Geodiversity, geoheritage and volcano tourism in natural protected areas of Tenerife (Canary Islands, Spain)

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Volcanic landscapes are attractive for the tourists. Its complex eruptive history and the erosional processes generate multiple forms with an important geodiversity and geoheritage (geosites and geomorphosites). Tenerife constitutes the largest (2,034 km²) and highest (3,718 m a.s.l.) of the Canary Islands, Spain. It has been built up as a result of the accumulation of different volcanic materials (mafic, felsic and intermediate) during a large period of time of more than 12 million years. The aim of this contribution is to study the volcanic geodiversity and geoheritage of natural protected areas (NPA) in Tenerife and their importance for volcano tourism. The methodology is based on field work and calculates the geodiversity values through the inventory of its geoheritage and its volcanic resources for the geotourism. According to Serrano and Ruiz-Flaño, (2007), geodiversity values can be classified in very low (<15), low (15-25), medium (25-35), high (>35-45) and very high (>45). According to Sigurdsson and Lopes (2000), volcanoes offer eight types of “attractions” for tourism: scenery, the spectacle of volcanic activity, hot springs and spas, adventure sports, adventure travel, black, red or green sand beaches, archaeology and the relation between the religion and volcanoes. Tenerife has 43 NPA and cover 48% of its surface. The Island hosts a National Park (Las Cañadas del Teide), ten Natural Reserves, one Natural Park (Corona Forestal), two Rural Park (Anaga and Teno), fourteen Natural Monuments, nine Protected Landscapes and six Sites of scientific interest. The main criteria for the selection of a NPA in Tenerife are landscapes, naturals and biological, although in the Natural Monuments and the Reserves the geodiversity and the geoheritage are very important. The percentage of geodiversity in the NPA of Tenerife are very low (46.51%), low (32.56%), medium (2.32%), high (2.32%) and very high (16.29%). The main geoheritage in the natural protected areas of Tenerife are cinder cones, lava fields, ravines, cliffs, alluvial and colluvial deposits and black beaches. Most frequent volcanic resources of NPA in Tenerife for the geotourism are the scenery (100%), the adventure travel (53.48%), sports (28%), front to the archeology-religion (16%) and hot spring and spas (7%). All these aspects demonstrate that in the natural protected areas of Tenerife the geodiversity, the geoheritage and the geotourism are very important for its development, but Tenerife authorities must make strategies to promote geotourism in the NPA of the Island.