2.2 Legal framework and planning systems

Introduction

In all of the SPECIAL partner countries, urban land use planning forms part of the legal framework of the state. Therefore legally binding spatial planning instruments and procedures are employed within these states to underpin actions relating to energy and energy efficiency. Less formal systems can be employed at lower spatial scales (please see more information in Module 3).

Planners working at national, regional and local levels need to learn to include planning considerations when dealing with environmental concerns to sustainability, climate change (mitigation/adaptation), biodiversity and scarcity of resources.

Planning is an important instrument for the achievement of political climate protection objectives which are formulated on European, National and Municipality level (see policy objectives in 2.1). Planning systems are slightly different in the SPECIAL partner countries but the overall structures are mostly similar. European, national and local climate protection objectives and policies have to be implemented / concretized on subordinate spatial level (local area).

Legal framework

For the SPECIAL project, different legislative levels and sectors are relevant. Most important are:

- Planning legislation (e.g. planning objectives and procedures, building regulations, infrastructure...)
- Energy legislation/programmes (climate change, energy saving, feed-in tariff...)

On European level some Directives have an influence on national legislation relating to spatial planning and energy, such as the Directive on the “Energy performance of buildings” (2010/31/EU) or the Directive on the promotion of the use of energy from renewable sources (2009/28/EC). At a national level, all partner countries possess legislative instruments which give effect to European and national targets and objectives within that jurisdiction.

A distinction is drawn in spatial planning between comprehensive spatial planning and sectoral planning. Comprehensive spatial planning is cross-sectional at all planning levels, whereas sectoral planning addresses single, mostly technical infrastructure sectors, dealing with specific projects like railways, airports, and waterways. (ARL, 2008). In the most partner countries the legally binding legislation covers three government and planning levels:

1. National/Federal Government – National planning level
2. State Government: Countries /Counties planning level
3. Local Government: Regional /Local planning level
The distribution of competence and functions between the three levels of government produces a system with legally, organisationally, and substantively differentiated planning levels. In Germany for example, federal spatial planning is limited essentially to the development of guiding principles of spatial planning which also provides the legal basis for state spatial planning and superordinate specifications for sectoral planning. State spatial planning gives concrete form at the state level to the federal principles of spatial planning, while at the local level, final planning goals are developed in compliance with both federal and state spatial planning specifications. It is the responsibility of local authorities to regulate the use of land for building and other purposes at the lowest planning level. (ARL, 2008).

The legal basis for planning in the countries is quite different - the example from Germany will show how complex only the basis framework is:

- Article 75 Section 1 and Article 30 of the Basic Law, which regulate that the federal government has framework legislative powers on spatial planning, nature conservation and water, but the Länder are responsible for the practical implementation
- Federal Regional Planning Act (ROG) and the consequent state planning laws
- Federal Nature Conservation Act (BNatSchG) and the consequent state conservation laws
- Water Resources Act (WHG) and the consequent state water laws and on this basis further legal regulations that relate to content and method
- Article 74, Section 1 of the Basic Law, which stipulates that the federal government has concurrent legislative competence on the housing and human settlements and land use
- Building Code (BauGB), with which this competence is filled
- Land Utilisation Ordinance (BauNVO), which outlines the types of land use as well as related legal regulations.

In general urban planning legislation articles include measures which seek to foster activities conducive to facilitating climate mitigation. The following outlines some measures taken from the German Building Code (BauGB) which was last amended in 2013:

- General clause on climate protection in local urban development planning (§1a Abs. 5): “The requirements of climate protection should be worn both by measures to counteract climate change, as well as those that serve to adapt to climate change.”
- Content of the binding land-use plan (§9): supplement to the existing list of possible contents areas for plants and equipment for centralized and decentralized production, distribution, use, or storage of electricity or heating or cooling from renewable energy or combined heat and power generation (similar in some other sections of the law: §11, §148)
- Admissibility of solar collectors on buildings in the Undesignated Outlying Area (§35 Abs. 1)
- Urban renewal areas (§136): the goal of up to date measures of climate protection and climate adaptation can be one of the causes for urban renewal
- Economical and efficient use of energy (§248): In some cases it is possible to deviate (to a lesser extent) from the fixed measures of the extent of structural use, the type of construction and the buildable land area on existing building to reach the goal an efficient use of energy
- Repowering of wind turbines (§249)

However, it is not possible to present and discuss all different legislation forms and contents of the different partner countries here. The following table shows some titles of the legal framework in partner countries.
Planning systems

Spatial planning has some basic principles which can be the following:

- Spatial planning is geared towards the achievement of the common good.
- The overall aim is to promote social and economic development with special reference to environmental impacts.

The specific objectives are:

- Efficient use of the available space,
- Economic balance of the regions,
- Create equal living conditions,
- Care and development of environmental resources (e.g. use of renewables, efficiency).

Spatial planning is an area-related public sector task that can be subdivided into comprehensive (or overall) planning and sectoral planning. Comprehensive spatial planning addresses the supra-local (spatial planning) and local levels (urban land-use planning). The area related planning levels can be structured as follows:

- European
- National (e.g. Sweden)
- Counties (e.g. Saxony)
- Regional (e.g. Greater London)
- Local (e.g. City of Graz)
- Area/Plot (e.g. Royal Seaport Stockholm)

While planning is legally, organisationally, and substantively defined and clearly differentiated, they are interlinked by the mutual feedback principle as well as complex requirements of

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<th>Country</th>
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<td>Local building order</td>
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notification, participation, coordination and compliance. The following figure shows the different planning levels (example Germany) and their mutual feedback principles.

**Figure 1: Mutual feedback principle:**

The following example will show parts of the planning systems in the different partner countries. (Source: ARL, 2008).

**Supra Local Planning Levels**

Spatial planning at the national and state levels comprises all comprehensive, supra-local and superordinate activities for structuring and developing space. It is “comprehensive” in the sense that it has the job of coordinating spatially significant sectoral planning. It is “supra-local” in that its scope is beyond that of the territorial and material, autonomous scope of the individual local authority. The comprehensive and supra-local nature of spatial planning gives it “superordinate” status in the planning system. (Source: ARL, 2008)

**National/Federal Spatial Planning**

The National / Federal Spatial Planning lays in general down the tasks and guidelines and principles of spatial planning, providing a framework for state/regional spatial planning acts. For example in Germany the main aspects of national spatial planning include (Source: ARL, 2008):

- guidelines of spatial planning,
- principles of spatial planning,
- goals of spatial planning.

In some other countries also sectoral acts are included (forests, nature, Rail...) for example in Hungary or Austria.
State Spatial Planning

State spatial planning works towards establishing and safeguarding equivalent and healthy living and working conditions in all parts of the state. Its main job is to lay down principles and binding goals in spatial structure plans, which are prepared on the basis of all spatially significant sectoral plans pertaining to industry and commerce, transport, utilities, housing, labour and recreation, as well as nature conservation and environmental protection. The most important tool in state spatial planning is the comprehensive, surpralocal, and intersectoral state spatial structure plan implementing federal planning principles, as well as state spatial development goals and ideas. The name given such plans varies from state to state. They are termed state development plan, state spatial planning programme, state development programme, etc. (Source: ARL, 2008).

Regional Planning

Regional planning coordinates land use matters of supra-local interest transcending municipal boundaries. It defends the general interests of a region against the particular interests of local authorities. In Germany for example it has an independent, legitimate mandate - according to the Federal Spatial Planning Act – to (Source: ARL, 2008):

- prepare and update the regional plan,
- integrate the landscape outline plan for the region into the regional plan,
- advise urban land-use planning authorities and other public and private planning agencies,
- collaborate in preparing and updating the state development plan and state sectoral development plans,
- engage in spatial planning proceedings,
- collaborate in state sectoral planning,
- take the initiative in regional policy to promote and develop the region,
- cooperate with regional agencies for joint programmes.

Local Land Use Planning

In the framework of local government planning autonomy, local authorities regulate urban development and the structure of their territories by means of urban land-use planning in their own responsibility. Local government urban land-use planning has the task of preparing and guiding the use of land for building and other purposes in the municipal territory. (Source: ARL, 2008). Task of the local urban development planning: to prepare construction and other use of land in a municipality in accordance with the Building Code and conduct.

In Germany for example exists a two-tier system of the local urban development planning:

1. Level: preparatory planning - **preparatory land-use plan**

2. Level: binding land use - **binding land-use plan**

The **preparatory land-use plan** outlines the development envisaged for the entire municipal territory. The territory of the municipality is not only the object of urban land-use planning and other local authority planning but also of supra-local, comprehensive spatial planning and regional planning. Supra-local plans are implemented and concretised through land-use plans adapted to the goals of spatial planning.
The preparatory land-use plan outlines the types of land uses envisaged for the entire municipal territory in accordance with the urban development proposed to meet the anticipated needs of the municipality. The particular importance of the preparatory land-use plan for urban development is that it sets out the fundamental decisions of a community on how and for what purposes (building, transport, agriculture, forestry, recreation, nature conservation, etc.) the land available can and should be beneficially and appropriately used. It provides the framework and basis for binding land-use plans. The aims of comprehensive spatial planning and of state spatial planning, in turn, provide the framework for the preparatory land-use plan.

Following tasks could be relevant for a preparatory land use plan:

- Development out of the regional plan,
- Arrangements of the type of land use for the entire city,
- both for developed as well as undeveloped land,
- The plan outlines where in the city residential areas, commercial areas, green areas, traffic areas etc. are located while taking into account environmental concerns (landscape plan)
- The preparatory land-use plan is binding on authorities, but has no direct legal effect to the citizens.
- From the descriptions of the preparatory land-use plan, the binding land-use plan will be derived.

**Figure 2: Preparatory land use plan in Hanover (Germany).**

Source: City of Hannover.

Binding land-use plans are developed on the basis of preparatory land-use plans in the form of bye-laws, laying down binding specifications for urban development. These specifications are in turn the basis for measures required under the Building Code such as the provision of local public infrastructure (land improvement), land reallocation, and compensation. (Source: ARL, 2008)

The binding land-use is the second stage in the two-stage system of local urban development planning. In contrast to the preparatory land-use plan the binding land-use plan contains legally
binding specifications steering and controlling urban development structures, the use of land for building and other purposes (Section 8 (1) of the Building Code). It is adopted in the form of a bye-law or municipal statute. The binding land-use plan is the chief instrument for implementing local government planning, and constitutes the basis for other measures needed to implement the Building Code. For example in Germany these include (Source: ARL, 2008):

- land reallocation,
- land improvement (provision of local public infrastructure),
- compensation,
- expropriation,
- urban development enforcement orders,
- admissibility of projects within areas covered by binding land-use plans.

The binding land-use plan gives specific form to the preparatory plan through the clear, plotby-plot definition of land use.

Aspects of the binding land-use plan
> focuses and differentiates the framework determinations of the preparatory land-use plan for spatially delimited areas
> lays down legally binding rules (inter alia)
  - Type and level of building use,
  - building height,
  - building density,
  - degree of building coverage
  - spaces for transport and green spaces
> Decision as a statute by the local council,
> legally binding basis for the construction planning legality and the approval of construction projects in its scope,
> Determinations of the plan are mandatory for property owners.

Figure 3: Example of a binding land-use plan of the city of Hanover.
Source: City of Hannover.

Please see for more details the country specific “good practice” documents (e.g. Hungary Planning Systems)

Relevant parameters to be considered

Legal frameworks with relevance to the SPECIAL project have an impact on following issues:

1. Spatial structures in Cities/Regions and mobility.
2. Infrastructure.
3. Living and working environment.
For planners, there are manifold possibilities to influence the design of the built environment in a sustainable way. Below you will find some examples of energy efficiency in urban development:

**a. possibilities of influence**

Urban design allows influence on energy efficiency:

- **orientation of the building**
  - main facade faces south to optimally exploit solar radiation energy
  - deviations of up to 45 degrees are possible without large losses

- **avoidance of shading**
  - avoid shading from other buildings or plants in order to optimally utilize solar radiation energy
  - shading by trees: deciduous and coniferous trees are to be distinguished (in summer shading by deciduous trees can be quite intentional)

- **compactness of the building**
  - geometry and compactness of the structure have a decisive influence on the demand of heating energy
  - compactness follows from the ratio of length / depth / height. The lower the resulting ratio of surface to volume, the lower the annual heating demand.
  - The roof shape influences the compactness and thus the heating demand (unfavorable roof shape: e.g. stacked storeys).
  - Fragmented building subdivisions also have a negative effect on the ratio of surface to volume (e.g. forward/backward jumps, bay windows, dormers, building offset in row houses, etc.)

**b. possible determinations in the binding land use plan (example German Building Code)**

§ 9 Abs. 1 Building Code sets a closed list of legally binding rules – there is no possibility to invent other determinations.

- **Impact on the energy efficiency can be caused by the determination of**
  - the type of development (open or closed) (§9 Abs.1 Nr. 2) → impact on compactness
  - building lines and set-back lines (§9 Abs.1 Nr.2 in connection with § 23 BauNVO) → impact on orientation of the building, avoiding of shading
  - the height of buildings (§9 Abs.1 Nr. 1) → impact on compactness, avoiding of shading
  - planting orders (§ 9 Abs. 1 Nr. 25) → impact on avoiding of shading by plants
  - exceptions to the admissible degree of building coverage to enable a better thermal insulation (§9 Abs. 1 Nr. 1 in connection with § 16 BauNVO)
  - areas for plants and equipment for centralized and decentralized production, distribution, use, or storage of electricity or heating or cooling from renewable energy or combined heat and power generation (§ 9 Abs. 1 Nr. 12).

- **Further possibilities are**
  - the designation of areas with local rules (bye-laws) on the compulsory connection to and use of a district heating system (§ 9 Abs. 1 Nr. 6) and
  - when mounting a building or other constructions, special structural or technical measures for production, use or storage of electricity or heating or cooling from renewable energy or combined heat and power generation (§ 9 Abs. 1 Nr. 23b).
The binding land use plan does not give the possibility to determine the compulsory use of a certain energy source or an obligatory energy efficiency standard (e.g. by stating a maximum heat energy demand). The determinations according to § 9 Abs. 1 Building Code can only establish the conditions for energy efficient buildings or the use of renewable energies.

Further regulations, which are not possible via the Building Code, are governed by a contract if necessary.

- Urban development contract
- Real estate purchase contract

c. Possible regulations via contracts, e.g.:
- use of renewable energy, definition of certain energy sources,
- reduction of heat energy demand,
- improving energy efficiency,
- connection to heating network and/or use of CHP plants.