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| Title                | Knowledge gaps in relation to radionuclide levels and transfer to wild plants and animals, in the context of environmental impact assessments, and a strategy to fill them                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Author(s)            | 1. J.E. Brown (editor) and R. Gjelsvik<br>2. R. Saxén and J. Mattila                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Affiliation(s)       | 1. Norwegian Radiation Protection Authority, Norway<br>2. STUK, Finland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| No. of tables        | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| No. of illustrations | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Abstract             | <p>International activities with regards the development of methods for assessing impacts on the environment from ionising radiation have been substantial in recent years. In developing these methods, there are requirements (i) to determine the transfer of radionuclides within ecosystems and (ii) to determine background dose-rates arising from the presence of naturally occurring radionuclides, in a satisfactory manner. It has quickly become evident that fulfilling these 2 requirements is not entirely straightforward reflecting a lack of data in many cases. This report specifies exactly where these data-gaps lie through analyses of data generated from the most recent studies conducted internationally on this topic. It is evident that information is limited for numerous radionuclides from U-238 and Th-232 decay series and notably, in view of its importance as a contributor to dose-rates in plants and animals, Po-210. The simple way to rectify these data deficiencies is to organise target field campaigns focusing on particular species and radionuclides where information is lacking. To this end, field sampling has been conducted in a semi-natural mountain ecosystem in Norway and freshwater aquatic systems in Finland. It is envisaged that the data derived from the studies briefly described in this report will provide fundamental information for our understanding of the behaviour and fate of natural decay series radionuclides in terrestrial and aquatic systems and provide the basis for more robust way.</p> |
| Key words            | Transfer, non-human biota, impact assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |