seminar organised by the Association of Towns and Villages of Slovakia (ATVS) intended for representatives of local area self-governments," Such cooperation at the present time, when self-governments are battling with insufficient funding, becomes an essential prerequisite for development of towns and villages and improving the lives of their citizens.

Regional politics are one of the basic principles of EU politics. The aim is to reduce the differences between unevenly developing regions of Europe and so to contribute to their integration into a unified European-wide market.

Economic research shows that disputes between people relating to environmental goods can be solved by a peaceful route with respect to their subjective value, fundamental human rights and voluntary discussion of participants from all sides. Development of cooperation between NPs and PLAs and the regions therefore has great potential which reprehensibly is not, however, utilised at present in Slovakia. The proposed model brings the possibility to define a partner for the region, which brings a positive externality, the possibility of development and meeting the needs of the populace of a particular region and of the whole nation. Cooperation with the regions beings a benefit in building TUR and also in fulfilling international agreements to which we are committed by the EU and other countries, especially in the field of environmental protection.

On the basis of a study conducted in 2006 in the field of tourism and MF NP, new opportunities and risks of cooperation were identified. Visitors have a unique experience, with a feeling of local traditions and rural culture. This is supported by providing information, including on the historical and cultural heritage in surrounding communities, about transport connections between individual communities and about services in the park and surroundings, organised festivals, traditional fairs and educational programmes.

Advantages of the proposed model

Preservation of ecological stability and aesthetic values of the landscapes of protected areas as well as other landscapes has, and will have in the future, particular importance because of its economic significance for agriculture, forestry, recreation, tourism and community development. The proposed model, where legal definition, financing and cooperation with regions are intertwined, can solve many of today's problems.

We can include the following among the main advantages of the proposed model:

- Comprehensive protection of nature and preservation of "heritage" for future generations
- Development of regions, employment, involvement and participation of citizens in the region and land owners in problem solving
- Reduction of the outgoings of the state on administration

- Decentralisation in the management of NPs and PLAs
- Improving the effectiveness and harmonisation of current legal norms in the field of nature protection with the world and especially with the EU
- Utilisation of the proposed model in the preparation of a new law on nature protection
- Clarifying financial flows and public scrutiny
- Raising awareness in the field of cultural heritage of Slovakia, recognition and education of the public in the field of nature protection
- Unifying nature rangers
- Development of transboundary cooperation as it is in surrounding countries etc.

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