## **Modelling Radionuclide Activity in the Irish Sea**

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## <u>Abstract</u>

The relationship between Sellafield-derived radionuclide activity, particle size distribution and sediment composition is examined in saltmarshes and mudflats from the eastern Irish Sea. The particle size dependency of <sup>241</sup>Am and <sup>137</sup>Cs is utilised to identify a preferred grain size proxy for radionuclide monitoring purposes. Based upon these relationships, a predictive model is developed which will facilitate the identification of spatial and temporal trends in radionuclide activity in these environments.