

Ecological connectivity within spatial planning in Slovenia

Ecological connectivity and landscape values have received little attention in recent spatial planning practices in Slovenia. For the author of this testimony, a landscape architect, the new legislation adopted in 2017 should allow for a better integration of these concepts in spatial planning and a better synergy of actions between the different sectors of activity impacting the territories: agriculture, tourism, forestry, water management, etc.

Spatial planning and landscape planning in Slovenia

Long before the adoption of the European Landscape Convention, Slovenia expressed strong concern for nature protection and the landscape, which was implemented through measures for nature protection, sustainable forestry, and through interdisciplinary spatial planning. Since 1984, the principles of landscape planning (transparent coordination procedures, decision-making based on comparison of variants and determination of the least harmful ones to the environment) have been taken into account in spatial legislation and in practice, which puts sustainable development at the forefront. Procedures for the early involvement of spatial planning stakeholders and of the general public (with public hearings) have been introduced. Together with the economic and social planning, spatial planning was an important integral part of planning in the national level and municipalities, and it also included environmental impact assessments. All this contributed to relatively effective procedures for reconciling different interests in spatial development, and quality of spatial planning was in the public interest and relatively high in the system of social values.

After the establishment of the new Slovenian state (1991), numerous professional bases were prepared for the new generation of spatial plans, which addressed spatial issues of settlement, infrastructure and landscape. Landscape

projects addressed the typology of landscapes, reclamation of deteriorated areas, guidelines for the development of activities in the landscape (agriculture, forestry, nature conservation, cultural heritage, water management, tourism, mining, transport, power and other infrastructure). At the national level, the Environmental Vulnerability Study for the Spatial Plan was developed as a basis for assessing environmental impacts, which defined environmental vulnerability for settlements, transport infrastructure, energy infrastructure, mining, forestry, agriculture, water management, recreation and tourism.

These analyses and planning were focused on whole territory and not just on individual areas (e.g. natural reserves, flood areas and different designated, outstanding or other valuable areas). Among other things, this has formed the basis for the evaluation and long-term regulation of the Slovenian landscape, which was then enacted in the Spatial Development Strategy of Slovenia (SDSS - Official Gazette, No. 76/2004). The document required (in the chapter on preservation of natural values) that "the planned spatial development and location of individual activities shall serve to ensure the preservation of natural process and vitality of large and small areas with natural qualities throughout Slovenia". In the chapter on landscape, which is (next to settlements and infrastructure) one of the core three spatial systems, the document contains guidelines towards the "maintenance and establishment of landscape structures, which are

❶ In Slovenia, the extent of building plots and urban sprawl has skyrocketed in suburban areas and in the countryside.



important for the conservation of biodiversity, favourable status of habitat types, which are conserved on priority basis and the habitats of endangered species."

After 2004, when the preparation of the next generation of municipal spatial plans began, some municipalities prepared the professional bases on landscape. Land use and guidelines for the development of agriculture, water management, recreation and tourism, settlements, infrastructure and mining were proposed on the basis of landscape evaluation. Town master plans included green systems as a network of green spaces, taking into account their ecological, morphological and social contents.

At the time when Slovenia ratified the European Landscape Convention (in July 2003, among the first in Europe), landscape planning was therefore relatively well established in Slovenia. Comprehensive spatial planning was ensured, and the implementation of nature protection objectives was achieved through the guidelines of various sectors (notably nature protection, forestry and water management), although ecological connectivity was never specifically emphasized as a separate category.

After 2007, some poorly thought-out changes to spatial and related legislation were adopted. Requirements for the creation of landscape concepts, strategic regional plans and interdisciplinary planning teams were abolished. At the same time the autonomy of individual sectors affecting the landscape has strengthened. The sectors are inevitably partial in their relation to the landscape, as they are only interested in their particular aspects and/or individual parts of the landscape. They have legal basis for that in the sectoral regulations, plans and programs, which, however, often lack horizontal harmonization. In this way, they increasingly exercised the principles of reserve protection based on the protection of individual areas, and therefore (excessively) focused only on predefined areas and their protection. In doing so, other activities are being focused on these areas, which in turn create increased development pressures on the remaining areas

that do not have a special designations and guardian. This is especially problematic in landscape areas outside settlements, since in the last decades the Ministry of Spatial Planning in Slovenia was responsible only for settlements, and no institution was responsible for the landscape.

In addition, in the last 25 years, the number of municipalities increased from 60 to 212, which has significantly contributed to the fragmentation of the Slovenian territory and of spatial planning. The fact that there is no intermediate level between the state and the municipality (e.g. regions) often results in irrational land use due to the mismatch between the plans of individual municipalities, which, among others, diminishes the possibility of integrated landscape planning and neglects the landscape as well as ecological values.

In the last 25 years, the Slovenian landscape has changed a lot. The extent of building plots and urban sprawl has skyrocketed in suburban areas and in the countryside. In addition, spatial proportions in some areas have been fundamentally changed with the large infrastructure projects (motorways, hydropower plants, power lines, etc.). Land use and different activities in landscape are changing the landscape and natural processes with interventions which often have not been subject of spatial planning.

Ecological connectivity in Slovenian regulation and practice

In Slovenia, there are no explicit demands in the spatial planning legislation and regulations related to ecological connectivity and ecological corridors. Consequently, they are not a special category or element of municipal spatial plans or detailed (municipal and national) spatial plans. However, it does not mean that ecological connectivity is not taken into consideration in spatial planning processes. All spatial and other documents must be reconciled with the Spatial Development Strategy of Slovenia (SDSS) and need an approval from all spatial planning institutions.

► In the course of designing municipal spatial plans, some of the spatial planning institutions (above all in the field of nature conservation) prepare requirements that are relevant for ecological connectivity. In great deal, they refer to the Nature Conservation Act which among other things defines the landscape diversity and landscape characteristics important for biodiversity that should be preserved, developed or restored. At the moment, this is more or less the only measure to assure ecological connectivity, and is mainly limited to the species from the list of Natura 2000.

Landscape planning is not compulsory in spatial plans. In the absence of guidelines, standards or recommendations from the state, it highly depends on municipalities, spatial planners and stakeholders' knowledge and awareness of the importance of the landscape. As a result, there are significant differences in the content and quality of spatial plans.

In terms of ecological connectivity, environmental impact assessment is particularly important. Assessment of impacts on nature has a special place in Slovenia, since (contrary to other contents of the SEA) it is compulsory to produce a special study (supplement) in which the impacts on nature are dealt with especially thoroughly and in detail. However, this assessment applies only to nature protection areas and not to the whole territory (of the municipality/country), which may be essential in terms of ecological connectivity.

In recent years, it has become increasingly rare to prepare vulnerability studies, which were valued in the past as an extremely objectified, computer-aided analytical and planning tool, since they are neither mandatory nor recommended by the state.

One of the important reasons for the situation described is the lack of awareness of the importance of the landscape, which has not been systematically regulated and enforced at either the national or the local level.

What in relation to ecological connectivity brings new spatial planning legislation

The Spatial Planning Act (ZUreP-2) adopted in 2017 (Official Gazette, No. 61/17) brought some improvements:

- It introduced regional spatial plans that will reduce some negative effects of an increased number of municipalities.
- One of the obligatory parts of town master plans is the (urban) Green System and the new legislation also introduced the Green System on the regional level (there are some 12 regions in Slovenia) as an integrative part of the new planning act, the Regional Spatial Plan.
- It reintroduced landscape concept, which is a mandatory professional basis for strategic regional and municipal spatial plans; it is prepared for individual landscape areas, and optionally for the entire municipality, which allows for a more comprehensive treatment of ecological corridors.
- In the frame of an urban concept (master plan for bigger towns) a green system must now be planned as a network of green spaces, which also relate to the (agricultural and forest) hinterland of settlements.

- It introduced land policy measures that promise to reduce the pressure of settlement on landscapes and uncontrolled intrusion into landscape.

- It has given the Ministry of the Environment and Spatial Planning responsibility for the landscape, but only for its identity.

In connection with ecological connectivity, it is also important to introduce the concept of green infrastructure as a part of the renewal of the SDSS, which will also contribute to the promotion of ecological connectivity.

In connection with the efforts to improve the situation for landscape planning, and thus for spatial planning in general, it is important that the Ministry of the Environment and Spatial Planning, on the basis of several years of warnings from the professional public, financed study on Concept of Landscape Policy of Slovenia which has been prepared in the past year by the Slovenian Association of Landscape Architects together with two other NGOs. The Concept consists of five pillars:

1. The legal framework for the implementation of landscape policy through amendments to the relevant legislation;
2. The organizational framework for establishing mutually harmonized, coordinated landscape management throughout the territory of the state and municipalities, and public availability of all relevant information in one place;
3. Landscape protection, planning and management tools: unification of terminology, revision of landscape typology; full implementation of landscape planning as a way to effectively balancing of different interests; more appropriate treatment of the landscape in environmental impact assessments; enforcing the formal protection of specific landscape areas; more appropriate involvement of the landscape in sectoral policies/programs at all levels; cooperation and partnerships to ensure the transfer of knowledge into practice;
4. Raising of awareness, education, professional development and good practice;
5. Financial mechanisms for the implementation of landscape policy.

We firmly believe that the implementation of landscape policy will make it possible to establish an effective system of landscape protection, management and planning in Slovenia.

Finally, it should be emphasized that the landscape is a living organism that is significantly influenced by social and natural processes. Therefore, not only spatial planning, but also the maintenance and management of the landscape and the individual elements of green systems are of utmost importance in terms of ensuring ecological connectivity. These activities are largely the responsibility of other sectors – above all forestry, agriculture, water management, nature conservation and tourism, which dispose of a variety of landscape management mechanisms. We hope that with the implementation of landscape policy the sectors will be more aware of the importance of their activities in the landscape; and that they will create synergies through better integration and contribute to improving the situation in the landscape – also in terms of ecological connectivity. ■



The author

Jelka HUDOKLIN

Acer Novo mesto d. o. o.,
Šentjernejska cesta 43,
8000 Novo mesto, Slovenia.

jelka.hudoklin@acer.si

Bohinj Lake in summer Triglav National Park, Slovenia (Europe).