

THE CONTRIBUTION OF DIFFERENT GPS TYPE'S IN SUSTAINABLE DEVELOPMENT (CASE: MOUNTAIN CHORTIATIS – KISSOS)

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EXTENDED ABSTRACT

The last decade GPS has appeared as a powerful instrument for radionavigation technology for military, transportation, engineering, geosciences and GIS applications. GPS has a variety of applications on land, at sea and in the air. Basically, GPS is usable everywhere except where it's impossible to receive the signal such as inside most buildings, in caves and other subterranean locations, and underwater. Many different types of GPS are now in the market. The contribution of GPS technology in sustainable development is what we called to answer in this paper. The sustainable development is an environmental issue of our days. We believe that all the GPS types can provide a sustainable development in a different way each one of them.

Here we used two main types of GPS, the GPS with a reference antenna and the handheld GPS. Using these two GPS types, on a mountainous area, we found out that there are different position results and there was not accurately with the real ones which were measured by surveying methods.

The Methodology which was followed, based on the knowledge of Selective Availability (SA) implementation, due the Golf War in Irak, by the time of our fieldwork. The Selective Availability was a method for reducing the accuracy for civilian users of the system. After the fieldwork we compared the results of GPS's and the results of surveying methods and we made a comparative table in order to point out the inaccurate points. Based on this GPS fieldwork we discuss about the possibilities of contributing these types of radionavigation systems in sustainable development on mountainous areas.

The GIS data collection is directly connected with the located position. A big rate of GIS applications are based on data which can be covered from only one receiver. The handheld GPS provides more facilities in use than the GPS with reference antenna, although that both them collect data for GIS applications, which can be used for making a sustainable development plan for a mountainous area.

Key words: GPS, sustainable development, compare different types of GPS, mountainous area, Chortiatis.