

Implementation of Spatial Plans in Serbia

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1. Implementation as Phase of the Spatial Planning Process

Main elements of the planning process can be recognized as: analysis, formulation of objectives, synthesis through formulation of planning proposals, implementation, monitoring and evaluation. None of those phases should be observed and realized separately. The interlinking of phases adds value to the planning process. That is why implementation in this paper is going to be observed in relation to other phases of the process. All phases are supposed to be bundled in a perspective planning continuum. The awareness that implementation is not the final phase of the planning process has existed since the beginning of planning practice. Since the system of planning takes time to be built and established, the first successful planning implementation activities appear as the final phase. As the implementation in Serbia is still weak in the planning practice, initial efforts that are currently being made represent so-called post-planning implementation.

So far, analysis was realized through results of experienced expert's research from different sectoral fields relevant for spatial development with purpose of their integration in the spatially relevant topics for formulation of planning proposals in accordance with the planning objectives. Planning objectives are the level of aims together with an overall vision for the referent territory and specific goals. Usually three levels of aims are being recognized: vision, goals and objectives. Planning objectives may be formulated and reformulated throughout the planning process. Implementation is supposed to fulfill the objectives through projects and other activities.

Planning proposals are supposed to generate projects and the other relevant activities. The purpose of the planning practice is to support the generation of adequate projects based on the results of analysis carried out for the plan. Therefore, the quality of analysis is very important. The analysis should take into account the course of the forthcoming implementation. Implementation is based on realization of planning proposals through projects. One planning proposal may contain one or more projects. Planning proposals may also contain other activities (adoption of laws, creation of strategies, harmonization of procedures, research etc.) which support the realization of projects. Projects are the activities which have clearly defined actors, financial resources and timeframe – those elements are crucial for implementation.

Implementation as the phase of the planning process is linked to the monitoring. Monitoring has two main objects, indicators of spatial development which are perceptively supposed to improve the analysis in the subsequent planning cycle and the second object of monitoring is realization of the planning proposals through projects and other activities. Database used for monitoring is the same database that can be used for the analysis what makes the round of the planning cycle. The link of monitoring and implementation is going to be described more in details on the following pages through the presentation of reporting on spatial development. The remaining phase of the planning process or cycle is evaluation which uses the results of monitoring and project and activities realization and gives the estimation on their quality and necessity.

2. Spatial Plans in Serbia and the State of their Implementation

Spatial planning in Serbia is the activity which can be traced back to 1957 when an important meeting was held in the city of Aranđelovac (Novaković, 1987). That meeting put the basis of the integrated approach to spatial planning in Yugoslavia (Perišić, 1985). Soon after that meeting the first law on spatial planning was adopted in 1960 and the first spatial plan for the region of the Danube river from Belgrade to Bulgarian border was made. From that time, lots of spatial plans were made, but the territory of Serbia hadn't been covered completely by plans. The first plan that covered the whole territory of Republic of Serbia was the plan of the Republic from 1996. Plans on other levels haven't achieved the full coverage. The Ministry which had for the first time spatial planning in its name was created in 2008. The government from 2008 to 2012 initiated the elaboration of spatial plans at regional and local levels on the whole territory with a big probability to achieve full coverage by plans at main three levels – national (already reached by the national plan from 2010), for regional plans most probably until the end of 2012, and for municipal (local) plans in 2012 or in 2013. The fourth type of spatial plans defined by the article 11 of the Law on Planning and Construction in Serbia is special purpose area plan – for purposes which are infrastructure, mining, water accumulations, tourism, protection of natural and cultural heritage. Urban plans (legally separate category from spatial plans, also defined by the article 11 of the Law on Planning and Construction) are elaborated for settlements and parts of settlements. All those plans should be implemented! Municipal plans, special purpose area plans and urban plans are implemented directly with an accent on land-use as a result of integrated analysis. National and regional plans are strategic, they give framework and are implemented indirectly.

This paper is going to deal with indirect implementation, since the direct implementation is bounded by urban planning regulations and zoning principles. The indirect implementation needs an additional support and the instrument that was foreseen for national and regional plans is the Program of Implementation defined for the first time in the Law on Planning and Construction from 2009, and first time realized for the Spatial Plan of the Republic of Serbia in 2011. Programs of Implementation for the adopted regional spatial plans are currently being elaborated.

The challenge of implementation is multiple. Prior to definition of Program of implementation another instrument had been foreseen by the Law on Planning and Construction from 2003, it was Contract of Implementation, but this instrument didn't achieve its expected effects. Implementation of spatial plans before the program of implementation is a research topic and should be considered for every spatial plan separately. Four models of implementation were recognized through analyzing nine spatial plans and it was concluded that in previous period plans were carried out only formally and partially (Stefanović, 2011). Implementation was only the final chapter of all spatial plans which vaguely proposed organizational, financial, legal and institutional measures. More detailed elaboration with an intention to achieve project based action planning is foreseen by the new instrument which is the Program of Implementation. As it is an innovative instrument open issues can still be recognized.

Program of Implementation for the national plan and for regional spatial plans defines responsibilities, timeframe and financial sources and amounts for realization of strategic priorities. It is the document which is endorsed by the national or regional government. Concerning the regional government in Serbia, it exists only for the autonomous provinces and for the city of Belgrade. Seven other regional plans are elaborated for the regions which don't have their own institutions. Therefore, the national government endorses those plans and their upcoming programs of implementation. This situation might change, because regionalization (bearing creation of regional institutions) is an ongoing process in Serbia. The issue of responsibility in the domain of spatial planning for the regional level seems quite probable to be given, in the future, to regional development institutions.

3. Program of Implementation – New Instrument of Spatial Development Policy

Program of implementation for the national plan and for regional spatial plans was for the first time defined by the Law on Planning and Construction from 2009. This Law is currently in force, it has had a few revisions. The article 12 defines programs of implementation for national spatial plan and for regional spatial plans as documents for implementation of spatial plans. The articles that define it more precisely are 58 and 59.

Article 58
The program of implementation of the Spatial Plan of the Republic of Serbia determines measures and activities for the implementation of the Spatial Plan of the Republic of Serbia for a period of five years.
The program of implementation of the Spatial Plan of the Republic of Serbia is brought by the government, at the proposal of the Ministry with jurisdiction over affairs of spatial planning, within one year from the day of enactment of the Spatial Plan of the Republic of Serbia.
The program of implementation of a regional spatial plan determines measures and activities for the implementation of the regional spatial plan for a period of five years.
The program of implementation of a regional spatial plan is brought by the agency with jurisdiction over the preparation of the plan, within one year from the day of enactment of the regional spatial plan.
The program of implementation of the spatial plan of an area of special purposes is brought by the government, i.e. the responsible agency of the autonomous region, within one year from the day of enactment of the spatial plan for the area of special purposes.
The agency with jurisdiction over affairs of spatial planning is obliged to submit annual reports to the agency which brought the Program, on the implementation of the Program.
Modifications and supplements from Paragraphs 1, 3 and 6 of this Article, based on the analysis of effects of implemented measures and conditions in the space, may be completed before the expiration of deadlines, at the recommendation of the agency with jurisdiction over affairs of spatial planning.
Article 59
The Program from Article 58, Paragraphs 1, 3 and 5 of this Law particularly includes the following:
<ol style="list-style-type: none"> 1) priority projects for the fulfillment of spatial regulation; 2) schedule of regulating particular spatial entities and priority projects; 3) amounts and sources of funds for the financing of projects; 4) deadlines for the completion of projects; 5) responsibility for the completion of projects; 6) criteria for tracking changes of conditions in space

Figure 1: Articles 58 and 59 of the Law on Planning and Construction

Those legal provisions were the only guideline for creation of the Program of Implementation as an innovative document in the planning practice. From the article 59 it was clear that the Program should elaborate the strategic priorities to satisfy first five points of this article. The sixth point refers to the indicators of spatial development. For all this and generally, the need for information system on spatial development is an obvious necessity. Therefore the content of Program of Implementation started to get clearer. Three main parts of this new document appear to concern:

- elaboration of strategic priorities as guidelines for monitoring of their realization
- definition and guidelines for operationalization of spatial development indicators
- creation of initial model for information system on spatial development

Since the first Program of Implementation to be prepared was for the national Spatial Plan of the Republic of Serbia which was adopted in December 2010, based on the provision from the article 58 the Program should have been adopted in the timeframe of one year. And it was! The National Assembly adopted the Spatial Plan of the Republic of Serbia for the period of 2010 to 2020 on the 23rd of November 2010 and it entered into force on the 1st of December. Exactly and precisely one year later, on the 1st of December 2011 the Government of Serbia approved the Program of Implementation of the Spatial Plan of the Republic of Serbia for the period from 2011 to 2015. The Program was adopted for the first five years of the planning period as it is defined by the Law in the article 58.

The first part of the Program of Implementation concerns the elaboration of strategic priorities. Strategic priorities until 2014 were defined in 39 sectoral chapters of the Spatial Plan. A few challenges were in front of the working team. The first one was to have a clear list of strategic priorities since they are not presented in the same way throughout the whole plan. Their number was around three hundred. The most simple was when priorities were bulleted, but in some chapters they had to be extracted from the text. Their final number was 292 what is quite a lot. The task was to elaborate those priorities following the points 1 to 5 of the article 59. For that a unified questionnaire in the form of table was prepared in order to collect the necessary information.

A. Strategic priority	
Text of the priority	
Chapter in the plan	
B. Responsibility for realisation	
Main responsibility	
Stakeholders in horizontal cooperation	
Stakeholders in vertical cooperation	
Specific partnerships	
C. Funding	
Cost	
Sources	
D. Dynamics	
Duration of the project	
Beginning	
End	
Phases	
E. Indicators	
Indicator(s) influenced by realisation of the project	
Link with the goal(s)	
F. Risk management	
Problems and challenges	
Possible solutions	

Figure 2: Table questionnaire for elaboration of strategic priorities

Since the number of 292 priorities is quite high and what is even more important the information required by the article 59 were not possible to be obtained for some priorities, for those two reasons the selection of strategic priorities which were elaborated through those table questionnaires was made. The final number of elaborated strategic priorities was 125. Other priorities which were not elaborated for the program of implementation were listed in the Program of implementation grouped by the reason why they were not elaborated. Ten reasons were recognized: implementation on local or regional level (not national), harmonization with national and European regulations, realization through national strategies, activities in course of implementation, education, promotion, research, international cooperation, present in multiple chapters.

Another challenge concerning the strategic priorities is the way of their realization. The realization is most naturally done through projects. Some strategic priorities can be recognized as projects, but the others contain more separate projects that can attain even a few dozens of projects. Therefore, through the Program of Implementation a need for more precise definition of strategic priorities, both theoretically and practically was recognized. The program of implementation should contribute to the better quality of both implementation and realization, but also of elaboration and creation of future spatial plans.

The information for the table questionnaires was collected in close collaboration with relevant institutions. Questionnaires were sent to the relevant institutions. In most cases additional phone calls or organized meetings took place. Tables were filled in in different ways, therefore their processing required harmonization of acquired information and putting them in the same format, despite the proposed tables. Additional instructions with the table questionnaires could have prevented the differences in the way the tables were filled. On the other side, the simple form of the tables didn't frighten those who were supposed to fill them in. Between the simplicity of the format and more detailed questionnaires with precise instructions, the choice was imposed a bit by the short time laps.

Since the sectoral chapters of the Spatial Plan of the Republic of Serbia are grouped in three big parts following the logic of sustainable development: nature, society and economy, and the strategic priorities of planning proposals are part of those chapters, as examples, excerpts of the information gathered in the table questionnaires for three priorities from each part (nature, society and economy) can be found bellow:

Strategic priority: increasing the total area under protection up to 10% of the territory of Serbia in the period until 2014 by declaring new protected areas

Main responsibility: Institute for Nature Conservation of Serbia

Cost: 350 million dinars

Funding sources: national, regional and local budgets

Duration of the project: 2011-2015.

Links with indicators: protected natural areas, fragmentation index

Links with goals: protected natural and cultural heritage and landscape

Strategic priority: initiating development of a comprehensive study of informal settlements and illegal construction

Main responsibility: Ministry of environment, mining and spatial planning

Cost: 15 million dinars

Funding sources: national budget, international organizations

Duration of the project: 2012-2014.

Links with indicators: illegal construction in protected water source areas, land use (CORINE), gini index

Links with goals: natural resources and improved environment

Strategic priority: completion of construction of the second half of the highway in the length of 107 km: Horgos-Novi Sad (branch B of the corridor X)

Main responsibility: Public enterprise "Corridors of Serbia"

Cost: 8 billion dinars (first phase), 3.5 billion dinars (second phase)

Funding sources: national budget

Duration of the project: 2010-2013.

Links with indicators: potential multimodal accessibility for population, intensity of traffic per network segment, density of road and railroad border crossings by the segments of border area, Travel time by car to MEGA's and transnational FUA's (ranked by the importance of FUA's)

Links with goals: regional development and social cohesion, natural resources and improved environment, functional integration with the surroundings

4. Monitoring through Spatial Development Indicators and Reporting

The second part of Program of Implementation concerns the system of indicators for monitoring spatial development. In the Spatial Plan of the Republic of Serbia 106 indicators were already selected to measure the realization of five main goals. Once again, ambitious quantity of indicators gave another task to the Program of implementation to make something more realistic. Operationalization of 106 indicators from the Spatial Plan was distributed for the period of five years to attain the full monitoring until 2015. An analysis was done with two main criteria – availability of data for indicators and balanced distribution of orientation towards each of five goals from the Spatial Plan. The result was to measure 25 indicators in 2011, additional 30 in 2012 and the others to be operationalized from 2013 to 2015. The other task for the Program of Implementation concerning the indicators was to elaborate each indicator more in details.

Elaboration of each indicator had the following structure:

- name and description: short description of the content of indicator
- goals: area of application – main goal and operational goal which link to the indicator
- geographical cover: national, regional, and/or local
- calculation: description of parameters for calculation
- interpretation: elements which enable better understanding and application of the indicator
- sources: sources for data collection and indicator monitoring
- publishing frequency: if indicators are available in time series
- future development of indicator: further improvements of indicator; expected new sources and statistical monitoring

Link of strategic priorities and indicators was preliminarily established in the table questionnaire. As the system of indicators for monitoring of spatial development is an innovation and it can be considered as a kind of test phase, the link with strategic priorities should be considered as preliminary. The system of indicators is based on data availability from national statistics and other sources of information, but also on experiences from other countries. The activities of program ESPON of the European Union are a source of ideas and models for spatial development indicators in Serbia. Another cooperation activity was the Government to Government project with Dutch planning institutions entitled “Building Capacity for Inspire Directive and ESPON 2013 Program in the Republic of Serbia”.

ESPON is the reference program at European level for research and harmonized monitoring of spatial development at transnational level. It was initiated in the 1990s and its activities started in 2002. During the first phase from 2002 to 2006 around 50 projects were finalized and their results are publicly accessible on the official website of the program. Currently the second phase is reaching its end with around 50 new projects which should be finalized until 2014 when the new program cycle should start. The new ESPON program for the period from 2014 until 2020 is under preparation. Serbia is undertaking steps to join the program as full partner and to participate in the forthcoming activities, since it has been only an active observer in the first two cycles. The indicators from the Spatial Plan and Program of Implementation took into account results of ESPON projects for defining the indicators.

First set of indicators, calculated for the first annual report on spatial development in Serbia ordered by the goals whose achievement they are supposed to measure:

Goal 1: More balanced regional development and improved social cohesion

Sub-goal: 1.1. Sustainable demographic development

- Population density (critical mass)
- Migration saldo rate / Balance of migration
- Share of population by large age groups
- Fertility rate

Sub-goal: 1.2. Improvement of social and economic cohesion

- Population with high education
- Employed persons with high education

Sub-goal: 1.3. Reduction of social exclusion and poverty

- Activity rate of male/female population (age 15-64)
- Employment rate
- Rate of the increase of active population in relation to the rate of the increase of persons with personal income and dependant population
- Annual unemployment rate

Sub-goal 1.4: Balance of settlement structure

- Average travelling time to three closest regional centers

Sub-goal 1.5: Balanced spatial organization of public services

- Accessibility of central settlements by public transport (including accessibility by rail)

Sub-goal 1.6: Parity in infrastructure and information accessibility

- Share of a settlement (% of households) covered by public water supply network
- Share of a settlement (% of households) covered by public sewerage network
- Share of a settlement (% of households) covered by highly reliable electricity supply network
- Share of internet users

Sub-goal 1.7: Territorially responsible governance

- Territorial cover by spatial planning documents

Goal 2: Regional competitiveness and accessibility

- Employment by economic activity

Goal 3: Sustainable use of natural resources, protected and improved environment

- Land use (agriculture, forest, built, water) (Corine)
- Quality of water courses (water quality classes)

Goal 4: Protection and sustainable use of natural and cultural heritage and landscape

- Protected natural areas
- Number of protected cultural assets in a region
- Number of cultural heritage sites proposed for protection
- Number and surface of identified landscapes

Goal 5: Spatial and functional integration in the surrounding area

- Number of international projects per municipality
- Weekly number of flights to European MEGA's

As it is foreseen in the article 58 of the Law on Planning and Construction reports on spatial development should be prepared annually. The first Report on Spatial Development and Realization of Spatial Plan of the Republic of Serbia was realized for the year 2011 in March 2012. The report calculates the values of indicators at the level of district, presents them at the level of district for the whole territory of Serbia and gives an interpretation of current and future trends for the indicator. The accent in the first annual report is on the spatial development indicators. For the annual report for 2012 monitoring of strategic priorities realization should be included, as well as 30 additional indicators and the update for first 25. It means that in the second annual report (for 2012) total number of 55 indicators should be present, heading towards all 106 indicators until 2015. At that moment the indicators should be reexamined and changes might be brought.

5. Towards Creation of Information System on Spatial Development in Serbia

Although information system was not foreseen as a topic of Program of Implementation in the legal provisions of articles 58 and 59, its necessity was obvious for monitoring and to enable evaluation which is not yet considered in details, but only mentioned. Therefore the first form of the information system on spatial development, with the model proposed in the Program of Implementation is denominated Information System for Monitoring and Evaluation. Two interlinked characteristics of that information system can be observed, it is GIS-based and linked to other international and national standards: INSPIRE Program and its project Plan4All, ISO, OGC and W3C standards, Serbian NSDI and other national sectoral information systems. INSPIRE Program is based on the EU directive from 2007 which establishes standards for collection of spatial information through 34 data themes to ensure that spatial data infrastructures are transnationally compatible for specific areas which are metadata, interoperability, network services, monitoring and reporting.

The concept of Information System for Monitoring and Evaluation of Spatial Development in Serbia proposes the metadata model in accordance with the Plan4All project and 24 sectoral themes (21 correspond to INSPIRE data themes and 3 are added specifically). Three additional themes are spatial planning, tourism and topography. Spatial planning is the theme specific to spatial planning system in Serbia, it consists of four packages:

- spatial plans – dealing with planning documents defined by law, three types of spatial plans which are currently national competence (national, regional and special purpose areas), national and regional programs of implementation, as well as spatial development reports which are not defined in the articles 11 and 12 of the Law on Planning and Construction, but as a document subsequent to the Program of Implementation defined by the article 58 of the Law on Planning and Construction
- spatial structures – dealing with the topic of polycentricity and network of settlements in Serbia, taking into account the functional urban areas (FUA) and metropolitan economic growth areas (MEGA) defined by the ESPON program
- spatial development indicators – dealing with 106 indicators defined by the Spatial Plan of the Republic of Serbia, elaborated more in details in the Program of Implementation and operationalized through the annual Reports on Spatial Development
- spatial analysis – dealing with prospective planning solutions from the spatial plans which are currently represented graphically on the synthesis maps in spatial plans

Program of Implementation contains diagrams for four packages of the theme spatial planning and the diagram for the metadata model, accompanied by the respective dictionaries. The other 23 themes are not elaborated in the Program of Implementation, but their more detailed elaboration will be done subsequently. Information System for Monitoring and Evaluation will evolve gradually towards the Information System on Spatial Development of the Republic of Serbia. The plan of activities concerning information system for the timeframe of the Program of Implementation is part of Program of Implementation. This GIS-based information system on spatial development is an innovative and necessary element for the contemporary spatial planning practice. The intention for its realization in Serbia is not new, but concrete steps towards it are undertaken through the Program of Implementation as the third part of this new planning document which should contribute to the improvement of the planning practice in Serbia.

6. Challenges and perspectives of spatial plans implementation

Systematic and organized activities supported by the Program of Implementation have started recently in Serbia. However, experience is being accumulated and observations on possible improvement are already appearing. As any process this one is also subject to perpetual changes and adjustment. Numerous elements for evaluation of a planning practice case can be easily found among the activities of implementation, monitoring and reporting, but the evaluation itself is the remaining phase of the planning process that has to be conceptualized. As mentioned in the beginning of this paper, all those phases shouldn't be observed only as consequent in sense that they follow each other. They should be realized in parallel and constantly. This system is being built for better organized spatial development policy in Serbia. Exchange of experiences in hyper-dynamic urban and regional context in the world is not only welcomed, but represents a real necessity for sustainability of development. Growth and decline should be organized since the hyper-dynamic development brings to both situations and spatial development policy should contribute to the balance which makes cities and their regions livable and quality of life satisfactory.

Implementation is still the bottleneck of the planning process and can be seen as a link from good analysis to realization of planned activities. Implementation can stimulate the continuity of the planning process and is prerequisite for the phases of monitoring, reporting and evaluation at first instance. Subsequently the process endorses them and they become all parts of the system which is supposed to function smoothly and to add value to the quality of life. Cooperation is an important element, since the global space is a continuum and territory at any level – local, regional, national or continental can't be isolated and sustainable at the same time. Isolation and autarchy are artificial and need specific efforts to be sustained (at least temporarily). Exchanges of practices are more than welcomed.

Experience of the first steps in implementation of spatial development policy in Serbia is based on domestic and foreign experiences, but presents also an example of the initially post-planning implementation with the intention to become integral part of the planning process. Spatial development policy in Serbia is currently based on the experience which comes mostly from the abundant integrated sectoral analysis. The implementation activities should upgrade this solid base and improve the quality and effectiveness of the spatial development policy. The first Program of Implementation from 2011 for the national Spatial Plan is going to be followed by the programs of implementation for nine regional plans until 2015, when the next Program of Implementation is going to be made for the national Spatial Plan, since the timeframe as defined by the Law is five years. That second Program of Implementation for the national Spatial Plan for the period from 2016 to 2020 is for sure going to be built on experiences of the previous one. Hopefully the exchange of experiences at international level will be intensified and planning implementation instruments will offer optimal solutions for future development.

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