

PLANNING DOCUMENTS AS AN ELEMENT OF MODERNIZING THE URBAN STRUCTURE OF THE POZNAŃ METROPOLITAN AREA

Wojciech BONENBERG¹

Poznan University of Technology, Faculty of Architecture, Poznan, Poland

Abstract

The article presents a report on studies concerning the role of planning documents in the modernization process of the Poznań metropolitan area (PMA). Over the last 25 years, dynamic social, economic and spatial changes have taken place in this area, which is becoming an increasingly integrated place combining living, work and leisure for a million residents. Emerging challenges regarding the functional, spatial and infrastructural modernization of the PMA call for new planning methods. In this respect, the existing planning documents and methods by which they are prepared are not able to keep up with the ongoing changes and constitute an obstacle in the modernization of the metropolitan area. The purpose of the article is to identify the risks posed by the discrepancies of existing planning records. Recommendations aimed at adapting the planning documents to the challenges of modernizing the PMA have also been presented.

Keywords: Poznań metropolitan area, modernization of urban structures, planning documents

1. AIM OF STUDY

The aim of the study is to assess to what extent the current planning documents allow for the effective modernization of the metropolitan area of Poznań. This pertains especially to providing an answer to the question of whether the records of the study of conditions and directions of spatial development (*Studium uwarunkowań i kierunków zagospodarowania przestrzennego - SUiKZP*) serve

¹ Corresponding author: Poznan University of Technology, Faculty of Architecture, Nieszawska st. 13 C, 61-021 Poznan, Poland, e-mail: wojciech.bonenberg@put.poznan.pl, tel. +48616653260

the function of an instrument coordinating and integrating the spatial policies of municipalities (gminas) within the PMA?

The area under study covers 18 municipalities comprising the PMA. The borders of the PMA were defined on the basis of interdisciplinary planning studies carried out in the years 2008-2012 by the Center of Metropolitan Research of the Adam Mickiewicz University in Poznań [3,5].

2. DESCRIPTION OF PROBLEM

Over the last decades, planning and spatial management methods of metropolitan areas have been developing intensively in Europe, Japan and the USA. The basic research programs in this field stress the following elements:

- spatial management and the environment,
- infrastructure and the organization of transport,
- the economy and job market,
- social services,
- integrated management and territorial marketing.

Tools of metropolitan integration are being developed in spatial planning, encompassing strategic problem areas: transparency, coordination, partnership, balance, solidarity, empathy, participation, flexibility, competitiveness, and integration [1,4].

All of these issues are reflected in planning documents in the form of appropriately depicted data. Presentation techniques make it possible to connect qualitative and quantitative data with geospatial information bases. Uniform graphic coding standards are applied, facilitating reliable comparisons and fast implementation.

Modern planning systems stress final effectiveness in terms of the cost and time of preparing urban studies, emphasizing the influence of the graphic representation of data on decreasing the costs of and accelerating the planning process. At the same time, they leave room for the constant improvement of the process while accounting for emerging ideas and initiatives, and above all local specificity resulting from the technological level, economic possibilities and cultural differences [2].

The standardization of graphical information is aimed not only at improving the quality of spatial planning but also, most importantly, at obtaining measureable financial gains. It is worth noting that representation encompasses all the individual components of the planning procedure, which is comprised of: diagnoses, measurements, analyses, implementations and monitoring.

Modern planning techniques allow for the code of graphic representations to be connected with basic system functions.

- registration and classification of information,
- observation and completion of information,
- storage, processing and transfer of information,
- interpretation and comparison of information,
- indexation of information,
- standardization of information.

Planning records prepared in such a way play an important role in coordinating social, economic and environmental phenomena within the areas of municipalities. These phenomena are attributed to various specializations and fields of activity, which begin to overlap one another in planning records displaying mutual relations. Such depiction serves to predict future changes, essential to modernization processes.

3. STUDIES ENCOMPASSING THE POZNAŃ METROPOLITAN AREA

In the years 2009-2014, a research team of the *Institute* of Architecture and Spatial Planning of the Poznań University of Technology, under the guidance of the author, carried out research aimed at diagnosing the supply and state of documentation pertaining to the spatial policy in the administrative units of the Poznań metropolitan area.

Comparative analyses concerned the records of the study of conditions and directions of spatial development of 18 municipalities comprising the PMA. The method applied called for analyzing source materials. The studies focused on the following issues:

- means of making planning materials available
- applied scales of cartographic documentation
- applied graphical representations
- applied terminology

The analysis pertained especially to:

- a) The means of marking the boundaries of the area encompassed by the study of conditions and directions of the spatial development of the municipality.
- b) Means of graphically presenting the boundaries of areas with different land uses.
- c) Selection of letter and number symbols distinguishing these areas.
- d) Means of marking the boundaries of restricted areas.
- e) Means of marking the boundaries and representation of objects protected on the basis of separate provisions (e.g. areas at risk of flooding, areas under protection, etc.), as well as letter and number symbols distinguishing them from other areas.

- f) Means of indicating areas specified in Art. 10 section 2 of *The Act on Spatial Planning and Management*, with particular attention paid to problematic areas resulting from the conditions and needs of developing the municipality, as well as those areas where public purpose investments of a supralocal nature will be located, in accordance with the provisions of the spatial development plan of the province (voivodeship).
- g) Types of maps used when preparing planning materials (e.g. base maps, cadastral maps, photomaps, orthophotomaps, aerial and satellite photographs),
- h) Interpretation of planning symbols and markings.

The results of the analyses provided a view of the quality of basic planning documents (SUiKZP), which currently form the basis for modernizing the Poznań metropolitan area.

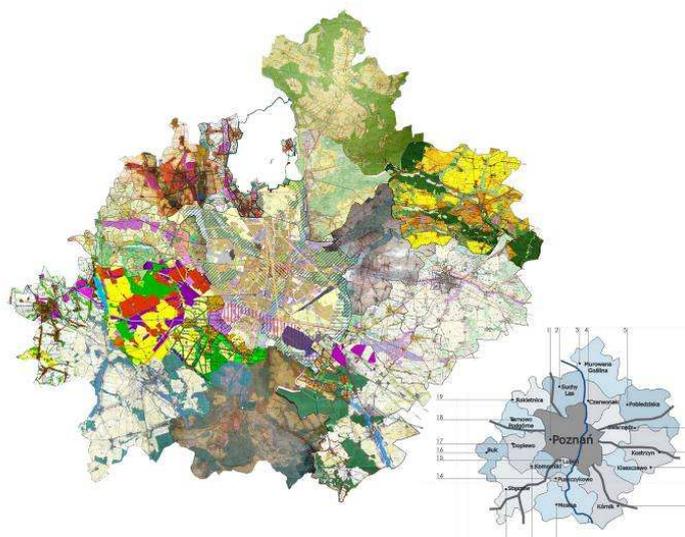


Fig. 1. Compilation of SUiKZP graphical documentation of eighteen municipalities within the Poznań metropolitan area. Each compilation applies a different graphic code for recording the directions of the spatial management of the municipality. The means of identification and their spatial resolution is different for every municipality. The graphical representation of the conditions and directions of spatial management of the municipalities is not uniformly connected with the statistical data base and land information system. Graphical representations do not always correspond to the written description of the plan (source: compiled by the author)

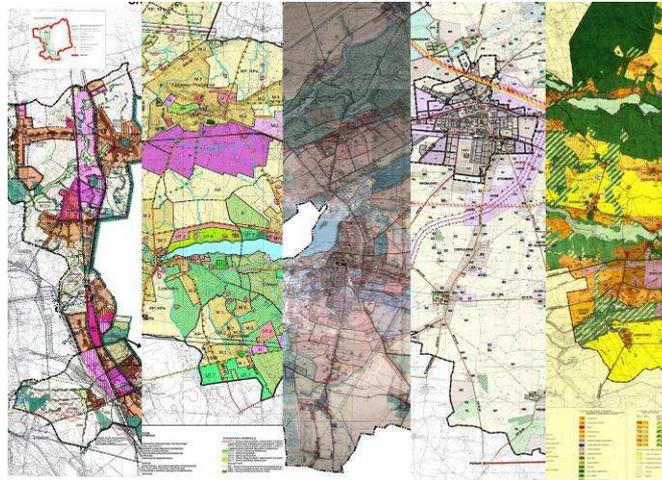


Fig. 2. Compilation of fragments of graphical records of the SUiKZP of municipalities in the Poznań metropolitan area. The ambiguity and incoherence of the records makes them difficult to coordinate (at the level of the municipality and agglomeration), prevents comparative analyses from being carried out, is a source of spatial disorder and leads to infrastructural collisions. In effect, it is one of the reasons behind the low effectiveness of urbanistic solutions (source: compiled by the author)

4. CONCLUSIONS

- A. Current SUiKZP records do not serve their function as a tool coordinating spatial policies of municipalities within the PMA. Their usefulness in modernizing the metropolitan area is severely limited.
- B. The applied scales, specificity of recordings, graphical markings and terminology used make it impossible to directly compare the provisions of the land use plans of the individual municipalities.
- C. Planning materials use modern graphical imaging techniques to a limited extent, especially in terms of depicting dependencies extending beyond a two-dimensional image distinguishing areas of different types of land use. There is a lack of graphical records showing the dependencies between certain issues (as, e.g. compositional relations, or social, economic and environmental determinants) marked on base maps.
- D. Discrepancies between graphical records make it difficult to coordinate planning at the level of agglomerations, preventing direct comparative analyses from being carried out, and are a potential source of infrastructural collisions.

- E. Graphical representation of the conditions and directions of the spatial management of municipalities is not parametrically connected with spatial data bases and the land information system (LIT).
- F. The depiction of data contained in the records of land use plans makes it difficult to identify the scale and dynamics of urbanization processes and changes in the types of land use, as well as to assess the suburbanization process in the area of the agglomeration.

This does not mean that the analyzed land use plans do not meet provisions of the regulations currently in force, especially *the Regulation of the Minister of Infrastructure of 28 April 2004 on the scope of the project regarding the study of the conditions and directions of spatial development of a municipality* as well as in *the Act of 27 March 2003 on spatial planning and management*.

Notice should be taken of the fact that the regulations in force concerning the means of preparing a SUIKZP are characterized by very low expectations, but at the same time do not disallow these expectations to be raised above the binding minimum. Therefore, quick actions aimed at improving the means of representing data in land use records of local administrative units within the Poznań metropolitan area need to be taken.

5. RECOMENDATIONS

- A. The means of identification and their spatial resolution ought to be adapted to the scale of records resulting from the area of the region being represented and establish guidelines of uniform interpolation to identify the necessary values at points for which there is a lack of direct measurement data.
- B. Depictions of temporal resolution ought to be introduced, which is essential for representing processes of a dynamic nature.
- C. Graphical representations must correspond to the written description of the plan, which should be characterized by a sequential structure. Attention should be paid to representativeness of the text and graphics, avoiding descriptions and representations (written and graphic) in which given symbols have multiple meanings. This particularly concerns the written descriptions and corresponding graphical representations of center-forming, recreational and residential functions.
- D. A technical possibility of combining SUIKZP records with other documents connected with managing a municipality should be ensured, i.e.: development strategy of the municipality, local development plans, regional operational program, EU support programs, etc., as well as plans at a higher level (province, national) and those connected with particular branches of industries (transport, energy, environmental protection, vocational development, revitalization, etc.)

- E. A connection of graphical representations with the statistical data base ought to be ensured and a division into standardized layers of topics and issues coordinated with the planning description introduced.
- F. The requirements set out above on the techniques of preparing a SUIKZP ought to be implemented in public tenders for preparing studies of conditions and directions of spatial development of municipalities. These requirements should be coordinated and standardized for the entire metropolitan area. The Center for Metropolitan Studies of the Adam Mickiewicz University in Poznań should serve as the coordinating unit.

REFERENCES

1. Bonenberg A.: *Beauty of the City - Urban Empathy. Case Study Catania in Sicily*, FA, Poznan University of Technology, Poznan 2011.
2. Franchini A.: *Idea of City and Urban Transformations*, w: *Czasopismo Techniczne*, zeszyt 2-A, (2014) 67-80.
3. *Metropolia Poznań 2020. Strategia rozwoju aglomeracji poznańskiej*, redaktor Kaczmarek T., Centrum Badań Metropolitalnych UAM, Poznań 2011.
4. Stangel M.: *Kształtowanie współczesnych obszarów miejskich w kontekście zrównoważonego rozwoju*, Wydawnictwo Politechniki Śląskiej, Gliwice 2013.
5. *Zielona księga aglomeracji poznańskiej*, redaktor Kaczmarek T., Centrum Badań Metropolitalnych UAM, Poznań 2010.

DOKUMENTY PLANISTYCZNE JAKO ELEMENT MODERNIZACJI STRUKTURY URBANISTYCZNEJ POZNAŃSKIEGO OBSZARU METROPOLITALNEGO

Streszczenie

W artykule przedstawiono sprawozdanie z badań dotyczących roli dokumentów planistycznych w procesie modernizacji poznańskiego obszaru metropolitalnego (POM). W ostatnich 25 latach nastąpiły dynamiczne zmiany społeczne, gospodarcze i przestrzenne na tym obszarze, który stanowi coraz bardziej zintegrowane miejsce wspólnego zamieszkania, pracy i rekreacji dla miliona mieszkańców. Rodzące się wyzwania dotyczące modernizacji funkcjonalnej, przestrzennej i infrastrukturalnej POM wymagają nowych metod planistycznych. W tym zakresie istniejące dokumenty planistyczne oraz metody ich sporządzania, nie nadążają za postępującymi zmianami i stanowią przeszkodę w modernizacji obszaru metropolitalnego. Celem referatu jest identyfikacja zagrożeń wynikających z niespójności istniejących zapisów

planistycznych. Przedstawiono również rekomendacje mające służyć dostosowaniu dokumentów planistycznych do wyzwań modernizacyjnych POM.

Słowa kluczowe : poznański obszar metropolitalny, modernizacja struktur urbanistycznych, dokumenty planistyczne

Editor received the manuscript: 08.01.2015