Irish coastal platform location and type.

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Shore platforms provide important ecosystem services and are significant components global coastal systems. One third of Ireland's coastline has been classified as coastal cliffs. The degree to which these cliffs are fronted by shore platforms is not currently known as there are no maps which identify their distribution. We present a new map of the distribution of rock platforms on Ireland's coastline.

Platform morphology is a function of lithology, structure, tectonics, and weathering processes. Preferential weathering along weakness provides opportunity for channel formation and subsequent intrusion of seawater into the inner platform. Joints and discontinuities have been shown to influence mesoscale morphology and rates of platform erosion through e.g., block removal. There is emerging evidence to suggest that rock platforms may provide an important role to slow rates of coastal retreat by attenuating wave energy and thereby serve to protect the coastline cliffs from direct wave impact. We have found a significant variation in platform geomorphology (roughness) along Ireland's coastline and suggest that extant classification schema do not sufficiently capture the range of morphologies or morphometries that enhance wave attenuation. We propose a new classification scheme for Ireland's platforms.