

## **Dr. W.P Aspinall**



Willy Aspinall took his BSc and PhD degrees in Physics from the University of Durham in 1966 and 1970 respectively. His early career was spent in the Eastern Caribbean as a research scientist working on volcanoes and earthquakes, and then he worked mainly as a consultant on earthquake hazard assessment for the civil nuclear power industry in the UK. Latterly he has been a part-time researcher at the University of Bristol, with the title Cabot Professor in Natural Hazards and Risk Science. Aspinall's current activities and principal research interests are in volcanology and seismology, with professional interests in the formalized use of expert judgement in decision-making for low probability / high

consequence events in circumstances of scientific, medical or engineering uncertainty. Notwithstanding his career has been largely outside academe, he has published more than sixty peer-reviewed academic papers and co-authored fifteen book chapters, and has acted as a peer reviewer for several leading international journals. Aspinall has served as a member of: the UK Government Chief Scientific Adviser's Blackett Group on low probability – high consequence events; UK Government Chief Scientific Adviser's Science Advice Group for Emergencies (SAGE); the Scientific Committee, IAEA International Seismic Safety Centre; the IAEA Specialist Group preparing the Safety Guide on Volcanic Hazards in Site Evaluation of Nuclear Power Plants and the Working Group on Probabilistic Seismic Hazard Assessment; a major utility advisory board on seismic hazard policy considerations in Canada, and as a specialist on the UK Nuclear Power Industry Seismic Hazard Working Party. Aspinall also served as a member of the Vice Chancellor's International Review Panel for the Faculty of Science, University of New South Wales, Australia.

As a consultant Aspinall has acted as facilitator or expert witness in issues as diverse as: risks and uncertainties in carbon capture and storage, including induced seismicity; a Lloyd's Arbitration Tribunal on a New Zealand earthquake reinsurance dispute; evaluation of shatter zones at the Tsuruga Nuclear Power Plant, Japan; long-term tectonic hazard to Geological Repositories in Japan; vCJD infection risk from blood transfusions and blood products - Canada; expert elicitations for internal erosion modelling for dam safety assessment for UK Government; uncertainty, conservatism and the use of expert judgement in probabilistic site-specific earthquake ground motion hazard assessments for the UK Nuclear Safety Directorate of the Health & Safety Executive; in a UK High Court hearing of a volcano insurance dispute; judgment-based fragility assessment of reinforced concrete buildings exposed to fire; expert-judgement based assessment of bridge scour risks in UK; policy options for control of sheep scab in UK; stakeholder elicitation on policy options for research council funding of Earth sciences research, UK; evaluation of a performance-based expert elicitation for the WHO Global Attribution of Foodborne Diseases; World Health Organization Estimates of the Relative Contributions of Food to

the Burden of Disease Due to Selected Foodborne Hazards; quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment; an expert elicitation for the judgment of Prion Disease Risk uncertainties associated with Urine-derived and Recombinant Fertility Drugs; expert judgments to improve Chronic Wasting Disease Risk Management in Canada; expert elicitation to characterize long-term tectonic risks to radioactive waste repositories in Japan; an immediate Bayesian belief network analysis of eruption scenario probabilities for urgent decision support under uncertainty; an expert judgement assessment of future sea level rise from the ice sheets; expert judgement prion disease risk uncertainties, and several other problems requiring structured elicitation of expert judgement. Bamber and Aspinall's paper "[An expert judgment assessment of future sea level rise from the ice sheets](#)" (see RFF 2013 webcast [Ice Sheets on the Move](#)) has been selected as one of [10 Nature Climate Change articles](#) to highlight research in Nature Climate Change over the last 5 years.

Aspinall is a Chartered Scientist, a Chartered Geologist and Fellow, Geological Society of London, and a European Geologist. His honours are: the 2012 William Smith Medal, Geological Society of London; 2014 Lloyd's Science of Risk Prize, Natural Hazards (co-recipient); 2014 Bristol University Vice-Chancellor's Impact Award (co-recipient) and, in 2015, The Queen's Anniversary Prize for Higher and Further Education (co-recipient).