

# Spreadsheet from Wood et al.

- Concentration ratios ( $CR_{\text{wo-media}}$ ) are used in most radioecological models to predict radionuclide activity concentrations in wildlife from those in environmental media.
- This simplistic approach amalgamates the various factors influencing transfer within a single generic value and, as a result, comparisons of model predictions with site-specific measurements can vary by orders of magnitude.
- To improve model predictions, the development of 'condition-specific'  $CR_{\text{wo-media}}$  values has been proposed (e.g. for a specific habitat or wildlife sub-category).
- The underlying datasets for most  $CR_{\text{wo-media}}$  value databases, such as the [wildlife transfer database](#) developed within the IAEA EMRAS II programme, include summarised data.
- This presents challenges for the calculation and subsequent statistical evaluation of condition-specific  $CR_{\text{wo-media}}$  values.
- A further complication is the common use of arithmetic summary statistics to summarise data in source references, even though  $CR_{\text{wo-media}}$  values generally tend towards a lognormal distribution and should be summarised using geometric statistics.
- Wood et al. proposed a statistically-defensible and robust method for reconstructing underlying datasets to calculate condition-specific  $CR_{\text{wo-media}}$  values from summarised data and deriving appropriate summary statistics.
- To enable others to be able to conduct similar analyses of summarised data sets the authors have made the [SPREADSHEET with macro's available](#).
- **Ensure you read and follow the instructions on the README sheet.**

## Reference details

Wood M.D., Beresford N.A., Howard B.J. and Coplestone D. *Evaluating summarised radionuclide concentration ratio datasets for wildlife* (Submitted to Journal of Environmental Radioactivity, May 2013).