ORTOFOTOMAPS USE AND SYSTEM GNSS POSITION DETERMINATION ROMPOS PROJECT MANAGEMENT MINE CLOSURE IN MARAMUREŞ COUNTY THE USE OF GIS

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Abstract. *Is the use ortofotomaps and GNSS position determination system ROMPOS, project management of mine closures, the current concern to policy makers in the county of Maramures. In making decisions on mine closure project management can use GNSS positioning systems positioning and target areas ortofotomaps scale 1:1000, 1:2000 or 1:5000. Good decisions in drafting mine closures has to their conservation and environmental protection, and can be more easily taken knowingly when using ortofotomaps and GNSS positioning systems ROMPOS with Information Systems Geographic, which are indispensable in all fields, and particularly in developing these projects. presented previously are parts of GNSS positioning system ROMPOS, its use in decision making on projects of mine closures and benefits arising from this use in this area. In the final draw general conclusions and specific to look at using GNSS positioning systems ROMPOS ortofotomaps position determination and decision making on projects of mine closures, but the usefulness and speed in making decision systems using these relatively new in Romania, and especially in Maramures county*

Keywords: ROMPOS, GNSS positioning, project management, Maramures county, environmental protection, GIS.

INTRODUCTION

Is the use ortofotomaps and GNSS position determination system ROMPOS, project management of mine closures, the current concern to policy makers in the county of Maramures. In making decisions on mine closure project management can use GNSS positioning systems positioning and target areas ortofotomaps scale 1:1000, 1:2000 or 1:5000.

The data provided by the GPS system, type DGPS and RTK, could be used in various applications, such as: positioning and monitoring of static or moving objects, navigation, surface measurement, agriculture, environmental protection, land surveys, transportation etc. This new approach introduces the concept of GIS manipulation for a decisional support, which implies a manipulation of the spatial image, in order to ease the access of decision factors towards discovering, accessing and integrating geospatial information in support-decision scenarios, in numerous domains.

MATERIAL AND METHOD

The area has a wide variety of land cover classes, including different levels of urban development, industry, agriculture, forest land, mining, logging and many bodies of water. Since this study focuses on the amount of urban versus non-use of developed land classes have been aggregated in the post-classification into four general categories of land use: urban, rural, forest and water.

The images are GeoTIFF format and are products that have undergone radiometric correction, geometric and field. Also, the images were rectified to the frames of the project stereographical 1970, and WGS84.

Home using ground control points using a cubic convolution method of resampling. The images were then processed to create composite mosaic of the study and perform supervised classification, in order to create maps for each year. Classification method used for this study was classified high risk, followed by a set of post-classification routines including the combination of classes, and to reduce sporadic and combine pixels adjacent similar pixels.

Classification process begins with selection of representative samples of each class currently image. Prior knowledge, together with aerial imagery was used to determine and select the training samples. For this study, the aim was to determine the extent of surrounding urban areas developed at the expense of rural land and forest classification using known levels. However, for some classes of images correctly classified are required to be divided into subclasses and then combined to post-processing nivell I classification.

Urban class was broken into two subclasses: one representing a highly developed urban landscape and dense low density consisting of other areas were mainly residential subdivisions and large single houses or similar structures.

Before forested areas were divided to classify healthy and densely wooded areas where previous logging or clearing left behind scrub / shrub vegetation type. Finally, agricultural areas were divided into three subclasses: crops and lush pasture, cultivated or exposed soil, and another class of recently harvested or unhealthy vegetation / dormant.

In order to find a robust relationship between the two quantifier, statistical and mathematical analysis of all major factors that can influence directly or transport emissions is required. To be truly meaningful, this type of study would require data sets with similar spatial and temporal resolution / extent. Monitoring stations tend to be located around sources of pollution and adjacent neighborhoods. This is useful for tracking pollution levels to be used in accordance with ensuring national standards, but it does not allow us to obtain accurate regional perspective.

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Fig.1. Area affected by pollution because of the hilly mining Maramures area

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Given the location of monitoring sites, we can see how satellite data and orthophotomaps, may be useful in measuring particulate pollution in areas where limited or no ground monitors. Satellite details help to give us a regional map, which is probably more accurate than interpolation of scattered observations from ground monitors. The result is a more complete picture of the pollution and allow us to better correlate the changes over a larger area that would be difficult using surface observations.

Another possible enhancement to this study as the use of high quality data sets and with a higher frequency of observation.

These maps would provide a detailed picture of land use in a different region and allow a better determine the effects of certain land use changes may have on air quality.

The ability to extend spatial and temporal coverage of data sets used in this study, such as the above would greatly enhance the accuracy and usefulness of the results on a regional scale.

CONCLUSIONS

Good decisions in drafting mine closures to their conservation and environmental protection, and may be easier knowingly taken when using ortofotomaps GNSS positioning systems and geographic information systems ROMPOS, which are indispensable in all fields , especially in developing these projects. above are part of GNSS positioning system ROMPOS its use in decision making on projects of mine closures and the benefits of this use in this area.

In the final draw general conclusions and specific to look at the use of GNSS positioning ROMPOS ortofotomaps position determination and decision making on projects of mine closures, but the utility and speed in decision making using these new systems relative to Romania, and particularly in the Maramures county.

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