

Nuclear Science and Technology for a sustainable environment – trends and case studies of solutions to environmental problems of the 21st century.

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Abstract

It has been a long tradition that nuclear science and technology was applied to environmental studies. The use of natural as well as artificial radioactive tracers has been successfully applied to reconstructing past environmental change, groundwater recharge rates, environmental pollution studies, ecotoxicology on biota. This presentation will focus on: 1) reconstructing past rapid climate changes using XRF techniques and radiocarbon as a tracer, 2) Using XRF and Pb-210 dating techniques to study recent coastal pollution trends and 3) using nuclear and isotopic techniques in food provenance. We will demonstrate that partnerships and collaborations to form multidisciplinary teams is paramount to tackle environmental issues of the 21st century, we will simultaneously demonstrate that research does not have international boundaries and that international collaboration and developing capabilities in less developed countries should be part of our daily activities.