

Protection of the Environment in Existing Exposure Situation

D. Copplestone^a, C-M. Larsson^b, P. Strand^c

^aICRP Committee 5, Biological and Environmental Sciences, School of Natural Sciences, University of Stirling, Stirling, UK

^bICRP Committee 5 Chair, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), 38-40 Urunga Parade, Miranda NSW, Australia

^cICRP Committee 5, Statens strålevern, Grini næringspark 13, 1361 Østerås, Norway

In *Publication 124*, the Commission described its approach to protection of the environment and how it should be applied. The report expanded on the Commission's objectives for environmental protection and how the Derived Consideration Reference Levels (DCRLs) apply within different exposure situations. DCRLs relate radiation effects to doses over and above their normal local background radiation levels and consider different potential pathways of exposure for animals and plants. In this presentation, we will describe how the DCRLs may be used within existing exposure situations, where control of the source is not in place, to better understand the potential impacts on animals and plants. In these circumstances, the Commission recommends that the aim should be to reduce exposures to levels that are within the DCRL bands (or even below, depending upon the potential cost/benefits) but with full consideration of the radiological and non-radiological consequences of doing so. Using examples, we will demonstrate how this may be achieved in practice bearing in mind the potential exposure of humans, animals and plants during and following any remediation attempted.