

Habits Surveys; an opportunity to engage with the public in the vicinity of nuclear licensed sites in the UK

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1. Introduction

The radiological impact to man from the ingestion of seafood can be estimated using consumption rates from site specific surveys or generic national surveys. Site specific data is obtained from interviews with members of the public in the vicinity of nuclear sites during 'habits surveys'. Habits surveys also present an ideal opportunity to engage with members of the public to increase awareness of other aspects of radiological protection. By consideration of two case studies, we illustrate the difference in estimated dose using site-specific and national generic data.



2. Methods

- 97.5th percentile consumption rates of fish, crustaceans and molluscs obtained during annual habits surveys at Sellafield (2001 to 2010) were compared with generic 97.5th percentile consumption rates obtained from Byrom *et al.*, 1995. A similar comparison was undertaken using data from two habits surveys at Hunterston (2001 and 2007) and Byrom data.
- Doses estimated using habits consumption data and generic consumption data were compared for Sellafield and Hunterston. The results of radiological analysis of seafood presented in the Radioactivity in Food and the Environment report series (for example, EA, FSA, NIEA and SEPA, 2011) were used in all dose estimates.
- For dose estimates using habits data, the radionuclide concentrations in samples of seafood species that closely matched observed consumption were selected and weighted according to their consumption rate, whereas, for the dose estimates using generic data, each species was equally weighted.

3. Results

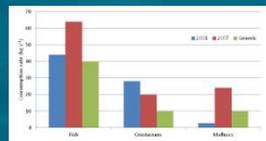
Sellafield 97.5th percentile consumption rates



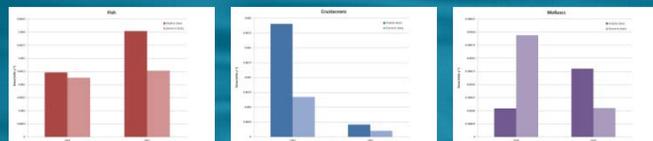
Sellafield doses



Hunterston 97.5th percentile consumption rates



Hunterston doses



4. Conclusions

- The use of site-specific habits data provides more realistic and accurate estimates of doses to the public than are provided by the use of generic data.
- Estimates are improved because of (1) more realistic consumption rates and (2) better matching of consumption rate data with the available radionuclide concentration data.
- Engaging with the public is a pre-requisite for obtaining accurate site specific consumption rate data.

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References

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