

Shoring up coastal defences

July 8 2019, by David Bradley

Throughout civilisation, coastal defences have been an issue for those people who live by the sea. Now, climate change and its implications for rising sea levels make the issue increasingly pressing for more and more people. Research published in the *International Journal of Lifecycle Performance Engineering*, discusses the issue of over-topping of sea defences in the face of a changing environment.

Mehrdad Bahari Mehrabani of the Department of Engineering Science at the University of Greenwich, in Chatham, Kent, UK and Hua-Peng Chen of East China Jiaotong University, Jiangxi, China, have looked at how our changing climate makes it all the more urgent to find ways of assessing coastal defences and ensuring that they are maintained not only on a critical schedule but can be re-engineered on an ad hoc basis when time and tide require it.

Earth sea dykes of the kind that edge lowland coasts and protect towns and cities and the people that live and work on land reclaimed from the sea or vulnerable former marshland, are widespread. Higher than normal tides, storm conditions, and [rising sea levels](#) all conspire to breach such sea dykes. The team has demonstrated that it might be possible to predict the demise of a given sea dyke given particular conditions and so offer the possibility of shoring up and improving such coastal defences before problems arise.

More information: Mehrdad Bahari Mehrabani et al. Lifetime wave overtopping assessment of coastal defences under changing environments, *International Journal of Lifecycle Performance*

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