



## **Educational program on climate change and air quality in Tenerife, Canary Islands, Spain: a local and global reality**

José Barrancos (1,2), Verónica Vela (1,2), María Asensio-Ramos (1), Germán D. Padilla (1,2), Fátima Rodríguez (1), Aarón Pérez (1,3), David Calvo (1), Gladys V. Melián (1,2,3), Pedro A. Hernández (1,2,3), Nemesio M. Pérez (1,2,3)

(1) Instituto Volcanológico de Canarias, Granadilla de Abona, Spain (jbarrancos@iter.es), (2) Instituto Tecnológico y de Energías Renovables (ITER), Granadilla de Abona, Tenerife, Canary Islands, Spain, (3) Agencia Insular de la Energía de Tenerife (AIET), Granadilla de Abona, Tenerife, Canary Islands, Spain

The current problems with regard to pollution, climate change (perhaps the greatest socio-environmental problem facing humanity today) and air quality have made the environment a topical issue and has increased the concern of citizens for the possible consequences of unfavorable treatment of the environment that surrounds us. The atmosphere has become the traditional garbage bin for industry, transport and domestic users of fossil fuels; that is why the environmental quality changes at an unprecedented speed.

Tenerife (Canary Islands, Spain), with an area of 2,034.38 km<sup>2</sup> has a population of 891,111 inhabitants. To this we must add population that has not been registered, as the more than 5 million tourists who visit the island each year, students, temporary workers, etc. All this is a difficult burden to confront for a limited territory, considering that the Canarian community is 97% dependent on oil and supports one of the highest rates of air pollution in the Spanish country.

We present here the project "*AIRES DE TENERIFE: una realidad local y global*" (THE AIR OF TENERIFE: a local and global reality), that aims to bring young students, as well as their teachers and families, to the environment in which they live. With this, we want to contribute to a greater awareness among young residents about the emission of polluting gases into the atmosphere, air quality and climate change; strengthen their observation and analysis capacity; and emphasize that climate change is a problem of global magnitude that requires local and global responses at the same time.

In order to carry out this project, we organize a week-long based visit to a Secondary Education Institute of each of the 31 municipalities of Tenerife. This visit includes the exhibition of 17 informative and educational panels to understand and act against climate change, the projection of documentaries, the installation of two mobile units to measure the levels of emission (SO<sub>2</sub> and NO<sub>2</sub>) and immission of atmospheric pollutants (CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, O<sub>3</sub> and PM10 particles), and a colloquium talk on air pollution, the rational use of energy, energy saving and global climate change. Finally, we encourage the active participation of the students in experimental and social projects related to these issues.

This project is financed by the Tenerife Innova 2016-2021 Program that coordinates the Tenerife Area 2030: Innovation, Education, Culture and Sports of the Island Council of Tenerife, in collaboration with all the municipalities of the island.