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Use of GIS in macro planning, interdisciplinary collaboration: Konya – Isparta environmental master plans

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Keywords

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Abstract

In this study; one of the most common usage areas of Geographic Information Systems (GIS) in recent years, 1/100 000 and 1/25 000 scale "Environmental Plans" and how these plans are handled in cooperation with GIS and interdisciplinary will be explained. The relationship between "Provincial Environmental Plans (ÇDP) and Geographic Information Systems (GIS)", which is a reform work of the public administration, which has been in search of high-scale planning and environmental control since the beginning of the 2000s, will be discussed. In this Paper, as examples of these studies; "Konya - Isparta Planning Region 1/100 000 Scale Environmental Master Plan" was discussed. Analysis sheets, SWOT and synthesis sheets were prepared by supporting the Geographic Information System with literature studies, thesis studies, interviews, meetings held in the region.

1. Introduction

From the spatial information at the regional and/or provincial level produced with GIS, in line with the benefits of science and society; In MACRO PLANNING, human and environment-centered ENVIRONMENTAL PLANS and FUTURE STRATEGY and SCENARIOS are produced for "to provide benefit with maximum effect" and "sharing".

These strategies and scenarios and the 1/100 000 / 1/25 000 Scale Environmental Plans they are reflected in; "In The Entire Province" and/or in "The Planning Zone Including Several Provinces"; earthquake, epidemic disease, global warming, climate crisis, mucilage, fire, water, air pollution, reducing the urban heat island effect, establishing the protection-use balance, protecting the natural environment, determining land use decisions to ensure sustainable development, evaluating urban and rural developments and redirect, traffic etc. are used to develop solutions.

Within the scope of this paper; In order to provide information sharing for the benefit of society, it is aimed to reveal the spatial informatics (common) research/study topics that are of interest to the

disciplines of "map engineering" and "city and regional planning", science and social sciences, and to contribute to the decision makers to make the right decisions with the final products. This study will shed light on the need for interdisciplinary cooperation and GIS at the level of strategic planning and management.

2. Method

By examining the data related to the 1/100 000 Scale Konya Isparta Environmental Plans and the method of preparation with the ArcGIS program, the intersection between survey engineering and City and Regional Planning will be evaluated. By giving the cooperation and communication of the Survey Engineers and City Planners working in the creation and use of "Satellite Photographs", which is the most basic database used in these plans, and the prepared Provincial Entire GIS, the resulting products (analysis, synthesis and plan) are given.

3. Results

Spatial planning and decision making is a complex and interdisciplinary task with an infinite number of

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solutions. Noting that during the planning process, *“better planning can be achieved through better information and that better information”* will necessarily flow through an information system; integration of geographic information systems into planning; It has contributed to a clearer understanding of real planning problems as well as planning scenarios.

Slope analyzes were made by using satellite images and elevation charts called YÜKPAF, apart from the data storage in the database, the plan drawing. In addition, apart from ARCGIS, for example, a separate software was used for the classification of forest areas, and classification studies of forest areas and non-forest areas were made from satellite images. During the implementation of Environmental Plans prepared on the basis of a province or "Planning Region", which includes several provinces, rapid access to data and plan, updating and monitoring of information (monitoring) of many local and central public institutions/organizations are of great importance. Evaluation of the "Performance" of the plan and its addition and revision, when necessary, can only be healthier if the GIS environment is prepared effectively -web-based- and its access is facilitated.

4. Conclusion

As a result, the contribution of GIS to urban planning problems in both macro and micro level planning and decision-making processes, the opportunities it offers to evaluate alternative solutions, has shown that it is an invaluable tool. As the details will be explained in this paper, the use of GIS and the resulting Environmental Plans in line with the "Public Benefit" and the protection

of natural, cultural and historical values, as a result of the continuous cooperation and coordination of the Survey Engineer and the City and Regional Planner, are one of the most important legal tools used today.

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