

Liverpool Marine Science Symposium 2008 - Posters

- **Booth, M., Hodgson, D.M. & Kavanagh, J.P.** (Stratigraphy Group, DEOS)
Title: *Taking beach morphology analysis to 'Another Place': High resolution investigation of coastal dynamics and sediment budget in a low lying coastal setting utilizing statue plinths as a fixed datum.*
- **Hall R.** (POL)
- **Holgate S.** (POL)
Title: *Real time sea level data transmission from tide gauges for tsunami monitoring.*
Abstract: The Asian tsunami of December 2004 was the most devastating in modern history. Following this event, the Intergovernmental Oceanographic Commission held a meeting under the auspices of the Global Sea Level Observing System (GLOSS) where new recommendations were for made tide gauge installations. GLOSS guidelines were amended so that new tide gauge installations which are part of the GLOSS network include tsunami monitoring capability and transmit sea level data of suitably high frequency and intervals (e.g. 1 minute sea level samples sent every 5 minutes). Here we present the development and implementation of "tsunami enabled" tide gauges at Proudman Oceanographic Laboratory, which allow real time data to be returned from almost anywhere on Earth. The system is based around off the shelf components where possible. At its centre is a low power, embedded Linux platform, which performs the data logging and communications. The sensors used so far have been the OTT Hydrometry Kalesto radar and Esterline Pressure Systems KPSI pressure sensors which are queried over a serial interface. Telemetry is through the Inmarsat Broadband Global Area Network (BGAN) system which allows a bi-directional broadband connection over ethernet, permitting remote reconfiguration when required. Data transmission is via an IP connection with files containing 1 minute values from 3 sensors which are returned every 5 minutes.
- **Lawson R.** (Psychology - University of Liverpool)
Title: *Everyday understanding of climate change*
Abstract: Non-scientists often misunderstand scientific issues. For topics such as climate change, errors or omissions of understanding matter because scientists are advocating profound changes to policy-makers and the public. Questionnaires on University Open Days were used to investigate people's understanding of climate change. Most had some knowledge of the causes, predicted effects and proposed solutions to human-induced climate change. However, there were frequent confusions with other environmental issues, particularly the ozone hole and general pollution. "Common-sense" effects were better remembered, so sea-level rise was often predicted from ice-caps melting but rarely due to thermal expansion. Explanations consistent with people's everyday reasoning and repetition of basic information should be most effective in communicating about climate change.
- **Leah R.** (SWIMMER)
- **Moore, R., Souza, A., Wolff, J., Flint, S.S.** (University of Liverpool, POL)
Title: *Dee estuary morphodynamics*
- **Plater A.** (Geography, University of Liverpool)
- **Title:** CoFEE " Coastal Flooding by Extreme Events
- **Abstract:** The Coastal Flooding by Extreme Events (CoFEE) project proposed here will assess through advanced modelling the present and future flood risk to a range of coastal environments posed by extreme events likely to occur in the present climatic conditions and future climate change scenarios. It will consider both the rate of coastal flooding and the extent of inundation. CoFEE will examine predicted changes to the speed and extent of coastal flooding attributable to changes in the mean sea level and to the severity, frequency and succession of extreme events in accord with global climate change predictions. It will identify those coast types most sensitive to inundation as a result of extreme events and how the risk will change in the future. Finally, the impact of predicted changes in wave climate on drift-orientated shorelines will be examined using simple morphological models and the consequences of natural coastal evolution with respect to coastal flooding will be examined.
- **Sharples J.** (POL)
Title (prov): *Climate change in the North Sea*

- **Souza A.** (POL)

- **Tattersall G.** (POL)

Title: *NW European shelf sea temperature and salinity trends*

Abstract: Lineal trends in the sea surface temperature of the NW European shelf over the period 1960-1999 from POL Coastal Ocean Modelling System were compared with ICES data. The model reproduced the observed temperature and salinity time series at point stations throughout the 40 year period without data assimilation. A spring warming of 0.5°C/decade in the southern North Sea was simulated, which agrees with published literature; there was less pronounced warming in summer and winter. Additionally, modelled North Sea surface temperatures were shown to correlate with the previous winter NAO index; a feature also observed in the winter ICES data.