

SPATIAL PLANNING TOOLS FOR AGRICULTURAL LAND PROTECTION IN THE CZECH REPUBLIC AND AUSTRIA: A COMPARATIVE STUDY

LUKÁŠ PETR

Brno University of Technology, Faculty of Architecture, Department of Urban Design, Poříčí 5, 63900 Brno, Czech Republic

Tutor: doc. Ing. arch. Gabriel Kopáček, Dr.

ORCID: 0000-0003-3641-0872

E-mail: xapetr@vutbr.cz

ABSTRACT: One of the most significant problems of sustainable development is the continued loss of arable and agricultural land due to the expansion of housing and infrastructure development. The paper compares the current spatial planning tools for protecting agricultural land in the Czech Republic and Austria. Analysis of examples of spatial planning documents, legislation, and related strategies, their verbal description, and comparison provided an overview of the status of protecting agricultural land. The results show that there are tendencies and tools to reduce the consumption of agricultural land in both countries. However, conceptual land protection in the Czech Republic could be more effective if complemented with appropriate tools from the Austrian environment.

KEY WORDS: Spatial planning, spatial planning tools, spatial planning legislation, protection of agricultural land, agricultural land, agricultural land withdrawal, buildable areas

Introduction

Land is a scarce resource on a global scale and agricultural land is the foundation of farming activities. Within the meaning of Act No. 334/1992 Coll., the agricultural land fund is a fundamental natural asset of our country, an irreplaceable means of production enabling agricultural production and one of the main components of the environment. In today's volatile world, undeveloped land is a fundamental asset that plays an important role in mitigating the impact of climate change and preventing natural hazards.

However, one of the most significant problems in managing natural resources is the loss of arable and agricultural land. The amount of arable land in the Czech Republic is decreasing yearly, with 9 213 ha of arable land disappearing in 2020 (Czech Office for Surveying, Mapping and Cadastre 2021). This process is particularly evident in peri-urban and rural areas characterised by close links with the external landscape. Of course, situations and problems vary due to local, regional, and national differences. Despite these differences, efforts to mitigate the loss of agricultural land are common in several policies. At the European level, there is an ambitious target of zero net land take by 2050 (European Commission 2011). According to the current Austrian Federal Government, for example, land take is to be minimised by 2030.

The legislative principles for protecting the agricultural land fund area are mainly directed at the spatial planning process and the definition of developable areas. This study analysed existing spatial planning tools from the Czech Republic and Austria. Documents were specifically searched for tools to define buildable areas or protect agricultural land. For this study, spatial planning tools are divided into (i) traditional tools (spatial planning documentation); and (ii) complementary tools that support the implementation of proposed plans and measures. Market-oriented tools are not discussed in the study.

Research is based on the assumption that it could help identify 'good practice' in another country, which could then be implemented in the Czech Republic. Austria was chosen for the comparative study because it has very similar natural conditions to the Czech Republic, especially on its northern border. Furthermore, the origins of spatial planning in these two countries have identical roots in the times of the Austro-Hungarian monarchy (Šilhánková 2013).

The following hypotheses were chosen for the study: (i) Current spatial planning tools in the Czech Republic are imperfect, outdated, and ineffective in promoting sustainable development of the territory, including effective agricultural land. (ii) Spatial planning tools in Austria can be a possible inspiration for the ongoing change in spatial planning legislation in the Czech Republic.

The paper is organised as follows. In the next section, the methodology is presented. Then, the spatial planning systems and legislation in the Czech Republic and Austria are briefly described, and the existing spatial planning tools are analysed to define buildable areas and protect agricultural land. Based on a detailed description and comparison of these tools, the last part of the paper presents recommendations for the spatial planning system in the Czech Republic.

Methods

The paper is based on a qualitative analysis of spatial planning tools, their verbal description, and comparison. Primary data was collected by analysing spatial planning documents, legislation, and related strategies from the Czech Republic and Austria. Spatial planning documents in these countries are well documented and freely available in digital form. Once the documentation was collected, a content analysis focused on the methods of defining buildable areas and agricultural land protection and their effectiveness.

Spatial Planning Systems and Legislation

In the Czech Republic, spatial planning is regulated by Act No. 183/2006 Coll. The possibilities of preventing the overexploitation of agricultural land under the current institutional arrangement in the Czech Republic are summarised by Janatka (2011) and Maier (2012). An important tool for the qualitative and quantitative protection of agricultural land in the spatial planning process in the Czech Republic is Act No. 334/1992 Coll., which establishes a regime for the withdrawal of agricultural land and levies for the withdrawal of agricultural land.

Unlike the Czech Republic, Austria has a decentralised spatial planning system, and there is no federal law on spatial planning in Austria. Federal and provincial spatial planning is regulated by special laws (Water Act, Forest Act, Waste Act, Mining Act, Trade Act, Federal Road Act, Railway Act). Federal authorities monitor compliance with these laws in the planning and building permitting process. Therefore, spatial planning and related land protection in Austria are the responsibility of nine federal provinces. Each province has its law on spatial planning and nature conservation.

The main spatial planning principles are similar to most spatial planning laws. For example, according to Section 2(2) of the Salzburg Spatial Planning Act, the main spatial planning principles include the economical use of land and soil, particularly the careful use of building land, and the prioritisation of internal settlement development over the urban sprawl. Spatial planning laws generally provide for building areas (Bauland), transport areas (Verkehrsfläche), and green areas (Grünland). According to the Salzburg Spatial Planning Act, municipalities must develop a development plan for all parts of the municipal area that are eligible for development. On the contrary, green areas are unbuildable except for defined buildings related to the area's purpose. It corresponds to the wording of Section 18(5) of Act No. 183/2006 Coll., according to which only buildings, facilities, and other measures for agriculture, forestry, water management, mineral extraction, nature conservation, landscape protection, public transport, and technical infrastructure may be placed in undeveloped areas.

Spatial Planning Tools

At the national level, strategic spatial planning frameworks are usually developed to provide central references for the formulation of lower-level tools and to coordinate interregional forms of spatial development for matters of national and international importance. The national spatial planning tool in the Czech Republic is the Spatial Development Policy of the Czech Republic, which is binding for establishing and issuing spatial development principles, spatial plans, regulatory plans and decision-making in the territory. Austria does not have a framework competence for general spatial planning. Thus, the spatial planning activities of the various authorities are coordinated informally within the Austrian Conference on Spatial Planning, which draws up the Austrian Spatial Development Concept (ÖREK) every ten years. Although this is a non-binding document of a recommendatory nature, it is respected by all general and sectoral planning authorities and the various spatial planning tools are based on it. Austrian Spatial Development Concept (2021) sets general objectives for limiting urban sprawl and preserving agricultural land (e.g., developing and promoting compact settlement patterns with a quality-oriented mix of uses).

The basic framework of spatial planning at the supra-local and local level consists of formal tools that are binding and whose purpose, content, form and method of processing and approval are determined by spatial planning legislation. The Principles of Spatial Development lay down, in particular, the basic requirements for an efficient and economic arrangement of the territory of the regions in the Czech Republic. In Austria, federal states legislate on spatial planning. States issued the State Development Concept and the Regional Development Concept. Agricultural priority zoning is widely applied in Austrian regional planning to prevent the removal of quality agricultural land. Municipalities can designate building land in agricultural priority zones only under certain conditions. For example, in the south Austrian state of Styria, priority areas are defined to protect agricultural land and crop production, control flooding, limit urban sprawl and maintain recreational areas. In Vorarlberg, green zones have been established to protect natural landscapes, maintain recreational areas, and promote agricultural land use (BMLFUW 2015).

Local spatial planning coordinates, guides, and primarily seeks to conserve land, protect landscapes from sprawl, protect cultural sites, and promote economic development despite spatial constraints. According to Act No. 183/2006 Coll., the Land Use Plan in the Czech Republic establishes the basic concept of the municipality's development, the protection of its values, and its spatial and area layout. The Regulatory Plan in the area in question sets out detailed conditions for land use, for the location and spatial arrangement of buildings, for the protection of the values and character

of the area, and the creation of a favourable environment within the meaning of Act No. 183/2006 Coll. Spatial planning activities must comply with the principles of area protection of the agricultural land fund laid down in Act No. 334/1992 Coll.

At Austria's local spatial planning level, the Local Development Concept, the Land Use Plan, and the Regulatory Plan are issued. The Local Development Concept is a strategic document. In addition to identifying the needs and environmental, housing, and economic goals of the municipality, it also ensures coordination with the development of neighbouring municipalities. The Land Use Plan builds on the Local Development Concept and sets out the permissible land uses in the entire administrative area of the municipality. In the planning area, residential zones, agricultural zones, spa zones, central and commercial zones, central rural zones, mixed development zones, industrial zones, second home zones, shopping zones, special zones are usually defined. The Regulatory Plan illustrates the Land Use Plan's conditions of buildability and spatial regulations of the areas. The Regulatory Plan includes the definition of building and street lines, the determination of the size of building plots, the type and size of buildings, the height and density of buildings, the designation of green areas, the layout of traffic routes, technical infrastructure routes, the designation of public spaces. The purpose of the Regulatory Plan is to coordinate and regulate the use of agricultural land. The Regulatory Plan thus determines the density of development and the intensity of use of the building land.

Complementary Tools and Regulations

In addition to the traditional spatial planning tools described above, we can describe additional tools and regulations that support the implementation of proposed plans and measures to streamline the spatial planning process and related agricultural land protection.

In the Czech Republic, the area-based protection of agricultural land and its interconnection with the regulations in the field of spatial planning based on land registration and soil rating is relatively well established. According to Act No. 334/1992 Coll., the most fertile agricultural land (class I and II protection) may be withdrawn only in cases where other public interest significantly outweighs the public interest in protecting the agricultural land fund. The levies for the withdrawal of land from the agricultural land fund are also one of the tools for the protection of agricultural land, although the level of levies is still low.

Although the daily rate of agricultural land consumption in Austria is still decreasing, the policy targets have not yet been achieved (BMLRT 2021). Therefore, in re-

cent years, further measures have been taken at the level of individual federal spatial planning laws to reduce agricultural land.

Some spatial planning laws place time limits on development on newly designated building lots (European Communities 2011). Time-limited buildability allows municipalities to withdraw the right to build or amend the zoning ordinance after a certain period if the land is not used. Most Austrian provinces have introduced the ability for municipalities to enter into their development agreements with landowners. Municipalities can negotiate a contract with the landowner that defines the future use, the time frame for the implementation of the planned development, as well as the payment or prefinancing of costs associated with the provision of new infrastructure (new streets, sewers, power lines, water lines). This tool allows municipalities to ensure the efficient use of land for development. In some Austrian provinces, the purchase of municipal land is supported by state land funds, both for residential and commercial development. An effective measure to mobilise building land is the introduction of development charges levied on undeveloped building land. Development charges put financial pressure on landowners to make building land available for development (European Communities 2011).

Results and Discussion

The results show that in both countries, there are tendencies and tools to reduce the consumption of agricultural land. In addition to the fact that documents contain very general objectives such as sustainable development of territories and agricultural land protection, they should also contain more specific objectives and complementary instruments for their implementation.

The analysis of spatial planning tools in the Czech Republic demonstrates that the protection of the territory is legally treated. According to Janatka (2011), the actual implementation of protection depends on the responsible approach of all stakeholders so that there is no formal compliance with the law. Moreover, the spatial planning system in the Czech Republic lacks complementary tools to implement the adopted plans and proposed measures. In the paper, levies for withdrawing land from the agricultural land fund were mentioned as one of the instruments for protecting agricultural land. However, the amount of levies is still low, and this instrument does not constitute an effective brake on the consumption of agricultural land caused by further housing expansion and infrastructure development.

In recent years, tools to limit the allocation of new building plots and to mobilise existing building plots (making building plots available for development) have emerged

in the Austrian spatial planning system. These tools, described in the section Complementary Tools and Regulations, represent a possible complement to the classical spatial planning tools to define buildable areas or protect agricultural land. As these tools are still missing in the Czech spatial planning system, they could be part of the ongoing revision of the spatial planning legislation after further research.

Conclusion

Because of the continuing loss of agricultural land, new spatial planning tools are being investigated and applied. The paper aimed to compare the current spatial planning tools for protecting agricultural land in the Czech Republic and Austria. The results show that in both countries, there are tendencies and tools to reduce the encroachment of agricultural land. Analysing the Austrian spatial planning system and related tools represents a new research direction and an example of 'good practice' that could be implemented in the Czech Republic.

Acknowledgements

The paper was supported by the Student Grant Competition at FA VUT. The project registration number is FA-J-22-8002.

References

- BMLFUW, 2015. *Reduzierung des Verbrauchs landwirtschaftlicher Böden - Massnahmenvorschläge*. Wien: Bundesministerium Für Land- Und Forstwirtschaft, Umwelt Und Wasserwirtschaft.
- BMLRT, 2021. *Zahlen und Fakten 2021*. Wien: Bundesministerium für Landwirtschaft, Regionen und Tourismus.
- CZECH OFFICE FOR SURVEYING, MAPPING AND CADASTRE, 2021. *Souhrnné přehledy o půdním fondu z údajů katastru nemovitostí České republiky*. Praha: Zeměměřický úřad. ISSN 1804-2422.
- CZECH REPUBLIC. Act No. 183/2006 Coll. on Spatial Planning and Building Regulations.
- CZECH REPUBLIC. Act No. 334/1992 Coll. on the Protection of the Agricultural Land Fund.
- EUROPEAN COMMISSION, 2011. *Our life insurance, our natural capital: an EU biodiversity strategy to 2020*. Brussels: European Commission.
- EUROPEAN COMMUNITIES, 2011. *Report on best practices for limiting soil sealing and mitigating its effects (Final report)*. Brussels: European Commission.
- JANATKA, Marek, 2011. *Nástroje stavebního zákona pro omezení suburbanizace v*

- České republice. *Urbanismus a územní rozvoj*. Brno: Ústav územního rozvoje. 14(2), 39-42. ISSN 1212-0855.
- LAND SALZBURG. *Salzburger Raumordnungsbericht 2009* [online]. Land Salzburg [cit. 2022-09-18]. Retrieved from <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrSbg&Gesetzesnummer=20000615>.
- MAIER, Karel, 2012. Nástroje územního plánování k regulaci suburbanizace. *Urbanismus a územní rozvoj*. Brno: Ústav územního rozvoje. 15(5), 12-20. ISSN 1212-0855.
- ÖSTERREICHISCHE RAUMORDNUNGSKONFERENZ, 2021. *Österreichisches Raumentwicklungskonzept 2030*. Wien: Österreichische Raumordnungskonferenz.
- ŠILHÁNKOVÁ, Vladimíra, 2013. Systém regionálního rozvoje a prostorového plánování v Rakousku. *Regionální rozvoj mezi teorií a praxí*. Hradec Králové: Civitas per Populi. ISSN 1805-3246.