



Environmental Monitoring of Methane (CH₄) emissions to the atmosphere from landfills at Tenerife (Canary Islands) in Spain

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Abstract:

The present study investigated Environmental monitoring of greenhouse gas emissions (methane, CO₂, volatile organic compounds, etc.) in the atmosphere at ARICO landfill in Tenerife (Canary Islands) with Involcan, ITER and GeoTenerife. Methane (CH₄), the second largest anthropogenic greenhouse gas after carbon dioxide (CO₂), accounts for over one-third of anthropogenic climate forcing. Methane is considered a “short-lived climate forcing agent”. Although methane remains in the atmosphere for a shorter period of time than CO₂ and is emitted in smaller amounts, its “global warming potential” is 21 times higher than that of CO₂. The main objective of this study is the promotion of green energy with the development of biogas so that public and private structures can take ownership but also allow better management of solid waste by minimizing air pollution. As part of the research methodology, field and laboratory work is carried out. Thus, a spatio-temporal distribution of the study area has been carried out notably at the level of the environmental complex of Tenerife with 444 landfill gas collection points that are formed during the decomposition of organic matter in landfill sites, solid urban waste. The collection, processing and analysis of data are carried out by fairly powerful tools and equipment such as the NDIR ; microchromatography ; the sequential Gaussian Simulations. The results of the various studies are convincing, thus enabling a better understanding of methane emissions in landfills and capturing this gas for energy conversion in the context of biogas, also resilience and adaptation to climate change.

Biography:

Doro NIANG Environmental Geologist and Geotechnician PhD student at Université Cheikh Anta Diop de Dakar (UCAD), President of the Association of Young Geologists and Environmentalists of Senegal (West Af-



rica). Doro has completed his Master degree in 2016 in Geosciences at the Geology department of UCAD.

Publication of speakers:

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