

# “The Requirements of European Union for the Development of Contemporary Spatial Planning System in Europe.”

Sarmite Barvika (Riga Technical University), Anda Treija (Riga Technical University)

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## I. INTRODUCTION

The human history of land use is very relevant to planning function. Nowadays modern, geospatial information system (GIS) based, integrated property data systems (infrastructures) are essentially used for setting better performance of public sector in performance of property data systems and decrease of administrative burden for society with regard of real estate and spatial planning, (SP). Harmonization of spatial information on the European level is one of the approaches how to make SP interoperable across Europe and accessible for all in SP interested persons.

## II. IMPORTANCE AND COMPLEXITY OF SPATIAL PLANNING

In contemporary society SP is an essential part of modern land administration paradigm and has a crucial role in the context of social, political, economic and environmental issues.

SP is holistic activity of public sector and acts in “bottom-up” and “top-down” directions between all levels of relevant topics (for example: water and facilities management, transport, cadastre, geology, etc.) and with involvement of all “in spatial planning interested persons”. Every single day national, regional and local authorities face important challenges in the development of territorial frameworks and concepts. All the tasks and processes must be solved comprehensively with input from many various sources: there is a big diversity in different data collection, storing, processing and provision. To combine these sources, to perform an analysis and to ensure valuable results are also big challenges in SP.

Historically SP related information in Western countries have been stored and managed separately at different levels and by different organizations: European, national, or local, without application of the systemic approach, common standards and classification making it difficult to use in modern GIS applications as it is required by current binding international policies.

## III. EUROPEAN UNION EFFORTS IN INFORMATION HARMONIZATION

Globalization is affecting SP, requiring new ways of governance to take advantage of its benefits, while data collection requires new approaches in the way of data collection and use in local and cross-border context. This double challenging context is imposing changes and structural reforms on the countries administrative structures, including the traditional SP model and implementation mechanisms, which were clearly unable to respond to the existing economic, social and environmental problems. The new concept includes geodesy and cartography as the essence and mutual connection of geospatial infrastructure elements.

In 2007 the main European spatial information harmonization initiative, a Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing the Infrastructure for Spatial Information in the European Community (INSPIRE) laid down general rules for establishing an infrastructure for spatial information in entire Community and is the basis to support the Communities policies and to fulfillment of requirements on environmental issues around Europe in digital content.

The implementation of INSPIRE should be based on the previously developed spatial data infrastructures (SDI) of Member States (MS) and does not require new data collection system. The MS must ensure that their SDI is compatible, interoperable and usable on the national level and in cross-border content.

INSPIRE is fundamental to support the Community policies, including environmental policy, and to fulfill environmental protection, as well as SP requirements.

SP is not directly addressed by INSPIRE, but indirectly, in a complex way through its technical documents and Annexes (I-III) with listed 34 spatial data themes. There are also many similarities between the character of SP and the INSPIRE initiative (cooperation and data exchange in all levels, all parties involvement and transparency, use of already exist data and data basis, to establish European, in cross-border context, SDI etc.).

“Infrastructure for spatial information” means also metadata, spatial data sets and spatial data services; network services and technologies; agreements on sharing, access and use in accordance with the INSPIRE. All data must be in electronic format.

The development and implementation of INSPIRE follows a program of work consisting of three phases with the goal to finish implementation in MS and European level until 2019.

## IV. CONCLUSIONS

Harmonization on the European level is one of the approaches how to make SP interoperable across Europe.

A sustainable resource management (with direct and indirect impact on the environment) improves coordination of SP and its related processes and business.

## V. REFERENCES

- [1] Archer, P., Charvat, K., Navarro, M., Iglesias, C. A., O'Flaherty, J., Robles, T., & Roman, D. (2013). Linked Open Data for Environment Protection in Smart Regions–The SmartOpenData Project., ENVIP conference Barvika, S., Jankava, L. (16.07.2013-19.07.2013). An Introduction to the HLanData Project: a Step Forward in the Harmonization of Spatial Information throughout Europe, EUROPEMENT International Conferences, Rhodes Island, Greece. [Online]. Available: <http://www.europment.org/library/2013/rhodes/bypaper/EEED/EEED-25.pdf> [Accesses March, 2014][3] K.Charvat, M.Alberts, S.Horakova. INSPIRE, GMES and GEOSS Activities, Methods and Tools towards a Single Information Space in Europe for the Environment, Riga, 2009, pp.4-29