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### **Biography**

Rui Reis is a researcher at the General Directorate for Territorial Management and holds a PhD in Territorial Engineering and a degree in Geographic Engineering. Worked since 1990 for the working group in charge of the creation of the national spatial data infrastructure in Portugal and continued to work with the succeeding organizations with the same goal. Participated in many research projects and authored a book in GIS and more than 60 publications and presentations.

### **Abstract**

#### **Development of a pilot application to monitor land cover changes over time and to characterize the territory**

Monitoring the territorial evolution in recent decades can help understanding development strategies and induce more effective decisions regarding the planning process. This work was developed in the context of a pilot application called “Land Cover change detection and planning indicators” integrated in the European project eENVplus. The main objective of this pilot is to monitor land cover changes between different dates. For the study areas Official statistical Information is used to build derived planning indicators. A fundamental requirement of this application, once it is an EU funded work, was to harmonize, according to the Inspire data specifications, the geospatial data used. The datasets harmonized were the Portuguese national land cover datasets for 1990 and 2010, the Corine Land Cover datasets for 1990 and 2012, the administrative units national dataset and the land use dataset. The main functionality of the developed application is the detection of changes between land cover datasets, covering the same area, for different dates. The application enables the user to select the datasets for different dates and calls a change detection WPS (web processing service), developed in the eENVplus project, that returns the polygons where changes occur. The statistical data available includes demographic and economic variables. These variables are used to build a series of planning indicators. These indicators enable the visualization and characterization of the administrative units where land cover changes occur and to give insights to the processes responsible for the observed land cover changes.