Urban development issues; waterfront renovation

## Protection Of Aquifer Areas From Land Uses: Gölbaşı Spa

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Protected Area can be defined that designated or regulated and managed to achieve specific conservation objectives in specific geography. Protected areas are a cornerstone of conservation efforts worldwide and are generally effective in preventing habitat loss inside them. However, land-use changes in the surroundings of protected areas increasingly isolate protected areas. Land-use change is the main driver of current biodiversity decline due to the loss, fragmentation, and degradation of natural habitats. In this study special environment protection area (SPA) is chosen as sample protected area. Case study of paper is Gölbaşı Lake and Gölbaşı SPA. SPA is important protected area natural network systems that The Council Directives 79/409/EEC on the conservation of wild birds (Birds Directive), and 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), have led to the establishment of Special Environment Protection Area (SPA), a system of protected areas in the European Union. In this study protection of aquifer areas from land uses is researched in order to maintain natural structure of Gölbaşı (Ankara) SPA. Environmental Arrangement Plan of Gölbaşı SPA, Gölbaşı SPA map of aquifer areas, land use (both agricultural and urban) are formed material part of paper. A basic concept and technical process for the application of the GIS technique in the evaluating protection of aquifer areas of Gölbaşı SPA and relation between land uses are created by GIS. The analysis of the evaluation model and data interpolation method for the model in GIS was done. Euclidean Distance Mapping was chosen as method of study. Euclidean Distance Mapping is a method for determination of shortest paths that facilitates to link conservation areas and aquifer areas. Beside these paths restrict land uses so that conservation areas of Gölbaşı SPA can be protected. The physical environment generates two major conditions; first conditions resulting from the utility of resources; and latter is conditions resulting from the sensitivity of resources. This method offers balance between utility of resources and conservation of resources. Land use and water resources are inextricably entwined. In this method interaction of two important land uses which are agriculture and urban settlements and aquifer areas are handled. Result of research show that aquifer areas of Gölbaşı SPA are directly and intensively affected by agriculture and urban settlements. Euclidian Distance Mapping restricts land uses and integrates aguifer areas so that aquifer areas can be protected from land uses in Gölbaşı SPA. Beside balance of utility of resources and conservation resources can be achieved. Thus sensitivity of protection areas can be maintained. A map is proposed in order to arrange land use and link aquifer

areas and conservation areas in Gölbaşı SPA in order to provide sustainable development.