



THE CENTRAL SCOTLAND REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Online Lecture

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Monitoring coastal erosion from space: what is feasible and how confident are we on the changes detected?

by

**Dr Andres Payo
British Geological Survey**

EO from space is becoming mature enough to provide valuable information services for the coastal stakeholders with an interest on better managing the risk of coastal erosion to communities and assets. The European Space Agency (ESA) has funded "Coastal Change from Space" consortium to explore the feasibility of producing the information need by the end-users in Quebec, R. Ireland, Spain and UK. In this talk, we will explore how monitoring coastal erosion from space can contribute to better managing of flooding and coastal change risk to communities, businesses and infrastructure in the UK. We will do this by firstly addressing the questions of what is feasible to observe using civil satellite technology and how confident are we on the changes detected from space. Secondly, we will start exploring how this new technology can be integrated into the existing monitoring efforts in the UK.

More information on the content of this presentation can be found on our dedicated [webpage](#).



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Presenter
Dr Andres Payo
BGS

Andres is a coastal resilience and geohazard researcher at the British Geological Survey. For the past 20 years, he has worked on quantitative geomorphology applied to coastal protection against flooding and coastal erosion at decadal and longer time scales. Andre's role's is to work nationally and internationally to make our coasts and estuaries more resilient to coastal geohazards, help the transition from grey to green engineering, ensure that the build environment is adaptable to today's and tomorrow's climate and to minimize the impacts due to the legacy of anthropic activities. He is responsible for the scientific leadership of BGS Coasts & Estuaries program (website [here](#)). Andres is also the lead developer of the Coastal Modelling Environment (www.coastalme.org) software that incorporate sub-bottom properties and high detailed digital terrain models to assess the risk of coastal flooding and coastal erosion over decades to centuries time scales.

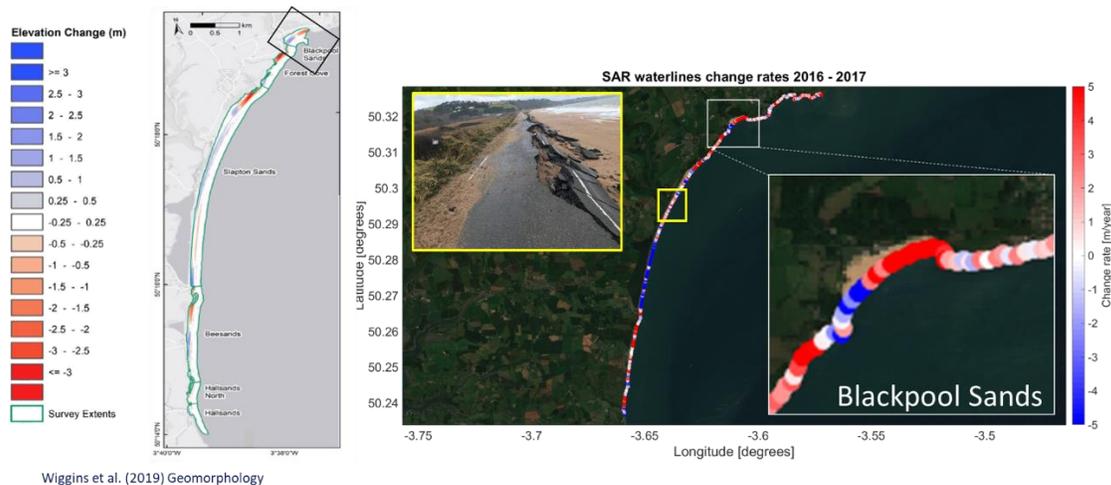


Figure 1 Illustration how beach rotation observed in Start Bay is captured by Waterlines extracted from Synthetic Aperture Radar (SAR) images from Sentinel 1 mission.