

# Copplestone et al. Review of current regulatory approaches to both chemicals and radioactive substances RP 44

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Protection of the environment from ionising radiation in a regulatory context (PROTECT): review of current regulatory approaches to both chemicals and radioactive substances.

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Assessment tools and frameworks have been developed that allow environmental assessments to be conducted and which can be used to demonstrate whether non-human species are protected from the impact of exposure to ionising radiation released under regulation. Frameworks are often tiered, increasing in the level of complexity, input data requirements and need for expert involvement as the assessment moves to successively higher tiers. These are, conceptually, similar to assessment approaches available for chemical risk assessment. What criteria (e.g. numeric benchmarks) should be used, and how these should be defined, are currently under debate, but it is likely that use will be made of approaches developed for setting assessment criteria for chemicals. However it will be necessary to ensure that any assessment criteria developed are fit for use in a regulatory context. This paper reviews the similarities and differences between regulation of, and assessment methods for, chemicals and radioactive substances and presents recommendations regarding how components of chemicals risk assessment may be adopted for radioactive substances.

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