

# Beresford et al. International comparison of approaches to prediction JRP

**Beresford, N.A., Barnett, C.L., Brown, J.E., Cheng, J.-J., Copplestone, D., Gaschak, S., Hosseini, A., Howard, B.J., Kamboj, S., Nedveckaite, T., Olyslaegers, G., Smith, J.T., Vives I Batlle, J., Vives-Lynch, S., Yu, C. 2010.**

Predicting the radiation exposure of terrestrial wildlife in the Chernobyl exclusion zone: an international comparison of approaches.  
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There is now general acknowledgement that there is a requirement to demonstrate that species other than humans are protected from anthropogenic releases of radioactivity. A number of approaches have been developed for estimating the exposure of wildlife and some of these are being used to conduct regulatory assessments. There is a requirement to compare the outputs of such approaches against available data sets to ensure that they are robust and fit for purpose. In this paper we describe the application of seven approaches for predicting the whole-body ( $^{90}\text{Sr}$ ,  $^{137}\text{Cs}$ ,  $^{241}\text{Am}$  and Pu isotope) activity concentrations and absorbed dose rates for a range of terrestrial species within the Chernobyl exclusion zone. Predictions are compared against available measurement data, including estimates of external dose rate recorded by thermoluminescent dosimeters attached to rodent species. Potential reasons for differences between predictions between the various approaches and the available data are explored.

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