

## **SELECTION OF AN OPTIMUM SITE TO CONSTRUCT AND DEVELOP AN AIRPORT IN THE NORTH AEGEAN USING MULTI CRITERIA ANALYSIS.**

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### **EXTENDED ABSTRACT**

For an airport in the North Aegean (located in Chios Island) to work effectively and competitively in the future, some works related to air terminal , aircraft runway and parking space increase, are required.

In the context of the Environmental Impact Assessment Study of these works, alternative sites of airport development were analysed using the Multi Criteria Analysis (MCA) methodology. Main Frame of Reference to this MCA analysis were criteria set by the Greek Environmental Legislation (Law 3010/2002), Local Planning Programms and Greek and European Objectives of Environment and Sustainable Development.

This paper presents mainly the methodology and the results of the Multi Criteria Analysis group of experts, where operational, financial, environmental, land-use planning and sustainable development criteria were set. This technique combines various components/criteria to select the best site in which an airport would be established. MCA analysis used in this work consisted of establishing the decision context, identification of Option for the Airport development, identification of criteria for assessing the consequences of every option, scoring the options on the criteria, assessing weights for each of the criteria and finally calculation of overall weighted score for every option.

In this framework of the Environmental Impact Assessment Study of Chios Airport a Multi Criteria Analysis was carried out in order to assess the environmental consequences of different sites for the airport development. Operational, financial, environmental, land-use planning and sustainable development criteria were set. This multi criteria procedure led to a site selection for the construction of the airport (the existing site is the preferred sites out of four candidates sites). The perspective of this approach seems to be very promising in the direction of employing scientific tools to rationalise optimal site selection in major transport projects.

**Key words:** Multi Criteria Analysis, Site Selection, E.I.A.