MODELLING AIR QUALITY ACCORDING TO INSPIRE DATA SPECIFICATIONS, ISO STANDARDS AND NATIONAL REGULATIONS

Abstract

Protection of the environment is an activity of many institutions, organizations and communities from global to regional and local scales. Any activity in this area needs structured database records, using advanced methodology, given, among others, in INSPIRE documents, ISO standards of 19100 series, and national regulations. The goal of this paper is to analyse both the legal provisions related to the air quality and also data sources associated with the prevention of air pollution. Furthermore, the UML application schema of the spatial data related to the air protection is proposed, for the use by urban planners. Also, the overview of the methodology of geographic information is given, including the Unified Modelling Language (UML), as well as the basic concepts of conceptual models within the INSPIRE project. The study is based on the relevant literature and documents, as well as on the expert knowledge gained through urban planning practice, as well as on the analysis of the spatial planning regulations. The UML application schema for different aspects related to the air protection, as presented in this paper, is an example of how to use the methodology also in other fields of the environment protection. Spatial planners know how to improve the air quality, but in the present state of law they often suffer from the lack of planning tools for real actions. In the spatial planners work an important issue are data that allow a thorough analysis of the area.

Key words: air pollution, application schema, INSPIRE directive, ISO standards of 19100 series, the Unified Modelling Language (UML), urban planning