

Shell London Lecture Series - Geology in the Age of Man

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Geological Society of London

Impacts and Adaptation to Sea-Level Rise

SPEAKER: Robert Nicholls (University of Southampton)



Coastal areas constitute important habitats, and they contain a large and growing proportion of population and economic activity, including economic centres such as London, New York, Tokyo, Shanghai, Mumbai, and Lagos. Sea-level rise is a long-term threat to these areas. Global-mean sea levels rose 17 cm through the twentieth century due to global warming: they are likely to rise more rapidly due to the same cause through the twenty-first century when a rise of more than 1 m is possible. In some locations, local (or relative) sea-level rise may be exacerbated by subsidence, especially due to ground fluid withdrawal from, and drainage of, susceptible soils. Relative sea-level rise has a range of potential impacts, including higher extreme sea levels (and flooding), coastal erosion, salinization of surface and ground waters, and degradation of coastal habitats such as wetlands. In the worst case, large land areas could be lost and millions of people could be displaced by sea-level rise. Appropriate responses include mitigation of climate (a global response) and subsidence (a local response) and/or adaptation (also a local response). A combination of these strategies appears to be the most appropriate response to sea-level rise. Adaptation responses can be characterized as (1) protect, (2) accommodate, or (3) retreat. While these adaptation responses could reduce impacts significantly, they will need to be consistent with responses to all coastal hazards, as well as with wider societal and development objectives; hence, an integrated coastal management philosophy is required. In some developed countries, including England and the Netherlands, proactive adaptation plans are already being formulated. Coastal cities worldwide will be a major focus for adaptation efforts because of their concentrations of people and assets. Developing countries will pose adaptation challenges, especially in deltaic areas and small islands, which are the most vulnerable settings.

Date: Wednesday 18th April 2012

Timings: This lecture will be given at 3pm and 6pm on this day (with tea/coffee served for half an hour before each), so please let us know, when applying for tickets, which talk you would like to attend.

Venue: The Geological Society of London, Burlington House

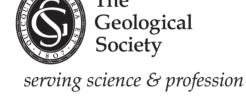
Entry to this lecture is free to all, but by ticket only. Please call at reception (to your right) or contact the Society by post, phone, fax or email (see below).



Conference Office, The Geological Society, Burlington House, Piccadilly, London W1 JOBG T: 020 7434 9944 F: 020 7494 0579 E: registrations@geolsoc.org.uk W: www.geolsoc.org.uk/shelllondonlectures12 Follow us on twitter #shelllecture

For further information, please contact:





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2012 Programme

18 January	Earthquakes and tsunamis in the modern world	James Jackson, University of Cambridge
15 February	Rocks and climate change: How we can stop pulling the carbon trigger	Bryan Lovell, GSL President
28 March	Life at the edge: Sinking deltas	James Syvitski, University of Colorado
18 April	Impacts and Adaptation to Sea-Level Rise	Robert Nicholls, University of Southampton
9 May	Unconventional gas	Melvyn Giles, Shell
27 June	Sustainability of groundwater in a changing world	Paul Younger, University of Newcastle
26 September	Volcanoes and man	Sue Loughlin, British Geological Survey
10 October	Pollutants and human health in the age of man	Jane Plant, Imperial College London
14 November	Geological aspects of renewable energy	Bruce Levell, Shell
19 December	Incoming: Learning to love the meteorite	Ted Nield, GSL



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