

## REFLECTIONS ON THE INTERNATIONAL NUCLEAR LAW ASSOCIATION CONGRESS IN ABU DHABI (PART 6 OF 7): RADIATION PROTECTION

*Prospect has been invited to attend the bi-annual meeting of the International Nuclear Lawyers Association (INLA) in Abu Dhabi from 4-8 November 2018 – [click here to see further information about the event](#)*

*On 6<sup>th</sup> November 2018, The International Nuclear Law Association congress in Abu Dhabi held important sessions on Radiation Protection.*

This session of the International Nuclear Law Association congress in Abu Dhabi was highly technical but serious and important.

**Roger Coates, OBE, former President International Radiological Protection Association** gave the keynote speech on a *'Practitioner's View on Radiation and the Law'*. This note attempts to do justice to his points, but is written by a non-scientist, who is responsible for any inexactitudes.

He noted that the IRPA had links with 52 Associate Societies in 67 countries and 18,000 individual members. It aimed to be the international voice of radiation protection worldwide.

He showed a slide measuring 'likelihood of effects' against 'radiation dose'. The challenging point was at the lower end of the spectrum, where there was no direct evidence of effects. This was the area of uncertainty in which much regulated activity took place.

The primary aim of the system of regulation was to protect people and the environment from the harmful effects of radiation without limiting its beneficial effects. He ran through the principles of Justification, Optimization and Dose limitation, and Planned, Emergency and Existing exposure situations, ICRP publications and IAEA Standards. He then turned to some of the practical considerations applying to this system.

Mr Coates said that Dose limits are always seen as central to the rules of radiation protection, but in practice exposures are essentially determined by 'optimisation'. The language of 'limits' suggested delineation between safety and danger. Natural exposure for everyone was at least 2mSv/y – but in emergencies 20mSv/y were allowed, which was confusing for the public.

Natural background dose could be increased by individual decision, such as flying, or living in a radon area. But much money was spent, for example, in getting potential doses from radioactive waste down to 'clearance' levels.

A 'trivial' dose of 0.1microSv/a was routinely required of the system of radiological protection, whereas holidaymakers in Cornwall might receive a few mSv of dosage without thinking about it. The challenge was how to bring that discrepancy into balance.

The principle of Optimisation or the 'As Low As Reasonably Achievable' 'ALARA' test had been an important and successful principle. But there was a growing concern amongst regulators that interpretation of this principle was moving towards 'minimisation'. How low is 'low enough', when this costs more and more money?

On the concept of 'prudence', he illustrated the difference by showing a photograph contrasting the equipment needed to hike on an Alpine glacier with that needed for a stroll round his home village. Multiplying the factors of prudence and taking a conservative view limited the 'clearance' of material and escalated costs. He thought that we had to do better to get good value for society.

The 'graded approach' was recommended in many standards, such as those governing Naturally Occurring Radioactive Material 'NORM' in mining. Material above 1Bq/g was classed as 'radioactive' but often constituted little or no risk.

He thought that standards delivered by practitioners were generally higher than basic legal requirements. But he questioned the continuing efforts to spend resources on achieving ever lower levels of radiation at high cost to society.

### **About the Author**

*William Wilson is a specialist environmental, regulatory and nuclear lawyer with over 25 years experience in government, private practice and consultancy. He worked as a senior lawyer at the UK Department of the Environment/DETR/Defra, and helped to build up the environmental and nuclear practices at another major law firm, as well as running his own environmental policy consultancies. William has experience of all aspects of environmental law, including water, waste, air quality and industrial emissions, REACH and chemicals regulation, environmental protection, environmental permitting, litigation, legislative drafting, managing primary legislation, negotiating EU Directives and drafting secondary legislation.*

*Prospect Law is a multi-disciplinary practice with specialist expertise in the energy and environmental sectors with particular experience in the low carbon energy sector. The firm is made up of lawyers, engineers, surveyors and finance experts.*

*This article remains the copyright property of Prospect Law Ltd and Prospect Advisory Ltd and neither the article nor any part of it may be published or copied without the prior written permission of the directors of Prospect Law and Prospect Advisory.*

*This article is not intended to constitute legal or other professional advice and it should not be relied on in any way.*

*For more information or assistance with a particular query, please in the first instance contact Adam Mikula on 020 7947 5354 or by email on [adm@prospectlaw.co.uk](mailto:adm@prospectlaw.co.uk).*