

# Determination of the Physical Characteristics of the Trekking Tracks in Hatila National Park through GIS

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## Abstract

Today's living conditions restrict the time people can spend in the nature. Studies conducted in the recent years exhibit that people's longing for the nature increases more and more. Trekking is an activity that can be performed by almost everyone and it is among the sports activities people can perform in order to satisfy their longing for the nature. This study was conducted for the purpose of evaluating the quality of 45 in-forest tracks of the mainly mountainous Hatila National Park located in the city of Artvin in terms of being regarded as trekking tracks. The area is an important recreational spot where the characteristics of natural landscape meet cultural landscape, and is under protection owing to the flora and wild life it embodies. Within the scope of the study, the physical characteristics of the trekking tracks including the slope, walking distance, walking time, aspect and elevation were determined through the use of geographic information system (GIS). From the findings obtained in the study, it was determined that the examined 45 tracks varied largely in terms of length (min 1612 m, max 33735 m), and that also track walking distances and the elevation differences between track starts and track ends vary (min 157 m, max 2189 m) according to the track length. It was also determined that variability in terms of slope levels also exists (minimum average gradient being 16.07% and the maximum average gradient being 27.90%) due to the topographical characteristics of the area, and that once again due to the topography, four different aspects are predominant in the area.

**Keywords:** Track, trekking, GIS, Hatila National Park

## 1. Introduction

Trekking is the common name for walks in the nature. Having initially started as personal or group activities nature lovers carry out in order to experience the beauties of the nature and spend time in the nature, today trekking has grown and gained an economic dimension under the frame of alternative tourism. Trekking can be classified under the groups of day hiking, hiking, backpacking, trekking with or without predefined routes, forest trekking, desert trekking, mountain trekking, canyon trekking, field trekking, stream bed trekking and winter trekking (Rival 2002; Geneletti & Dawa 2009; Wikipedia 2013a).

Physical characteristics of the area such as the difficulty level of the tracks, slope, distance, trekking time and the standards of the path (its width, ground) are closely related with the performances of the trekkers and the climatic characteristics of the area. With today's conditions, digitized maps and satellite images are used in the determination of the physical characteristics of these areas and performance of the necessary analyses. Walking time is an important parameter that needs to be determined for trekking