

Rainer Danielzyk, Angelika Münter

Spatial planning



CC license: CC-BY-SA 4.0 International

URN: 0156-559918046

This is a translation of the following entry:

Danielzyk, Rainer; Münter, Angelika (2018): Raumplanung. In: ARL – Akademie für Raumforschung und Landesplanung (Hrsg.): Handwörterbuch der Stadt- und Raumentwicklung. Hannover, 1931-1942.

The original version can be accessed here:

urn:nbn:de:0156-55991804

Typesetting and layout: ProLinguo GmbH

Translation and proofreading: ProLinguo GmbH

Spatial planning

Contents

- 1 Introduction
- 2 The multi-level system of spatial planning
- 3 Spatial planning and spatially relevant sectoral planning
- 4 Spatial planning and spatial development
- 5 Conclusions

References

Additional literature

Spatial planning (*Raumplanung*) is the public task of coordinating the demands for the use of spaces in an interdisciplinary, integrated way. It is formalised through the multi-level system of comprehensive spatial planning and has always been closely interrelated with spatially relevant sectoral planning. In addition, the dovetailing with spatial development based on soft steering approaches is gaining importance.

1 Introduction

Despite its manifold use, the term *spatial planning* has not been defined unambiguously either in legal or scientific terms (▷ *Space*; ▷ *Planning*). Spatial planning, as a rule, means the public task of coordinating the demands for the use of spaces in an interdisciplinary, integrated way (Fürst/Mäding 2011). According to a broadly formulated definition, spatial planning can also be understood as the focused impact on the spatial development of society, the economy and the natural, built and social environment in an area (a borough, city, region or country)¹ (Turowski 2005: 894). From a specialist professional perspective, spatial planning is the umbrella term for integrative, interdisciplinary planning on the three levels of ▷ *Federal spatial planning* (*Bundesraumordnung*), federal state spatial planning (▷ *Federal state spatial planning*, *federal state development*) including ▷ *Regional planning* (in Germany these two levels together are referred to as ▷ *Spatial planning* [*Raumordnung*]) as well as municipal planning (local planning, ▷ *Urban planning*, ▷ *Urban land-use planning*). Unlike in Germany, in Austria the term *spatial planning* (*Raumordnung*) is frequently understood as an umbrella term for spatially relevant comprehensive planning on all levels, i.e. including local spatial planning. There is no formal spatial planning on the supranational European level, but there is a ▷ *European spatial development policy*.

On all levels, spatial planning concerns especially the coordination of different, partly competing, demands on (land) use in space: from the development of settlements for ▷ *Housing*, trade, industry (▷ *Industry/trade*) and commerce to transport, leisure and recreation up to ▷ *Agriculture* and ▷ *Forestry*, ▷ *Nature conservation*, etc. In this article, spatial planning is, therefore, understood as the public task of interdisciplinary, cross-sectional, integrative, spatially relevant planning in the multi-tier system of state authority in the Federal Republic of Germany. Spatial planning in this sense is the comprehensive spatial planning for a smaller territorial unit of space, irrespective of the hierarchical level concerned. In a wider sense, spatially relevant sectoral planning (▷ *Spatially-relevant sectoral planning*) and development policies are also occasionally subsumed under spatial planning, although that is not the case in the present article. This article also takes a brief look at the interaction between interdisciplinary spatial planning and spatially relevant sectoral planning. The focus is thus both on the legally binding and on the persuasive shaping of the use of space through planning. In this sense, spatial planning as a public task fulfils numerous functions: In addition to the classic regulatory function, its goal is to develop spaces in line with guidelines, to safeguard resources and the ▷ *Equivalence of living conditions* (cf. Fürst 2010). From a macro perspective, spatial planning generates a social benefit by providing collective goods. This may involve ‘costs’ for individuals, e.g. due to the limitation of the possibilities for the use of space. In addition to the materially-substantive function, reference should be made to the procedural and service-providing function of spatial planning. This refers to those courses of action that have a steering effect on spatial planning or attempt to influence the actions of those affected by the actions. Additional functions of spatial planning from the individual micro-perspective of ‘users’ are, for example, planning/investment certainty or the advocacy function for parties not involved, e.g. future generations (cf. Fürst 2010: 15-23; see Fig. 1).

1 “gezielte Einwirken auf die räumliche Entwicklung der Gesellschaft, der Wirtschaft und der natürlichen, gebauten und sozialen Umwelt in einem Gebiet (einem Ortsteil, einer Stadt, einer Region oder einem Land)”

Figure 1: Functions of spatial planning (as a public task)

Social functions		User-related functions
Material functions	Procedural functions	
<ul style="list-style-type: none"> • Regulatory function: Long-term distribution of demands for use of the space • Development function: Notions of and impetuses for socially desirable spatial development • Resource protection function: Realisation of sustainable spatial development • Compensatory function: Creation of equivalent living conditions 	<ul style="list-style-type: none"> • Orientation function: Spatially-integrative perception of problems as well as potential cross-sector solutions for spatial use conflicts • Early-warning function: Monitoring and forecasting regarding spatial development • Moderation function: Steering of regional problem-solving processes • Orientation function: Creation of institutional prerequisites for cooperative problem-solving processes • Across-the-board coordination/conflict resolution function 	<ul style="list-style-type: none"> • Planning/regional/investment security: Reduction of risk costs for investments • Long-term focus: Support for decision-making through insights for future spatial development • Spatial design: <i>Place-making</i> for cities and regions • Advocacy function: Corrective for external effects and market-economic functions • Advisory function: Knowledge and information for spatial use processes

Source: The author, after Fürst 2010: 23

It has been clear for several decades that even the best formal planning can neither fully resolve these functions by itself, nor ensure the realisation of corresponding spatial developments. To this extent, in addition to formal instruments, spatial planning increasingly makes use of a broad range of informal processes and instruments (▷ *Instruments of spatial planning [Raumplanung]*). Such implementation and action-oriented approaches of spatially relevant, public and private actions are also used in spatially relevant sectoral planning (▷ *Spatial development*). This changed perception of spatial planning and its relationship to spatial development is discussed in section 4 of this article.

2 The multi-level system of spatial planning

Spatial planning is the umbrella term for interdisciplinary planning on the various levels of the German planning system (cf. Fig. 2). This decentralised multi-level system, which was established in the 1960s and 1970s, serves to fulfil the functions of spatial planning in relation to society and users (Fig. 1). It comprises three legal, organisational and materially separate and distinct planning levels, which are vertically interlinked through the ▷ *Mutual feedback principle* and the requirement that the different levels adapt to one another. The allocation of competences between the levels follows the principle of ▷ *Subsidiarity* (cf. also ▷ *Federalism* and

Spatial planning

▷ *Local self-government*), according to which all political decisions are to be taken at the most local political level on which the decision is possible and expedient.

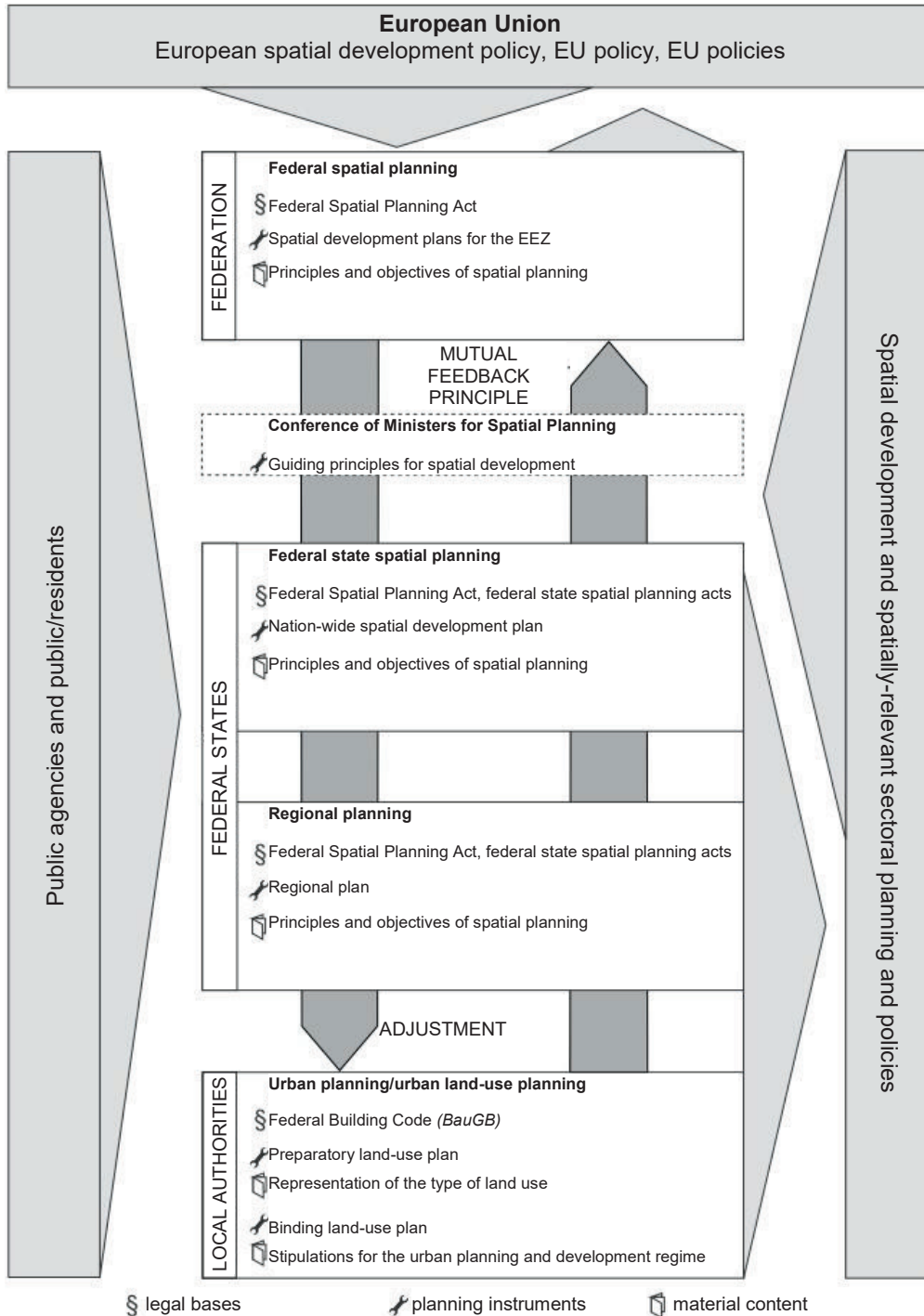
The highest level of the German planning system is the federal level (federal spatial planning); its most important function is of a legal nature. The guidelines for sustainable spatial development are found in the Federal Spatial Planning Act (*Raumordnungsgesetz, ROG*) (▷ *Sustainability*). It defines the principles of spatial planning as general prerequisites for the development, regulation and safeguarding of space, in particular for the structure for settlements and open spaces (▷ *Settlement/settlement structure*; ▷ *Open space*) and for ▷ *Infrastructure*, and includes prerequisites for federal state legislation, as well as for the binding effect of ▷ *Objectives, principles and other requirements of spatial planning (Raumordnung)*. Federal spatial planning thus defines the material guidelines for spatial planning, which are taken into account and specified by the downstream planning level; it should be noted that, as spatial planning has been classified under concurrent competence since the Federalism Reform of 2006, the federal states have the right to diverge from federal law in this regard. Federal spatial planning has made only limited use - in substantive terms - of the option, anchored in the Federal Spatial Planning Act since 2008, to prepare federal spatial development plans for the Exclusive Economic Zone (EEZ) in the North Sea and the Baltic Sea.

The Conference of Ministers for Spatial Planning (*Ministerkonferenz für Raumordnung, MKRO*), which is composed of the ministers responsible for spatial planning on the federal and state levels, serves to mutually inform and consult each other about matters of spatial planning and development of federal import. The Conference passes resolutions on the (not legally binding) ▷ *Guiding principles for spatial development* and the recommendations for supra-local planning in Germany.

The Federal Spatial Planning Act confers wide-ranging spatial planning powers on the federal states, as the mid-level planning tier, as well as a corresponding range of instruments to safeguard and implement planning, as substantively defined in the federal state spatial planning acts both for the federal states and the regional level. The most important planning instrument on the federal state level (federal state spatial planning) are the state-wide spatial development plans (frequently also referred to as federal state development plans), which formulate – based on the principles of spatial planning defined by federal spatial planning – substantive and spatial objectives and strategies for spatial development in the federal state concerned.

The Federal Spatial Planning Act obliges the German non-city states (with the exception of Saarland) to institutionalise independent, interdisciplinary spatially-relevant planning – i.e. regional planning – also on the level of smaller territorial units and regions. From a legal perspective, this is part of federal state spatial planning. The task of regional planning consists in particular in the coordination of the demands for land use at the regional level, by specifying the requirements of the federal state spatial development plans in the regional plans based on the mutual feedback principle, and in creating a framework for the spatial development ideas of the local authorities. Thus spatial planning inhabits a field subject to multiple tensions between municipal interests, regional interests and large-scale interests, general spatial and sectoral interests, as well as the interests of individuals and the common good in a region. It plays a mediating role between federal state spatial planning, local spatial planning (urban planning, urban land-use planning) and sectoral planning, and thus amounts de facto to an independent planning level. The ways in which regional planning is organised varies widely between the

Figure 2: The multi-level system of comprehensive spatial planning in Germany (spatial planning in the strict sense)



Source: The authors, modified based on BBSR (Federal Institute for Research on Building, Urban Affairs and Spatial Development) 2012: 128

Spatial planning

federal states. These range from regional planning undertaken entirely locally by the districts or municipal planning associations, collective regional planning, in which a public planning body is responsible for establishing the regional plan, which is then passed by a resolution by a municipal committee, to regional planning undertaken exclusively by state bodies. Likewise, the size of the regions undertaking regional planning differs considerably from one federal state to another (Priebis 2013: 84 et seq.).

Spatial planning on a municipal basis by local authorities, which is closely related to the subsidiarity principle, is part of constitutionally-guaranteed local self-government. This gives local authorities the right and the responsibility to regulate all matters of the local community within the framework of the laws. Municipal spatial planning is usually understood to mean urban planning. It is cross-sectional planning with the goal of structuring, steering and developing urban and rural municipalities. In addition to a broad range of informal instruments and plans, such as urban development plans, integrated urban development strategies, master plans, etc. (▷ *Urban development planning*; ▷ *Integrated urban development*), urban planning comprises especially urban land-use planning, which has the task of shaping urban structural development and order on their own responsibility. Thus the local authorities, as the lowest planning level, ultimately determine how land is used within their territory. Urban land-use planning is a compulsory task of the local authorities. It is uniformly regulated at the federal level by the Federal Building Code (*Baugesetzbuch, BauGB*) and is subject to the general framework provided by the higher planning levels. Its purpose is to advance the sustainable development of settlements and socially equitable land use and to steer the use of sites for built use and other purposes within the municipality. Urban land-use planning is based on a two-tier structure. Preliminary urban land-use planning (▷ *Preparatory land-use plan [Flächennutzungsplan]*, referred to as a *Flächenwidmungsplan* in Austria) determines the basic outline for the type of land use for the entire municipal territory, while binding land-use planning (▷ *Binding land-use plan*) specifies the type and density of built use per parcel of land for each territorial unit within the local authority.

The multi-level system of interdisciplinary spatial planning is subject to external influence from three sides. Firstly, a formal participation procedure involving public agencies as well as a broadly defined public is part and parcel of any formal planning process. While ▷ *Public participation* in urban land-use planning has been established since the 1970s, it became obligatory on the regional and federal state level only with the recasting of the Federal Spatial Planning Act in 2004.

Secondly, the ▷ *European Union (EU)* affects the German planning system. The EU has no own competence for binding, interdisciplinary, spatially-relevant planning, hence the EU does not form a planning level within the multi-level system, as outlined. Yet it affects the German system of spatial planning through its legislation, spatially relevant sectoral policies and informal discussions on European spatial development policy. While the impact of the EU has only led to some adjustments within a mature, well-developed system (▷ *History of spatial planning [Raumordnung]*) compared to other European countries, there have not been any obvious systemic contradictions (ESPON COMPASS 2017). Nevertheless, EU influence is widespread in planning processes today, particularly as a result of EU environmental legislation, and at times requires a change in the understanding of planning. The EU's Flora-Fauna-Habitat Directive (92/43/EEC) (▷ *FFH assessment of implications*), for example, plays a special role in German spatial planning by prohibiting any degradation of the ecological condition in areas within the Natura 2000 network, which considerably restricts the otherwise customary discretion in weighing interests as far as

ecological, economic and social concerns are affected (Chilla/Kühne/Neufeld 2016: 63 et seq.). In addition, the transposition of the EU Directive for the strategic \triangleright *Environmental assessment* (2001/42/EC) into national law is associated on all spatial levels with extended planning processes and substantially more comprehensive duties in relation to plan justification and participation.

Thirdly, spatial planning interacts closely with spatially relevant sectoral planning and policies, as well as with largely informal spatial development.

3 Spatial planning and spatially relevant sectoral planning

Spatial planning is consolidated, superordinate comprehensive planning, which coordinates the diverse sectoral interests in space and balances private and public interests. Due to its resulting cross-disciplinary nature, it is distinct from spatially relevant sectoral planning, such as \triangleright *Landscape planning* or \triangleright *Transport planning*, which serve, based on the laws in those sectors, to weigh and balance specific sectoral tasks and measures through planning, and thus making use of space and land as well as affecting the spatial development or function of an area. Sectoral planning may take the form of linear and location-related infrastructure planning (with spatially relevant procedures for \triangleright *Planning approval*), demarcations of conservation areas and other sectoral planning, particularly spatially relevant sectoral resource and framework planning (Reitzig 2011: 387 et seq.).

Hence, comprehensive spatial planning bodies are one of several institutionalised stakeholders which influence spatial development. Its responsibility is to provide horizontal coordination vis-à-vis these sectoral authorities. However, the steering effect of spatial planning on actual development processes should not be overestimated. Many areas of sectoral planning, such as transport planning, are not only provided with a substantial budget, but also have considerable political clout. The relationship between spatial planning and spatially relevant sectoral planning is, therefore, extremely complex. For example, a long-term trend toward a growing independence of sectoral planning can be observed; these planning activities undermine the coordination function of spatial planning as cross-sectoral comprehensive planning; as a result, many horizontal coordination problems in relation to space remain unresolved.

Nevertheless, spatial planning also has the means to impact sectoral planning. On the one hand, these are of a legal nature: many sectoral planning laws contain spatial planning clauses (*Raumordnungsklauseln*), which require sectoral planning authorities to observe and include the objectives and principles of spatial planning in their considerations. On the other hand, the discursive and persuasive nature of spatial planning offers opportunities for steering developments. In particular, it can successfully affect sectoral planning if

- it can contribute qualified and relevant specialist input, e.g. through analyses of the spatial impacts in the planning of \triangleright *Social infrastructure*,
- it can use its (very limited) political influence together with other policies to jointly achieve shared goals, e.g. in creating the necessary acceptance for the dismantling of infrastructure that is no longer sustainable due to \triangleright *Demographic change*, or if

Spatial planning

- it can offer and use its tried and tested participation and communication processes (▷ *Participation*), such as in controversial infrastructure projects, where such processes are used less frequently in sectoral planning (Blotevogel/Danielzyk/Münter 2014: 101 et seq.).

In addition, there are specialised fields of action, such as near-surface mining, which do not undertake their own sectoral planning, but instead rely on supra-local spatial planning to sustainably manage their interests. Accordingly, their approach is, as a rule, a more cooperative.

4 Spatial planning and spatial development

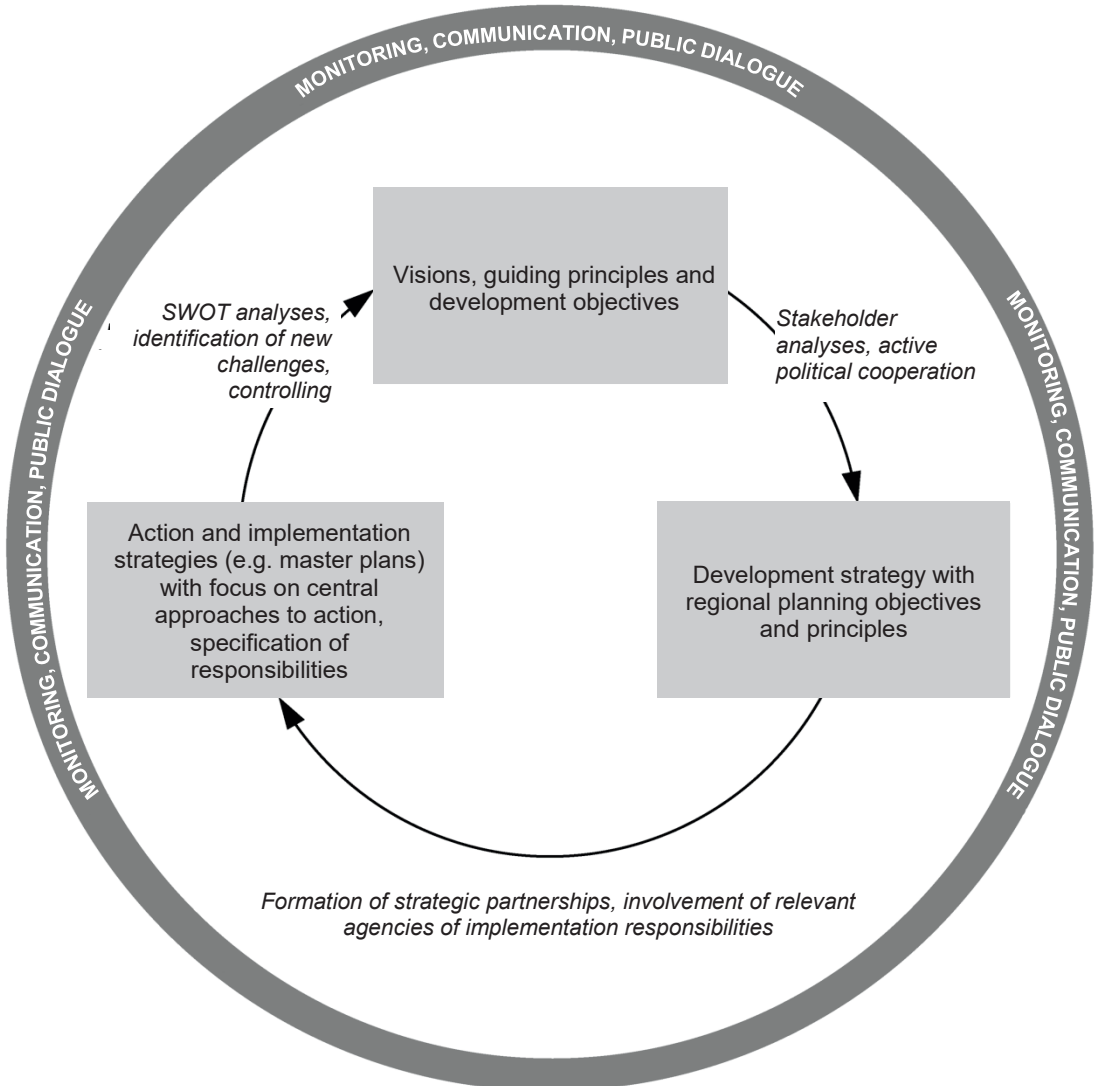
The spatial development of a given territorial unit is affected not only by formal spatial planning and spatially-relevant sectoral planning, but also by numerous types of ▷ *Informal planning* – in the course of both institutionalised spatial planning and other planning activities and policies. While spatial development is one of the goals of formal spatial planning on all levels, it has been shown that the range of instruments is scarcely suitable for steering spatial development that is both future-oriented and consistent with the guidelines, and can be used at best only in conjunction with action-oriented informal instruments and formats. The same can be said for discharging the procedural functions of spatial planning as a public responsibility (see Fig. 1). To this extent, there is a broad overlap between spatial planning and spatial development, and, accordingly, the two terms cannot be clearly distinguished from each other.

The numerous initiatives for spatial development have spawned a broad range of formats and associated instruments, especially at the local authority and regional level, which are generally of a procedural nature: after an analysis of the strengths and weaknesses of the space concerned, e.g. in the form of a development strategy, the perspectives and potential courses of action are outlined and the steps for implementing priority projects are defined. These approaches are not legally binding in the sense of planning law; their impact is based on the cooperative commitment on the part of stakeholders to abide by them. On the one hand, they can serve to implement the goals of binding spatial planning that are adopted but not actualised and thus require action from the stakeholders engaged in spatial development. On the other hand, informal approaches compensate for weaknesses in the operability of the formally constituted planning process, which is often unable, due to its standardised procedures, to address the complexity of the challenges and satisfy the need for flexibility and speedy responses. This is indicative of a changed understanding of administrative action (Fürst 2010) and a new planning culture: they are characterised more through cooperative, interlinked actions by stakeholders, who are in principle on an equal footing, and less by top-down governmental action (▷ *Planning culture*). This leads to an expansion of formal planning structures, or even a bypassing of them (Blotevogel/Danielzyk/Münter 2014: 102). Agencies and regional and municipal development associations are examples of this.

Especially the regional level of action frequently illustrates that a region can be successfully developed only through a combination of formal planning processes and informal approaches. The combination appropriate in each case, in the sense of regional governance (▷ *Governance*), depends on the framework conditions within that region. A conceptually more advanced approach, which combines strategies of spatial development and formal spatial planning, is strategic regional planning (see Fig. 3; ▷ *Strategic planning*). This is based on a dovetailing of the

regional planning tasks related to ordering and developing space and the procedural components of spatial development (content, governance and implementation) (Vallée/Brandt/Fürst et al. 2012).

Figure 3: Elements of strategic regional planning (products and processes)



Source: Vallée/Brandt/Fürst et al. 2012: 173

The numerous strategies and approaches of spatial development have the advantage of being able to reinforce their practical orientation through access to funding. In this regard, the funding made available by the various EU structural funds (▷ *European regional policy* and rural development) plays a particularly important role. This enhances the attractiveness of these approaches for the stakeholders involved. Although the EU has relatively limited influence on integrated formal spatial planning activities, it has greater influence on spatial development

Spatial planning

strategies by defining funding conditions, the stakeholders to be involved, how spatial development is organised, etc. (ESPON COMPASS 2017). This enhances the competitiveness and living conditions of the territorial units, but may also contribute to the selective treatment of relevant issues and challenges: tasks that are attractive from the perspective of funding policy are resolved in a more or less cooperative way, while conflict-prone issues are frequently disregarded.

Formal spatial planning and spatial development strategies can also be at odds with each other. The successful development of a territorial unit will depend on the appropriate, specific interplay between the two in the sense of territorial governance, which makes use of the strengths of both perspectives. This may eventually lead to the further development of the activities and ways of organising spatial planning, which can then be used for both perspectives (which has so far occurred only rarely), or to new ways of organising it, such as agencies and development associations, gaining importance; in this context, ‘spatial development with the participation of public stakeholders’² is only occasionally spoken of (Selle 2006). This development is reflected in the almost unmanageable diversity of the forms of cooperation on the regional and intermunicipal level.

5 Conclusions

The system of spatial planning in the Federal Republic of Germany, the main features of which were established in the 1960s and 1970s, has never able to fully realise its envisaged role of comprehensively coordinating and steering spatial development. The design expectations, in particular, of integrative formal spatial planning have proven to be and remain so extensive that their realisation is scarcely feasible in view of the complexity of conditions, the limited resources and obvious competition with spatial sectoral planning and spatial development activities (cf. Blotevogel/Schelhaas 2011: 160 et seq.). The expectations of what spatial planning is able to achieve in a state based on a social market economy subject to the conditions of ▷ *Globalisation* are now more realistic: making a certain contribution to sustainable spatial development and the equivalence of living conditions.

The system of formal spatial planning in Germany has remained almost unchanged since its inception; it has seen only a few, select modifications over this time. A particular problem is that the range of instruments at the disposal of binding spatial planning was developed in periods of growth and mainly focused on structuring or ‘ordering’ this growth. Faced today with significantly changed challenges and general conditions, as compared to the time of its inception, the capacity and steering effect of spatial planning is now limited in many ways. It is still primarily successful in ‘ordering’ space and shaping new developments through agreements and contracts (e.g. large-scale ▷ *Retail trade*, sites for generating renewable energies), but it is scarcely able to deal appropriately with other significant challenges for spatial development (e.g. demographic change, digitalisation). Instead, it leads to an increased significance of action-oriented, publicly funded approaches to spatial development, which are to a considerable extent affected by corresponding EU policies. In both urban and ▷ *Rural areas*, various ways of organising and strategising spatial development are currently being developed on the regional level, often with few or no links to space-related planning. At the same time, formal spatial planning processes

² “Raumentwicklung unter Beteiligung öffentlicher Akteure”

have become more time-consuming and complex due to the significant increase in recent decades in the requirements for public participation, spatial and environmental impact assessments and for legal certainty in general; this has led to a significant decline in their popularity in the political arena and among the public.

Nevertheless, some successful aspects are noteworthy: Spatial planning establishes legal certainty for investments and other activities of private stakeholders and contributes to the vertical coordination between the various levels: despite the evident tensions between supra-local steering expectations and local self-government, the principle of subsidiarity and the mutual feedback principle are successful means to find good solutions in many cases and allow for developments in line with the goal of sustainable spatial development.

The fundamental objectives of spatial planning and spatial development, as well as the guarantee of equivalent living conditions and the shaping of sustainable spatial development are still topical today; in fact, they have become even more relevant (cf. discussions about ‘spaces left behind’ and sustainable development goals). Hence, finding an adequate combination of formal spatial planning and spatial development is crucial. This requires a suitable combination of formal and informal perspectives in the sense of contemporary notions of territorial governance. In so doing, communication and achieving a consensus are as necessary as legally binding objectives, and where necessary, hierarchical decisions. In this sense, formal spatial planning and spatial development will only succeed and be effective in combination, as outlined (for example) in the notion of strategic regional planning (Vallée/Brandt/Fürst et al. 2012).

References

- Blotevogel, H. H.; Danielzyk, R.; Münter, A. (2014): Spatial Planning in Germany: Institutional Inertia and New Challenges. In: Reimer, M.; Getimis, P.; Blotevogel, H. H. (Eds): Spatial planning systems and practices in Europe. A comparative perspective on continuity and changes. New York, 83-108.
- Blotevogel, H. H.; Schelhaas, B. (2011): Geschichte der Raumordnung. In: ARL – Akademie für Raumforschung und Landesplanung / Academy for Territorial Development in the Leibniz Association (Ed.): Grundriss der Raumordnung und Raumentwicklung. Hanover, 76-202.
- BBSR – Federal Institute for Research on Building, Urban Affairs and Spatial Development (Ed.) (2012): Raumordnungsbericht 2011. Bonn.
- Chilla, T.; Kühne, O.; Neufeld, M. (2016): Regional development Stuttgart.
- ESPON COMPASS (2017): Comparative Analysis of Territorial Governance and Spatial Planning Systems in Europe – Questionnaire: Germany. Unpublished.
- Fürst, D. (2010): Raumplanung – Herausforderungen des deutschen Institutionensystems. Detmold.
- Fürst, D.; Mäding, H. (2011): Raumplanung unter veränderten Verhältnissen. In: ARL – Akademie für Raumforschung und Landesplanung / Academy for Territorial Development in the Leibniz Association (Ed.) (2011): Grundriss der Raumordnung und Raumentwicklung. Hanover, 11-73.

Spatial planning

- Priebs, A. (2013): Raumordnung in Deutschland. Brunswick.
- Reitzig, F. (2011): Fachplanungen, insbesondere raumbedeutsame Fachplanungen.
In: ARL – Akademie für Raumforschung und Landesplanung / Academy for Territorial Development in the Leibniz Association (Ed.): Grundriss der Raumordnung und Raumentwicklung. Hanover, 387-392.
- Selle, K. (Ed.) (2006): Zur räumlichen Entwicklung beitragen. Konzepte, Theorien, Impulse. Dortmund. = Planung neu denken 1.
- Turowski, G. (2005): Raumplanung (Gesamtplanung). In: ARL – Akademie für Raumforschung und Landesplanung / Academy for Territorial Development in the Leibniz Association (Ed.): Handwörterbuch der Raumordnung. 4th Edition. Hanover, 893-898.
- Vallée, D.; Brandt, T.; Fürst, D.; Konze, H.; Priebs, A.; Schmidt, P. I.; Scholich, D.; Tönnies, G. (2012): Modell einer Strategischen Regionalplanung in Deutschland. In: Vallée, D. (Ed.): Strategische Regionalplanung. Hanover, 169. = Forschungs- und Sitzungsberichte der ARL 237.

Additional literature

- Albers, G.; Wékel, J. (2015): Stadtplanung. Darmstadt.
- ARL – Akademie für Raumforschung und Landesplanung / Academy for Territorial Development in the Leibniz Association (Ed.) (2011): Grundriss der Raumordnung und Raumentwicklung. Hanover.
- Henckel, D.; von Kuczowski, K.; Lau, P.; Pahl-Weber, E.; Stellmacher, F. (Eds) (2010): Planen – Bauen – Umwelt: Ein Handbuch. Wiesbaden.
- Priebs, A. (2013): Raumordnung in Deutschland. Brunswick.

Last update of the references: October 2018