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OPPORTUNITIES FOR CLASSES OF GEOGRAPHY IN THE HIGH SCHOOL: THE USE OF 'CORINE' PROJECT DATA, SATELLITE IMAGES AND IDRISI GIS FOR GEOVISUALIZATION

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Presented work illustrates application of the GIS based processing of various geographic data: satellite images and CORINE (Coordination of Information on the Environment) layers at the lessons of geography in the high schools and universities. The research illustrates GIS application for understanding, visualizing and modeling landscapes of the Earth. Practically, the work aims to demonstrate students, how mapping land cover types can be done using GIS and combination of vector and raster geospatial data.

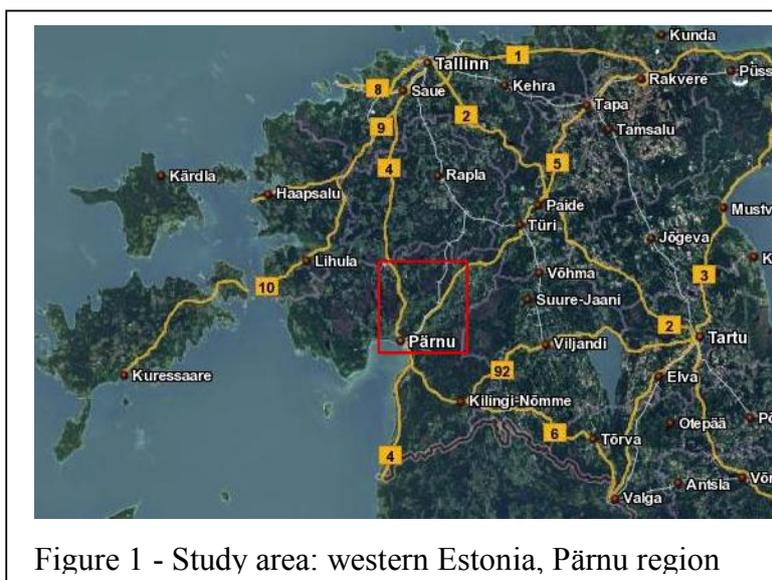
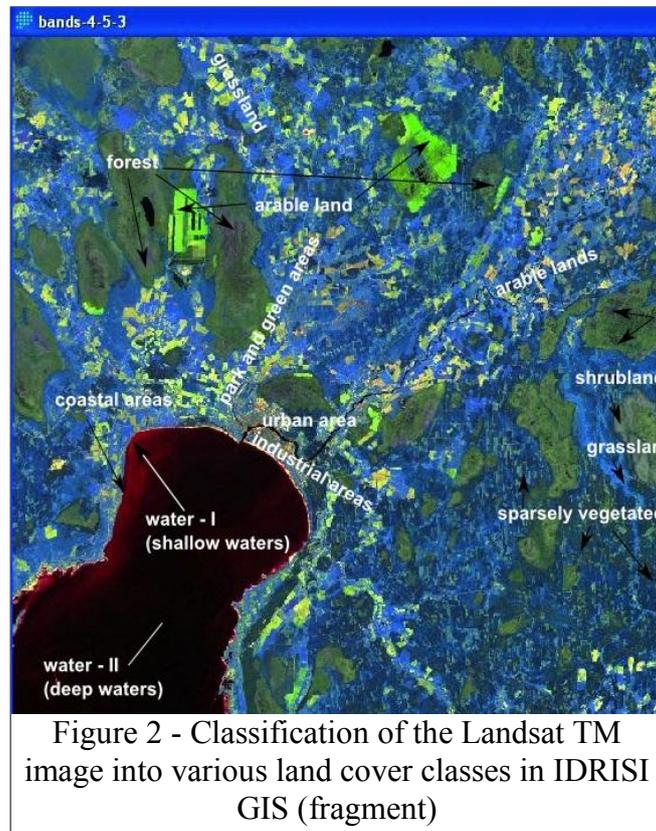


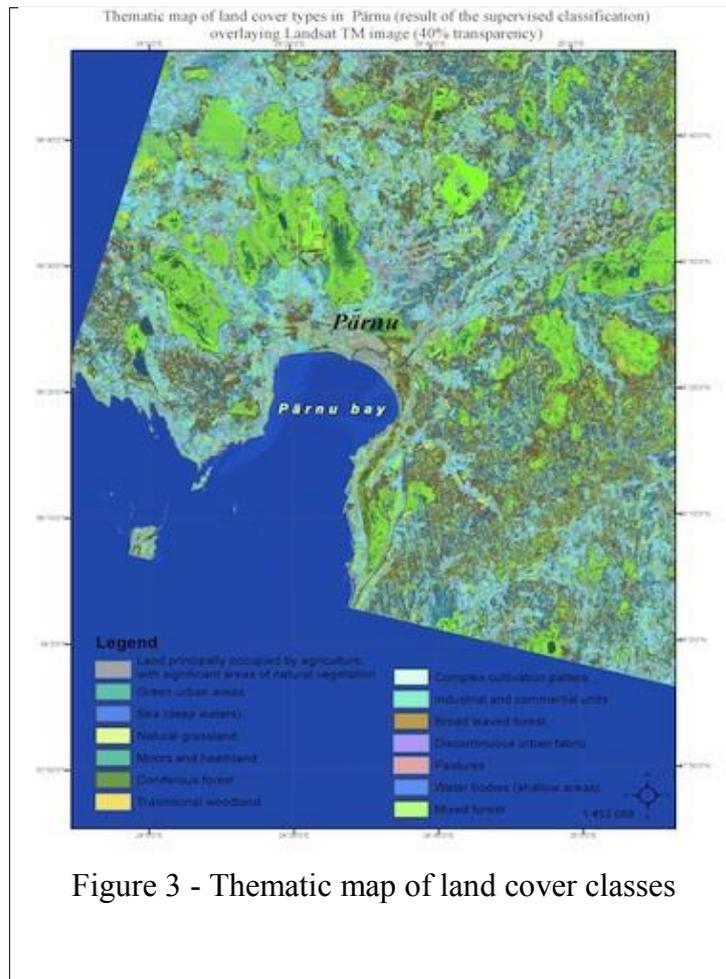
Figure 1 - Study area: western Estonia, Pärnu region

Practical example of this work is application of IDRISI GIS and geospatial data towards a study region, located on the coasts of the Baltic Sea: Pärnu region. The GIS project was performed using Landsat TM satellite image and thematic CORINE layers showing land cover and vegetation types. The CORINE project was started in 1985 in the European Union (EU). This is a cartographic database common and standardized for the EU. The project consists of 44 land cover types in classes, presented as a series of maps at a scale of 1:100 000. This database is available for the most areas of Europe (EU) including Estonia. There are numerous examples of

application of remote sensing data for land cover mapping as well as usage of CORINE for environmental mapping [1, 2, 3, 4].



These reports were considered methodologically. The Estonian part was produced by the Estonian Environment Information Centre. Vector CORINE map, available at the University of Tartu, was provided by the Estonian Land Board. The methods include data integration, interpretation, spatial analysis and thematic mapping. The workflow consists in the following steps: identification and recognition of the landscapes; creation of training sites and spectral signatures; supervised classification; thematic mapping. The image was classified according to the European system of CORINE Land Cover Project classification. The CORINE map was used for the interpretation of this classification [4]. Following this methodology the "training areas" were created, i.e. key regions, typical for the landscape types. In total, 14 land cover types were classified (Fig.3). Classification is based on the detection of land use types. The final result is thematic map of landscape types made using cartographic methods. The work demonstrated how the ecosystems can be studied using combination of CORINE, GIS and remote sensing by the students at the classes of geography at high schools.



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