Contribution ID: **77** Type: **Oral contribution**

Diagnostics techniques and dosimetric evaluations for environmental radioactivity investigations

Thursday, 8 September 2016 17:35 (20 minutes)

A comprehensive study was conducted about the investigation of the natural/anthropogenic radioactivity of various environmental matrices.
Different diagnostics techniques were employed: high resolution HpGe gamma spectrometry, to quantify the activity concentration of radionuclides that emit gamma photons; liquid scintillation, to determine the activity concentration of tritium, radon and total alpha/beta in liquid samples; alpha spectrometry through the Rad7 setup, to estimate the gas radon activity concentration in air, water and soil; total alpha/beta counter, for the activity concentration quantification of radionuclides, in solid samples, emitting alpha/beta particles.
From the dosimetric point of view, knowledge of the radioactivity level in the environmental matrices allows to evaluate any possible radiological hazard for the population, through the calculation of the appropriate parameters of radioprotection and their comparison with the safety limits reported by the current legislation.

Primary author: Dr CARIDI, Francesco (Environmental Protection Agency of Calabria, Italy (ARPACal), Department of Reggio Calabria)

Co-authors: Dr BELVEDERE, Alberto (Environmental Protection Agency of Calabria, Italy (ARPACal), Department of Reggio Calabria); Dr BELMUSTO, Giovanna (Environmental Protection Agency of Calabria, Italy (ARPACal), Department of Reggio Calabria); Dr D'AGOSTINO, Maurizio (Environmental Protection Agency of Calabria, Italy (ARPACal), Department of Reggio Calabria); Dr MARGUCCIO, Santina (Environmental Protection Agency of Calabria, Italy (ARPACal), Department of Reggio Calabria)

Presenter: Dr CARIDI, Francesco (Environmental Protection Agency of Calabria, Italy (ARPACal), Department of Reggio Calabria)

Session Classification: Multidisciplinary Applications