

# ALLIANCE Perspectives on Integration of Humans and the Environment into the System of Radiological Protection

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**Abstract**—Risks posed by the presence of radionuclides in the environment require an efficient, balanced and adaptable assessment for protecting exposed humans and wildlife and managing the radiological risk associated. Approaches have been developed to assess or predict the transfer of radionuclides in the environment and their distribution/accumulation in relevant environmental compartments. Environmental concentrations of radionuclides serve as inputs to estimate the dose to man, fauna and flora. Dose estimates are then compared with the radiological protection criteria, such as those developed by the ICRP, for man and wildlife. This demonstrates the similarity in the approaches for impact assessment in humans and wildlife, suggesting the protection systems could easily be integrated; some elements are different, e.g. individuals are the focus of human assessments whereas for wildlife are populations. If human and environmental assessments are not consistent and complementary in terms of how they are conducted and the underlying databases (where appropriate), this may cause difficulties for operators and regulators and be difficult to communicate to wider stakeholders. Both in terms of the underlying philosophy and the application via appropriate tools, the ALLIANCE is convinced that integration in several ways and from several perspectives (e.g. chemical/radiological risks) is required for optimisation of impact assessment and decision support.