

## **Introducing the Urban Growth Simulation Application in support to sustainable territorial management (in particular – urbanized zones) in the cross-border area Bulgaria-Romania**

Ass.prof.dipl.arch. Kristian Milenov – Agency for sustainable development and Euro-integration-ECOREGIONS (ASDE)  
Dipl.eng. Radko Radkov – ASDE/Remote Sensing Application Centre (ReSAC)

The report and proposed project was presented during a Sofia Technical meeting agenda – March, 2013, in the frame of a transnational flagship project between Bulgaria and Romania, under the Cross-Border Cooperation Program 2007-2013; The flagship project is – “Common Strategy for Sustainable Territorial Development of the cross-border area Romania-Bulgaria” ; ASDE , as project partner №9 was responsible for the common harmonized and integrated spatial databases for a territory of more than 71 000 km<sup>2</sup>. The report was presented during the technical conference in Sofia, and a month after on an expert meeting in the city of Ruse; it was published in a thematic leaflet and in digital format on the web page of ASDE , as well as on the web-page of the cross-border project-MIS ECT CODE 171;

**Abstract:** Most urban planning documents and strategies are based on the traditional analysis of various data and information, collected by the municipal administration and combined with data and information coming from regional and governmental administration. In the case of the Bulgarian-Romanian cross-border area there is additional need of trans-border exchange or information and of therefore of harmonization and integration of all kind of databases, mainly land cover and land use data. For the purposes of better understanding and management of urbanized areas, ASDE, with the participation of DG JRC experts has developed and proposed the so-called “urban-blocks” concept, as a specific classification unit, combining land cover and partly land use characteristics, to overcome the semantic complexity of different elements of the urbanized areas. This “urban blocks” have close links with referring statistical and other data and information and can be used for better monitoring of changes in cities and for better management strategy planning.

The integrated and coordinated processing and assessment is a time consuming and high expert task and often the municipal administration and the contracted expert groups do not process all possible variants and development scenarios. The same with risk prevention.

There is a need of an innovation tool, supporting the processing of various urban planning scenarios and large investment initiatives or projects, aiming the selection of best applications variants and avoiding serious mistakes and failures in urban management.

The urbanAPI Urban Growth Simulation (UGS) application provides the possibility of using an innovation tool , for different scenarios programming and assessment. It supports the development and assessment of various models of management, list of priorities, major investment projects. It is an attractive toll for strategy planning and clarification of possible tendencies, potential risks, negative and positive results of realized management activities.

**Keywords:** Trans-border/Trans-regional cooperation, Sustainable Urban Management, Regular monitoring, Reference SDB layer, LCCS/ISO 19144-2, Urban blocks units, Strategy planning and Risk management, IT Innovation Tools