

1.5-P03. ASSESSMENT OF THE RADIOLOGICAL IMPACT IN ARGENTINA OF THE NUCLEAR TESTS AFTER DECADES

Samples of the radioactive fallout of deposition and fresh milk had been taken in the city of Buenos Aires and the surroundings since 1960. A statistical procedure was used to analyse the temporary variation of the Sr-90 and Cs-137 concentrations. The obtained results allowed assessing the environmental impact and radiological exposure of the population in South America. The objective of this research was to increase the knowledge of the contamination caused by the past atmospheric nuclear weapon tests in the South Pacific and the radiological detriment in the population through the decades. The maximum concentrations of Cs-137 and Sr-90 in deposit were registered in 1966, and milk concentrations reached the maximum in 1964. The dose from the exposure to the maximum activity of Cs-137 was 17 $\mu\text{Sv}/\text{year}$. In the case of ingestion of milk, the maximum doses in children from Cs-137 and Sr-90 were 5.9 $\mu\text{Sv}/\text{year}$ and 5.3 $\mu\text{Sv}/\text{year}$, respectively. Up to the present the radionuclides Cs-137 and Sr-90 have delivered fifty percent of committed doses. Nowadays, dose from the residual fall out, of the studied radionuclide, are a negligible portion of the natural radiation dose.

Primary author: QUINTANA, Eduardo Edmundo (Autoridad Regulatoria Nuclear (ARN))

Presenter: QUINTANA, Eduardo Edmundo (Autoridad Regulatoria Nuclear (ARN))

Track Classification: 1. The Earth as a complex system