



The loss of Scottish peatlands: Implications for long-term net gains in coastal Blue Carbon stocks.

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Nearly 66% of Scotland is covered by peat and organic soils, representing over 50% of the UK's soil carbon stocks. Peatland erosion, while partly a natural process, is also accelerated by human activities, such as land management and potentially by the impacts of climate change. We present evidence from the voes (sea lochs or fjords) of Shetland's west coast to suggest that this process may have accelerated since Medieval times. Our work is supported by the analyses of short sediment (Craib) cores (triplicate coring) recovered from 17 sites. We present preliminary chronologies supported by radiocarbon dating and sediment characteristics that highlight both changes in the rate of accumulation and source of sedimentary organic carbon to the west Shetland voes during the late Holocene. Scottish coastal sediments contain a significant Blue Carbon stock, a significant proportion of which derives directly from terrestrial sources. The loss of peatland carbon represents a potentially important contribution (i.e. net gain) in refractory carbon within the marine environment and we present preliminary estimates to assess the significance of these large-scale transfers to the coastal ocean.