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Sent: 10 July 2013 21:27
To: Booth-Huggins, Lindsey (MMO)
Subject: Aggregates Dredging Application MLA/2013/00119

On behalf of the North Sea Action Group, the Aggregate Dredging section of MARINET and myself as a coastal bungalow owner at Hemsby, near Great Yarmouth, about to see his property destroyed by the coastal erosion brought about following intensive and continual offshore aggregate dredging, having already lost one bungalow by such already, I would ask the MMO to oppose the Aggregates Dredging Application MLA/2013/00119

I would wish to amplify those grounds for doing so given by Mike King and Stephen Eades in their evidence given on the lack of meaningful information given on the wave regime, and add to this that a further deepening of the offshore seabed, which in dredged areas has already been deepened by up to 10 metres by previous dredging, will further draw down the beaches as the steeper beach created by sand stripping has a far greater gravitational run off of sand coverage. Further, that it is likely that the loss of the cohesive granular sand taken by dredging and the return of the finer silt and sand washed off overboard means that the structural solidity element of associate beaches is changing as for the worse as the ratio worsens.

I would ask that the MMO study the many reports and scientific research papers created by expert independent bodies that show conclusively that Offshore Aggregate Dredging is a main (if not **the** main) cause of coastal erosion. There are many such 'Scientific Studies from around the world on the erosion resulting from offshore sand and gravel dredging' to be seen on our website.

A comprehensive briefing paper is to be seen at <http://www.marinet.org.uk/campaign-article/marinet-briefing-paper> in which I have explained in full detail the impact of Offshore Aggregate Dredging, and a further treatise on coastal defences under 'Why Canute Failed - A Treatise on Sea Defences' at <http://www.marinet.org.uk/coastaldefences/canute.html> Of particular significance is the second 'Sandpit' report from a large group of independent European scientists concerned with the impact of Offshore Aggregate Dredging and explaining the mechanism that may be seen at <http://www.marinet.org.uk/campaign-article/the-second-sandpit-report-a-report-from-a-large-group-of-independent-european-scientists-concerned-with-the-impact-of-offshore-aggregate-dredging> as well as initial EuroSION report part outlined at <http://www.marinet.org.uk/campaign-article/north-norfolk-dredging-induced-erosion-in-euroSION-report> plus the multi-national conference report on 'Why are our Beaches eroding? — Coastal Zone '07 paper' that may be seen by going to <http://www.marinet.org.uk/campaign-article/why-are-our-beaches-eroding-coastal-zone-07-paper>

There exists a host of scientific papers on our MARINET website calling for exhaustive reading, but necessary in order to fully comprehend the full situation. A study these papers will give much insight into what lies behind this exploitive matter and the full truth of the cause of erosion along our coastline. The research on this has already long been accomplished. What is needed is awareness and recognition of this. Up to now only the claims made in the Environmental Impact Assessment by those selected, appointed by and paid by the dredgers themselves have been heeded and no second opinion has been allowed in the licence granting process.

The awareness that Offshore Aggregate Dredging is responsible for coastal erosion is not exactly new. The British Association for the Advancement of Science established a Committee in 1883 *"for the purpose of inquiring into the rate of erosion of the Sea-Coasts of England and Wales, and the influence of the artificial abstraction of shingle and other materials in that action"* so demonstrating a strong indication of public and scientific concern even then. It reported in 1885 that shingle extraction was causing loss of land and property. Extensive land slide and shore retreat accompanying the 1897 North Sea storm surge increased public pressure for action to be taken.

One hundred years ago, the British Government set up a Royal Commission on Coastal Erosion "...to reach some conclusion with regard to the amount of land which has been lost in recent years by the encroachment of the sea on the coasts of the United Kingdom...". The Minutes of this that appeared in 1908 and 1909, and the Final Report in 1911) expressed concern that removal of sand and gravel from beaches caused or accelerated coastal land loss. There then followed bitter arguments about the effects of extraction and how both the Government and the dredging contractors responded to land and property losses.

The Government responded by setting up this Royal Commission on Coastal Erosion, following on the practice that Royal Commissions were established to inquire publicly about very important issues of national concern. This Royal Commission on Coastal Erosion that started work in 1907 presented its Final Report in 1911. It was required to inquire and report:

"a. As to the encroachment of the sea on various parts of the Coast of the United Kingdom and the damage which has been or is likely to be caused thereby; and what measures are desirable for the prevention of such damage". It further considered what powers were needed for protection and if changes to the law were merited. The Royal Commission Final Report (1911 p.158) concluded:

"The removal of materials from many parts of the shores of the Kingdom and the dredging of material from below low water mark, have resulted in much erosion on neighbouring parts of the coast" and that "Removal of sediments from the shore should be illegal" (Para. 7(a) p.160).

It further recommended "systematic observations" of change below low water, deep water sediment travel and sandbanks movements for which "information at present is scanty and vague". Little subsequent action was taken, nor has it to this day.

The Final Report (1911, Part II) said that on the basis of foreshore losses *"the gradient of the foreshore must be becoming steeper."* (p.45). However, there was no recognition by the authorities of the implications. More recently, Taylor *et al* (2004) report that 61% of the coastline was steepening and 33% had flattened. This recognition, long before the onset of Global Warming, is critical to the debate about coastal changes, especially in the discussion of sand-mining impacts, as it indicates a progressive exposure of beaches to serious damage.

Yet over a century later, these recommendations have yet to be established in practice. We have had many aggregate extractions licences granted with a complete lack of the evidencing facts that shows the damage resulting. We still await a proper scientific study examining the correlation between dredging levels in the offshore area and beach coastal erosion, with erosion measurement from prior to dredging commenced up to six years following the implementation as seen by my own findings at the end of my briefing.

If there is found to be no such correlation by the assessors, then the dredging companies would have the evidence they required and that they could be absolved. A simple sand tracking study has been requested of EMU Ltd. assessors of previous dredging licence applications, but this was refused by the dredging companies.

Such a study was carried out by Lancashire County Council when Blackpool began to lose its beach. The findings confirmed their concerns, yet this evidence remains unheeded. The dredging companies still maintain that there is no movement of material from the beaches to the dredging sites, and this statement has been accepted when issuing a licence to dredge.

I ask of the MMO to give this issue their deep consideration when resolving the continuity of offshore aggregate dredging and the consequent loss of our coastal resources.

Pat Gowen MARINET & NSAG