



Assessing Chernobyl's impact on Central Greece soils: a study overtaken a radiocesium halflife later

Theo Mertzimekis (1), Ioannis Ioannidis (1), Athanasios Godelitsas (1), Dionysios Gasparatos (2), Konstantinos Stamoulis (3), and Konstantinos Ioannides (3)

(1) School of Science, University of Athens, Athens, Greece, (2) Laboratory of Soil Science, Aristotle University of Thessaloniki, Thessaloniki, Greece, (3) Department of Physics, University of Ioannina, Ioannina, Greece

Soil cores to a depth of 20 cm from ground surface were collected from several rural locations in Central Greece in an attempt to study the ^{137}Cs concentration and distribution in soils from the most afflicted areas by the Chernobyl accident. As the time from the accident approaches one halflife of radiocesium, new data are required to assess the long-term fallout impact on the Greek environment.

The samples were examined by high resolution gamma spectroscopy and the results show that ^{137}Cs from Chernobyl is still highly present at some remote, undisturbed areas, while it has reached background levels or moved deeper into the soil profile in other locations. Correlations of ^{137}Cs to the soil particle-size fraction have also been searched, especially focusing on the clay content. In addition, natural radioactivity levels have been examined.