

Artificial beach recharge: the South East England experience

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Summary. Artificial beach nourishment and beach recycling are widely used shoreline management techniques in the UK, especially in Sussex and east Kent where the majority of beaches are composed of mixed gravel and sand. Beach nourishment schemes in Sussex date back to the late nineteenth century; recycling was under way by 1900. Until the 1970s, beach nourishment in Sussex and east Kent was small-scale and occasional, but since this date there have been a proliferation of schemes, some very large-scale. Beach nourishment volumes peaked in 1995-99; recycling in 1990-94. To date, at least 6.7 million m³ of shingle and sand have been added to the beaches of Sussex and east Kent, and at least 7.6 million m³ of beach material recycled. The total investment in beach nourishment has a present day replacement value of about £134 million, while the recycling that has been undertaken can be valued at a further £10-11 million at present prices. The amounts of material added to the region's beaches indicate that South East England has undergone a 'sedimentary crisis'. The volume of fresh shingle derived from cliff erosion is currently insufficient to offset losses. The nourished beaches have performed well, but costs of beach nourishment have risen fivefold since the late 1980s, and it is unclear how long the technique will remain cost effective. If sea-levels rise as predicted due to global warming, beach nourishment will provide only a short-term 'fix'. In the medium to long term, as costs of beach nourishment rise to unacceptable levels, serious consideration will need to be given to abandoning some low-lying coastal areas.