

CHERNOBYL ACCIDENT 14 YEARS LATER: SOCIETAL IMPACTS ON UKRAINE, EUROPE AND THE ENTIRE WORLD

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On April 25th-26th, 1986 the World's heaviest nuclear accident happened at Chernobyl. Materials released to the atmosphere were widely dispersed and sooner or later deposited onto the surface of the earth. It was quantifiable over practically the entire Northern Hemisphere. Since the involved dispersal processes were mainly of a meteorological origin and, therefore, exposed an extreme variability over a wide range of scale (both in space and in time), the multifractal techniques were particularly helpful for the quantification of the Chernobyl fall-out and its consequences. Traditionally in radiation protection the consequences are viewed mainly in terms of impact on the society and its individuals. The extreme variability implies nontrivial and widely recognized difficulties for risk assessment and monitoring since the risks depend primarily on local doses. Therefore, macroscopic manifestations of multifractal contamination of ecologically dangerous territories and estimation of their influence on risk criteria for inhabitants and economic activity are of the principal importance for an evaluation of the environmental damage produced by the Chernobyl accident.