

## **Geochemical hazards due to volcanic eruptions: soil-plant interactions in the volcanic island of Fogo (Cape Verde) – preliminary results**

CARLA CANDEIAS<sup>1\*</sup>; ALBUQUERQUE MANUEL<sup>1</sup>; PAULA ÁVILA<sup>2</sup>; FERNANDO ROCHA<sup>1</sup>

<sup>1</sup>University of Aveiro, GeoBioTec. Geosciences Department.  
Campus de Santiago, 3810-193 Aveiro, Portugal  
(candeias@ua.pt)

<sup>2</sup>National Laboratory of Energy and Geology (LNEG), Rua da Amieira, Apartado 1089, 4466-901 S. Mamede de Infesta, Portugal

Volcanic eruptions disturb directly and indirectly the ecosystems. Hazards include, among others, potentially toxic volcanic ashes that are deposited on soils and water systems on the volcano surroundings. These dusts also might be transported by the wind to distant locations. Direct impact occurs on the nearest soil-plant system with an input of several new elements. Indirect hazard happens through the consumption of these plants by inhabitants.

Fogo island (476 km<sup>2</sup>), in Cape Verde, has an active volcano. The last eruption occurred, after 19 years of inactivity, on November 23, 2014 on a subsidiary vent of the main cone. The lava expelled destroyed two villages, previously evacuated, and covered vast areas of agricultural land, causing huge economic losses on this developing country. Although the eruption caused no casualties large amounts of dusts were expelled and spread all over the island.

Three years after, in 19 selected villages spread all over the island, 59 human consumption plants and 19 rizhosfere soils were collected in order to understand the possible geoimpact of the volcano in humans. Data is being processed and preliminary results will be presented, taking in consideration previous Fogo soil studies.

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