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# Landscape development planning and management systems in selected European countries

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**Abstract:** The ambition of the paper is to show recent development trends in landscape planning and management in the context of integration of landscape ecology knowledge into the spatial planning and decision making processes. The results are based on the examples from selected European countries (Germany, Austria, Czech Republic and Slovak Republic) representing central European planning culture, characterised by high quality of environmental and spatial planning research and landscape. The paper analyses the legal background and evaluates interlinks between landscape planning and requirements defined by important European directives and agreements related to the environmental issues as well as to the development of civic society. The paper is reflecting the problems concerning real barriers in certain European countries, making the landscape planning knowledge implementation into the spatial development planning and decision making more difficult and less efficient.

**Key words:** *landscape planning and management, spatial planning, Central European countries*

## 1. Introduction

Landscape planning is historically understood as an intersection area of the land use planning, landscape architecture, regional planning, environmental planning and management. Landscape planning as an integrative part of spatial planning in addition to the land-use and strategic socio-economic planning can act as a coordinator of integrative environmentally oriented approaches in spatial planning and related decision making processes.

Landscape planning tools and their integration into the planning systems are differs from country to country depending on historical development, land use culture and intensity, planning and management traditions, landscape character. The scale of possible approaches represents the whole range from landscape planning as optimising method of spatial arrangement respecting landscape ecological conditions, via landscape planning focusing mainly on landscape character and landscape scenery or landscape planning as a toll for the protection of cultural heritage up to the landscape planning reflecting predominantly nature protection.

The paper shows recent development trends in landscape planning and management in the context of integration of landscape ecology knowledge into the spatial planning and decision making processes based on the examples from selected European countries (Germany, Austria, Czech Republic and Slovak Republic) representing central European planning culture, characterised by high quality of environmental and spatial planning research and landscape.

Germany belongs to first countries, where landscape planning was constituted. This was connected with the establishment of the Institute for Nature Protection and Landscape Maintenance at the University of Technology in Hanover in 1947, which started to be the leading centre of landscape planning in Germany. Methods of landscape planning have been gradually developed in other countries of Europe too, e.g. the Netherlands, Switzerland, Austria, Belgium, Slovak Republic, Czech Republic, Poland, Hungary. Among selected countries representing central European planning culture two countries (Germany and Austria) belong to "older" EU member states with long tradition of regular basis for landscape planning. The Czech Republic and the Slovak Republic are the EU members since 2004, still affected by the processes of societal transition and of planning system, in which landscape planning has not got efficient legal support yet.

Based on the analyses of legal basis and current development factors (e.g. new scientific knowledge development, deep social changes as well as the new environmental problem awareness, development of environmental laws and adoption of important international agreements) this paper evaluates interlinks between landscape planning and requirements defined by relevant European directives and agreements dealing with environmental issues, as well as to the civic society development (e.g. the Water Framework Directive, the Strategic Environmental Assessment Directive, the European Landscape Convention, Aarhus Convention – the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters etc.). The paper is reflecting the problems concerning real barriers in certain European countries, making the landscape planning knowledge implementation into the spatial development planning and decision making more difficult and less efficient. There are strengths and weaknesses of the implementation process summarised in the paper and assessed with special focus on what role the implementation of above mentioned factors in the decision making and planning processes plays.

The article draws on the results of scientific projects and initiatives that took place in Slovakia from 2004 to 2008 in connection with the preparation of a new Landscape Planning Law (Kozová, Finka, 2005; Kozová et al., 2007; Kozová, Paudišová, 2009) and a new Law on Land-Use Planning and Building Code (Finka, 2008).

## **2. Methods and approaches**

Based on the analyses of current state of the art in the field of legal, institutional and methodical aspects of landscape planning in chosen European countries following questions have been researched:

- What is the position of landscape planning in the spatial planning process like, and how this position is fixed in the laws?
- How the landscape planning processes and other planning processes (sectoral or integrative) are interlinked and in which way the public is involved in these processes?
- What are interlinks between landscape planning and requirements of the European Landscape Convention like?

### **3. Analyses, evaluation and comparison of legal background and current development factors in Germany, Austria, Czech Republic and Slovak Republic**

#### **3.1. Position of landscape planning in the spatial planning process, and how this position is fixed in the laws**

Landscape planning in **Germany** has its own long tradition and regulatory basis. It is well-established as a core planning instrument of the prevention-oriented nature conservation, defined by the Federal nature protection law of 1976. It is embedded in spatial planning system as a third tier, sectoral planning task with a broad range of objectives. The law defines landscape planning as an “instrument of active nature protection” and requires the elaboration of landscape plans in all federal states, districts and municipalities. Municipalities and districts are required to draw up plans that represent the status and the future development of nature and landscape.

Landscape programmes in **Germany** have been drawn up for the federal states, Regional landscape structure plans have been prepared for virtually all parts of the country. Local landscape plans currently have been elaborated for almost half of the area of Germany. Local landscape plans are currently being prepared for approximately one fifth of the area of Germany. In this way information base and objectives system has been set up, across the planning levels, over the whole area of the country. They represent important basis for the success of nature conversation work in past decades (Haaren et al. 2008).

Planning system in **Austria** is rather complicated. Each federal state has issued not only its own laws and standards but executive procedures and regulations related to specific planning fields differ from state to state as well. The relationship between spatial and landscape planning instruments in Austria has been defined by ÖNORM L 1100 (2000), where the basic contents of landscape-planning instruments are described. As Stiles (2005: 40) stresses “some ten years ago an attempt was made to prepare the way for the introduction of a German-style model of landscape planning into Austria. While being received in professional circles, this study and the ensuing publication failed to have any political impacts. It can be argued that ten years ago the political climate and general public receptiveness with regards to environmental questions was considerable more favourable than today. Furthermore the reputation of planning in general has received a considerable blow as the social emphasis has shifted from environmental to economic concerns.” Although Austria is one of the European countries which depends more economically on its landscape than most others and the one which has a reasonable well developed planning system that takes at least some notice of the importance of the landscape, indeed it recently funded a national research programme on the cultural landscape.

**Former Czechoslovakia (since 1.1.2003 Slovak Republic and Czech Republic).** Implementation of landscape planning methods has its tradition in **the Czech Republic and the Slovak Republic** for more than 40 years. They were broadly implemented for the optimisation of landscape land-use, based on the method of landscape synthesis (Drdoš 1983; Lipský 1998). In the 70s there was a new methodology of landscape ecological planning, called LANDEP, elaborated in Slovakia, profiting from the intensive contacts with outstanding European scientific centres, University of Technology in Hannover incl. (Ružička, Miklós 1981, 1982, 1990; Ružička 2000). But there is a lack in legal institutionalisation in comparison with Germany and Austria in both countries. Although methodical development started in the sixties years of 20<sup>th</sup> century, the landscape plans have been elaborated mostly based on initiative of research and planning institutions. Since 1976, in the contexts of the adoption of new law on land-use planning and building

code, the integration of environmental and landscape ecological aspects in land-use planning has been implemented although the landscape planning itself was not introduced. The instrument of territorial systems of ecological stability as part of land-use documentation started to be implemented in the seventies years of 20<sup>th</sup> century, at the beginning on the voluntary, later on legal base (Löw, 1984; Buček, Lacina, Löw 1986). First legal framework for territorial systems of ecologic stability created the Law No. 330/1991 about land consolidation. Landscape planning (landscape plan) has not been legally institutionalised in **the Czech Republic** yet. There were so called standards for the elaboration of the landscape plans elaborated there and some landscape plans have been elaborated for the territories requiring special regimes, reflecting the needs of territorial governments. In **the Slovak Republic** the position of landscape plan (landscape-ecological plan) was defined in the amendment of the Law on Land-Use Planning and Building Code in 2000. But, there is no institutional background for landscape planning defined as a comprehensive process, including public participation and clear responsibilities for its updating. The integration of ecological requirements safeguards landscape-ecological plan only as the part of surveys and analyses. This situation is not optimal and often criticised. Preparatory work on a new law on landscape planning started in 2003, but the political decision was to integrate the main instruments into the new law on land-use planning and building code and the law on nature protection and landscape management (Kozová, Pauditšová 2009).

### **3.2. Efficiency of the interlinks between landscape planning processes and processes of sectoral and integrative planning systems**

Landscape plans and programmes in **Germany** are precautionary planning instruments used for nature conservation and landscape management to promote comprehensive protection of the natural environment and its ecosystems and to develop the natural environment according to its specific needs. By Haaren et al. (2008) landscape plans in Germany are one of the standard tools of nature conservation, spatial planning and sectoral authorities as well as local communities, all of which can make fast and reliably relevant decisions on the basis of the differentiated comments on the condition and development of nature and the landscape. They support Local Agenda 21 and implementation of Aarhus Convention and several EC directives. This is confirmed also by Gruehn (2005:25) who quotes: „for the discussion on the effects of landscape planning it is quite important to be aware of its different addresses”. German and Austrian landscape plans reflect land consolidation and as well as activities of the Village Renewal Programme.

**Austrian framework landscape plan** is an instrument of supra-local spatial planning. It displays supra-local requirements, concepts and measures in the context of cultural landscape focused on land-use. It is used for the formulation of the framework preconditions for settlement development, localisation of industry, transport infrastructure and other infrastructural systems from the point of view of landscape planning and landscape ecology. By Stiles (2005) in **Austria** both land use planning and nature conservation are defined in the Austrian constitution as being within the responsibility of the provinces, there are nine separate planning laws as well as nine pieces of legislation dealing with nature conservation. The most explicit references to landscape and the need to afford it special treatment are made in the planning laws of Salzburg and Lower Austria. One of a positive example is ALPEN (Austrian Landscape Planning Education Network) – a programme to study the role of landscape planning in typical rural Austrian district (Stiles 2005).

**German and Austrian landscape planning** play crucial role in protecting biodiversity in rural areas and their multi-functionality. Especially important is interlink of landscape planning and processes of strategic environmental assessment (SEA) in those two countries. This potential is not used in **the Slovak Republic and in the Czech Republic**. The Czech Law No. 183/2006 on land-use planning and building code already integrates the SEA processes into the land-use processes. The Slovak Law No. 24/2006 on Environmental Impact Assessment ignores absolutely the fact, that the law on land-use planning and building code has integrated one of the basic instruments for the implementation of landscape-ecological requirements into the spatial development management – landscape-ecological plan. Preparatory work for new Slovak law on land-use planning and building code still does not reflect potential of the integration of SEA in the land-use planning processes. Main interlinks of landscape plans in the **Czech Republic and in the Slovak Republic** is oriented towards natural protection and land-use plans. Interrelations of landscape plans and documents of land consolidation are not as significant as in Germany or Austria, as there are only 1/10 of the cadastres is covered by land consolidation documentation. The Czech Government adopted the Programme of Revitalisation of River Systems in 1992. This was the first landscape programme of the Czech Ministry of Environment. Next programme – the Landscape Management Programme was introduced as a joint activity of the Czech Ministry of Environment and the Czech Ministry of agriculture in 1994 (Lipský 1998; Kedner 2004). There are no such similar programmes in the Slovak Republic. There are intensive interlinks between landscape plans and river basin management plans in all respective countries. It is based on the Water Framework Directive. E.g. there is the landscape plan mentioned in the Law on Water in Slovakia, adopted in 2004, which defined obligatory use of the river basin management plan in landscape planning.

Public participation became an integrated part of landscape planning in **Germany and Austria**. As accordance with Gruehn (2005), in general, landscape planning instruments in Germany can be characterised by a missing participation and soft commitment effects. But, as it can be seen, there are several positive exceptions from this. Very important is the result of evaluation effectiveness: landscape planning in Germany has significant effects on both urban and agricultural planning. The processes of landscape planning in **the Slovak Republic and in the Czech Republic** are not including the public participation processes.

All four described countries stress the local dimension of nature protection and landscape development. The Village Renewal Programme supports broad public activities at the municipal level and processes of Local Agenda 21. They have long tradition in Germany and Austria, nearly 20 year old tradition in the Czech Republic and 13 year old tradition in the Slovak Republic (although only with very low financial support).

### **3.3. Interlinks of landscape planning and the European Landscape Convention**

The significant international treaty which is strengthening the position of landscape planning in the whole planning system is the European Landscape Convention (Council of Europe 2000). By the Convention “landscape planning” means strong forward-looking action to enhance, restore or create landscapes. Recommendation CM/Rec(2008)3 of the Committee of Ministers to member states on the guidelines for the implementation of the European Landscape Convention (Committee of Ministers 2008) presents landscape planning as an instrument used to better implement the Convention and classifies it in the main categories of instruments for landscape policy.

**Germany and Austria** have not signed or ratified the European Landscape Convention yet, therefore no direct measures have been taken to implement it. However, there are measures which contribute – directly and indirectly – to the aims of the Landscape Convention. Landscape planning in Germany and also in Austria seems to be compatible with the European Landscape Convention. There exist several documents in Germany and Austria, which address various aspects relevant for landscapes: e.g. National Strategy on Sustainable Development, National Biodiversity Strategy, National Forest Programme, Forest Development Plan (forest spatial planning), etc.

**The Czech Republic and the Slovak Republic** – in spite of their ratification of the European Landscape Convention (Czech Republic on June 3, 2004 and the Slovak Republic on August 8, 2005), have not got appropriate legal framework for landscape planning yet, not having any nation-wide documents in which the integrated landscape policy would be formulated. The landscape policy of the Czech Republic reflecting the Convention is under preparation. Ratification of European Landscape Convention could be effective stimulus for positive development just in these two countries.

#### **4. Discussion**

Spatial development policy is derived from the ex-ante planning philosophy with the prospective planning measures in the central European countries such as Germany, Austria, the Czech Republic and the Slovak Republic. The analyses of the management systems show, that the growing dynamics of the development processes and stochastic behaviour of the stakeholders requires higher flexibility and ability to react on current problems, as well as new instruments mostly in form of informal instruments allowing broader implementation of participative planning approaches. They can support the mediation and prevention of potential conflicts before implementation of obligatory, by law defined planning processes and increase social acceptability and objectivity of adopted decisions (Finka 2008).

The efficient implementation of landscape planning still alludes to serious barriers obstructing its use in social practice. One of the barriers is repeatedly the current position of landscape planning in the system of spatial planning. Landscape planning in Germany and similarly in Austria is not strictly assigned to a specific branch of administration. So, its measures and requirements are relevant not only for nature conservation offices, but also for decision making in the framework of comprehensive or structural plans prepared by local authorities of agricultural planning, forestry planning and even for private persons. The term “requirements” means, that landscape planning proposals usually are not more than recommendations. So it is up to all various decision makers, what will be the implications of the landscape planning measures and requirements, even if the law provides considerations of landscape planning proposals on a high level”. For the time being, integrated landscape planning system does exist only in several countries. More often landscape plan is only a rather isolated document in the frame of land use planning (e.g. in the Czech Republic and in the Slovak Republic). Besides that, the experience shows, that the landscape limits and potentials, as the result of the landscape ecological plan are in general, not appropriately complied, when the proposals of new land use and economic activities are suggested in the spatial planning processes. With regards to the above mentioned complexity of the landscape issue, the management of the landscape development has to be understood as cross-cutting problem of spatial relevant management activities under which dominate integrative planning systems of land-use planning, socio-economic development planning and landscape planning, supported by broad scale of scientific disciplines, tackling with the different components of spatial/landscape systems. Fig. 1 presents the above

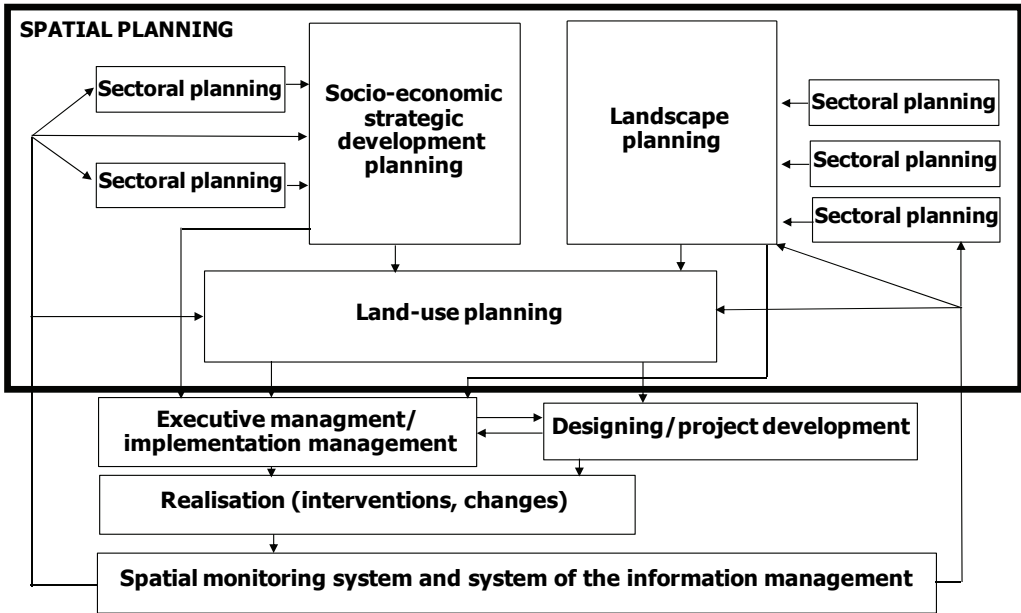


Fig. 1. The logic of integrative spatial/landscape development planning (Source: Finka, Žigrai, 2008)

mentioned main three pillars (landscape planning, socioeconomic strategic development planning and land-use planning) completed by the set of sectoral planning activities and executive instruments should create the complex of spatial/landscape development management (Finka, Žigrai 2008).

The big obstacle to apply landscape planning is apportionment of competencies dealing with landscape issues into different sectors (e.g. ministries responsible for the environment protection, agriculture, forest management, water management, regional development) without safeguarding relevant mutual cooperation. This problem is important especially in the newly EU member countries.

Based on the assessment published by Kyselka (2009), the concept of landscape structure elaborated in the frame of law on land-use planning and building code creates rather good legal bases for landscape-ecological planning outside of built-up areas, but there is a lack in the interlinks between land-use plans and land consolidation as defined by the law. There is a similar situation in Slovakia as well. A great unused potential can be seen in the public participation in all respective countries, as required in the European Landscape Convention.

To make landscape planning efficient it is necessary to improve coordination of its particular stages and support the phase of practical implementation. By Haaren et al. (2008) landscape planning can be used to overcome new challenges which result from the change in requirements and legal basis. In future the information presented in landscape planning should also be interpreted in relation to new fields of application and worded according to its target group to enable the landscape planning, to offer directly transferable contributions to environmental assessments and plans, as required in accordance with the EU Directives (Habitats Directive, Strategic Environmental Assessment, Water Framework and Flood Directives). It is necessary to include landscape planning as an inherent part of the concepts of the European spatial development management instruments. Haaren et al. (2008) stress advantages of so called module system in their work. The modules in this system are focused on specific topics (e.g. renewable energy

sources, requirements of agro-environmental systems, adaptation measures reflecting climatic change, etc.) relevant for local community.

Fig. 2 presents relationships between cross-sectoral planning (including environmental assessment tools) and sectoral planning of landscape.

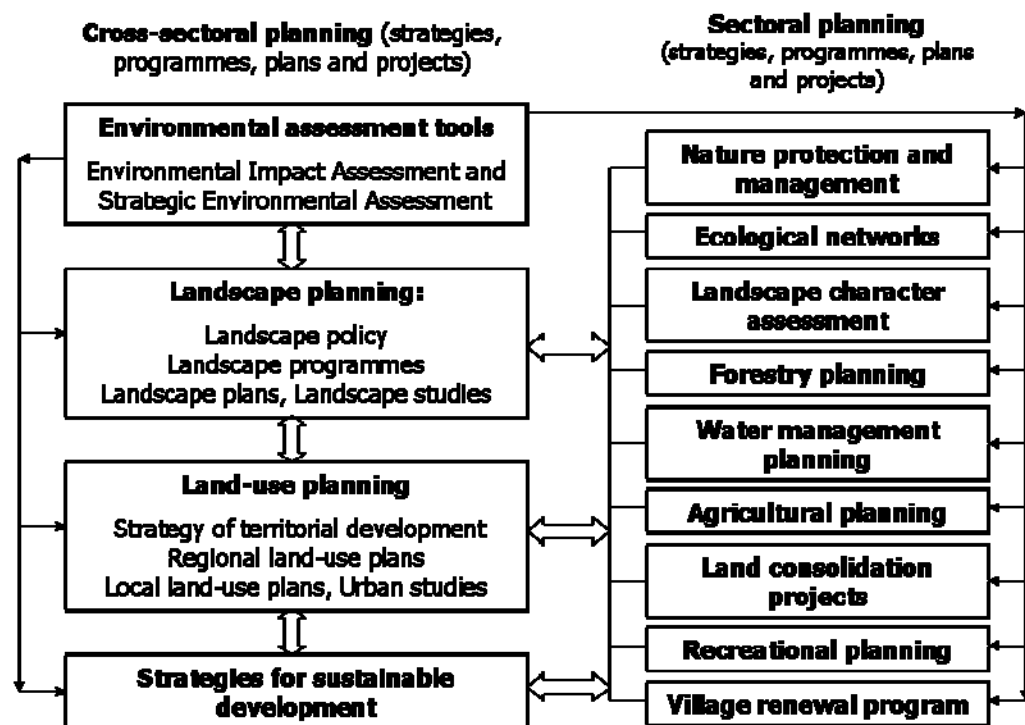


Fig. 2. Cross-sectoral and sectoral planning with respect to landscape issues

A really pressing issue is the need to increase the efficiency of the management processes by implementing the information and communication technologies into social participation processes, dominantly focused on increasing the accessibility of appropriate information and data for all subjects in the spatial development. Thematic information systems fulfilling these requirements exist in Austria and Germany and are built up in the Slovak Republic and in the Czech Republic (Finka 2008)

## 5. Conclusions

Current trends in the management and planning processes show growing importance of landscape planning (especially after 2000). This is given first of all by deep social changes, necessity to reflect pressing global ecologic and environmental challenges (e.g. requirements to increase safety in/of the landscape). They require implementation of integrative planning and management systems and instruments. One of them can be landscape planning. Experiences from Germany, Austria but as well from the Slovak Republic and the Czech Republic can be inspiring for other countries in the following points:



- To improve flexibility of planning processes (including landscape planning) and elaboration of the operative management instruments focused on pressing problems (e.g. module system in Germany)
- To use implementation process of the European Landscape Convention as a effective stimulus for positive development of landscape planning
- To interlink of landscape planning to the Water Framework Directive (coordination of requirements for the elaboration of the river basin management plans and landscape plans)
- To implement landscape plans as efficient instruments in the process of strategic environmental assessment of plans and programmes
- To support efficient use of landscape plans in the nature and landscape protection and biodiversity protection
- To divide of the content of landscape plans at the different levels with the increase proportion of strategic issues from local to supra-regional level
- To stress on clear and understandable formulation of the outputs form landscape planning processes and on intensification of education and motivation for participative processes in landscape planning
- To stress on interlinks between landscape planning and adaptation measures reflecting climatic change, eco-systematic services incl.

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