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FROM ACADEMIA TO APPLICATION: ENHANCING COASTAL CLIFF RISK MAPPING FOR A CHANGING CLIMATE

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Effective coastal risk management requires strong collaboration between academia, regulators, and consultancies. The Environment Agency's Flood and Coastal Erosion Risk Management Research & Development Program fosters this collaboration, and a recent example is the Cliff and Shore Sensitivity to Accelerated Sea Level Rise project. That study applied a research-derived numerical modelling tool to assess how climate change may accelerate coastal cliff recession across England and Wales.

The study was tasked with developing a tool to better represent the relationship between cliff recession and shore platform morphodynamics across different regions. This posed significant technical challenges due to the spatial and temporal scales, hydrodynamic variability and large uncertainties, alongside the practical challenge of ensuring usability for the second round of the National Coastal Erosion Risk Maps (NCERM2).

To address these challenges, the study employed highly selective simulations to maximize morphological insights while maintaining computational feasibility. Where resources were insufficient to reduce specific uncertainties, a conservative approach was adopted. The results were then processed into a tool designed with end-users in mind.

The presentation will summarize the analysis and tool development, highlighting the strengths and trade-offs of the approach. It will also reflect on how academic research was effectively translated into practice, emphasizing the importance of understanding real-world needs and constraints.