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Meeting on the International Systems of Radiation Protection: Bringing together Protection against Ionising and Non-Ionising Radiation

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The two international organisations responsible for developing the systems of radiation protection worldwide are the International Commission on Radiological Protection (ICRP), and the International Commission on Non-Ionizing Radiation Protection (ICNIRP). Both aim to protect people and the environment from potentially harmful effects of exposure to radiation, while recognising the benefits that may be associated with some of these exposures.

Building on past interactions, ICRP and ICNIRP held a joint meeting in Munich, Germany, organised by the World Health Organization (WHO), hosted by the German Federal Office for Radiation Protection (BfS), and in cooperation with the International Labour Organization (ILO) and the International Radiation Protection Association (IRPA). The objectives of this meeting were to: increase mutual understanding of the approaches to protection; reach a common understanding of the state of the systems of protection; and explore possibilities for continued collaboration.

Over three days, November 8-10, 2017, the organisations exchanged information and views on the scientific basis, ethical basis, and basic principles of protection.

There are many commonalities between the systems of protection used for ionising and non-ionising radiation. There are also differences, most stemming from different biological effects. Ionising radiation can cause stochastic and deterministic effects, while most effects due to exposure from non-ionising radiation appear to be deterministic. However, stochastic effects have been demonstrated due to exposure to ultraviolet radiation, which bridges the ionising and non-ionising parts of the electromagnetic spectrum. For ionising radiation there is a greater emphasis on optimisation of protection even at low levels of exposure, whereas for non-ionising radiation there is a greater emphasis on keeping exposures below thresholds for observed effects.

ICRP and ICNIRP share significant common ground, and have reached an agreement in principle to strengthen communication and collaboration between them and with other organisations with similar interests.