

LAND USE AND OCCUPATION IN THE CITRICULTURE SECTOR OF THE FEDERAL INSTITUTE OF ESPÍRITO SANTO - ALEGRE CAMPUS, BRAZIL

USO E OCUPAÇÃO DO SOLO DO SETOR DE CITRICULTURA DO INSTITUTO FEDERAL DO ESPÍRITO SANTO - CAMPUS ALEGRE, BRASIL

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Abstract

The conservation of water and soil is based on actions aimed at the responsible and sustainable use of natural resources. It is imperative to know the land use and occupation and to adopt conservationist practices to reduce the negative environmental impacts of anthropic actions. The objective of this work was to describe the land use and occupation in the Citriculture Sector of the Federal Institute of Espírito Santo - Alegre Campus. Initially, field work was carried out to identify the geographic features, relief, crop management, signs of water erosion and conservation practices adopted in the Sector. Then, in the institution's Geoprocessing Laboratory, the study area was delimited and the area of each geographic feature was quantified, resulting in the elaboration of the Sector Land Use and Occupancy Map. The elaboration of the map was followed by the use of the QGIS software, configured for the Coordinate Reference System SIRGAS 2000 - UTM Zone 24S. The on-screen photointerpretation technique was used, at a scale of 1:500, using the local Google Satellite image, referring to the month of March 2021. The study resulted in the identification of six land use classes: orchard; lake; road; trees; construction; and an open field area. We found that the area of the Sector is 34,285.23 m² and that the features have the following areas: orchard (22,210.7 m²), lake (910.33 m²), road (5,474.5 m²), trees (3,831.35 m²), construction (18.47 m²), and open field (604.68 m²). There are some noteworthy conservationist practices in the Sector, such as contour planting, terracing, maintenance of the native plant cover and the presence of some areas for cultivation of unconventional food plants, which is positive from a conservation point of view. However, on the roads, the presence of ruts caused by the action of water erosion was identified, especially on steeper roads. Thus, it is recommended to implement more soil and water conservation techniques in the referred agro-ecosystem, such as the construction of dry boxes, reservoirs built on the side of roads that make it possible to retain rainwater and solid sediments transported by surface runoff. Such action would better conserve the roads, minimize soil losses and, consequently, promote greater water infiltration, resulting in a better environmental quality.

Keywords

Soil conservation, geoprocessing, agricultural management.