

The Role of Geospatial Technology in the EU Water Frame Directive Implementation

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SUMMARY

Due to the importance of water for human beings development and in order to protect water and ensure its good ecological condition, a series of Directives was adopted by the European Union. The Water Frame Directive (Directive 2000/60/EC) of the European Parliament has dominant role in water management and establishes a framework for water quality protection. This paper aim to present the current status of water related EU Directive implementation in Serbia regulations and the conceptual mapping between the elements in the WFD spatial data model and the elements in the INSPIRE data models. The implementation of WFD require a large amount of data, over large geographic areas, with high spatial and temporal resolution which is time and money consuming if it's based on traditional methodes. The utility of geospatial technologies to support the WFD is largely determined by definitions and requirements for monitoring of surface water status. The role of remote sensing technology in the context of rapid acquisition of water body geometry and water quality parameters defined according to data model was presented. Also, guidelines for automatic aquisition of water body geometry, attributes and data quality assessment from geometrical and topological point of view according to INSPIRE directive by using optical satellite images and GIS was provided. This paper shows that RS data and GIS can form a fundamental component of monitoring to help support WFD implementation while data model in line with INSPIRE provide interoperabilit and data distribution across-border in order to enable a reporting obligation required by Article 15 of WFD.