

Interactive comment on “Element and radionuclide concentrations in soils and wildlife from forests in north-east England with a focus on species representative of the ICRP’s Reference Animals and Plants” by Catherine L. Barnett et al.

Anonymous Referee #2

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This is a very well written paper and the comments are to enhance clarity and to provide further explanation of some of the statements made. Line 50: it would be helpful to very briefly explain the 'Reference Site' concept. Line 101 onwards. Somewhere there needs to be a list of the elements/nuclides for which measurements have been made - this is only mentioned in Section 2.4. It would also be helpful to include a table that indicates which elements/nuclides are measured for each species. Line 215 and 253. Please explain why samples for these samples were ashed and others were freeze-dried in the preparation methodology. Line 400 (and earlier). What was the

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justification for choice of species for gamma analysis? Line 404/405. It is not clear from this sentence that only frogspawn was analysed for gammas and not other frog flesh samples. Line 531-Section 4. Please can the authors comment on the limitations of using location specific soil concentrations for estimating CR values for animals that graze a large area eg deer. How is this addressed in this and in general. Line 558 onwards. As the authors suggest, it would not be expected that the CR values for Cs-137 would be up to an order of magnitude higher than stable Cs and this deserves a note that further investigation is warranted for potentially important nuclides with respect to dose. Other published reports eg IAEA TRS479 make a comment that using CR for stable elements is likely to be conservative for short-lived nuclides if equilibrium is not reached and could be cited. Line 581. Sentence is not clear and would benefit from splitting.

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