

Channel Coast News

Issue 24 - September 2005

The newsletter for the Southeast Strategic Regional Coastal Monitoring Programme www.channelcoast.org

Regional News

South East Coastal Group



The new WaveRex wave/tide gauge and met station were installed on Deal Pier on 25 August and data are now displayed on the website in real-time.

SCOPAC

Analysis is underway of the bathymetric surveys in those areas where two or more surveys have been carried out. Volumetric changes between the two most recent surveys are superimposed upon the ortho-photo, to highlight areas of erosion or accretion (see Figure 1). Further analysis will be included in the Beach Management Plan Reports which will be produced in the autumn.

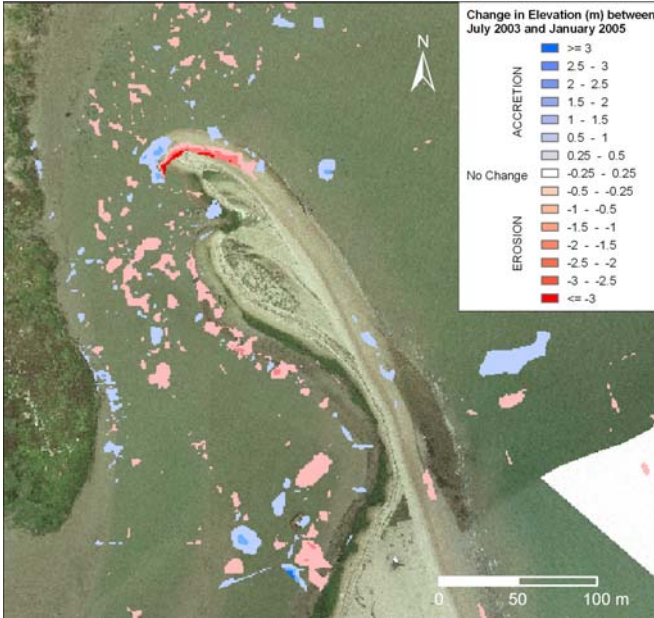


Figure 1 Bathymetric difference plot of North Point

South Downs Coastal Group

Annual Report work is progressing well with anticipated publication in early October. The majority of the SDCG frontage has now been flown by BKS for the autumn survey. All survey data from the March 2003, August 2004 and April 2005 surveys have now been received, checked and loaded into SANDS. Re-processed bathymetric survey data has been received.

Environment Agency (Southern Region)

BKS are continuing with the aerial flights for 2005/06, and aim to fly all the outstanding areas in SCOPAC (Christchurch to Selsey Bill) as well as Portsmouth, Chichester and Langstone Harbours in the next tidal window. All the profile data for the SDCG spring and summer flights, has now been delivered by BKS. Initial QA checking has shown this data to be of a high standard.

Good progress has been made within the habitat monitoring programme with only the Itchen, Hamble, Gosport and a small section of the IOW still to be flown. BKS may have a chance to complete this in September.

Channel Coastal Observatory

12 Academics attended the Workshop on 6 September, representing a geographical spread of Universities from London to Plymouth. A number of potential refinements to improve the flow of data for academic purposes were suggested, including an personalised automated email alert when new data are added to the archive.

Contacts

If you have any queries about the Strategic Regional Coastal Monitoring Programme, or would like a personal copy of this newsletter by email, please contact your area representative:

South East Coastal Group: Chris Longmire
Strategic.Monitoring@Canterbury.gov.uk

South Downs Coastal Group: Dan Amos
Strategic.Monitoring@Worthing.gov.uk

SCOPAC: Travis Mason
Travis.Mason@noc.soton.ac.uk

Environment Agency: Helen Dalton
Strategic.Monitoring@environment-agency.gov.uk

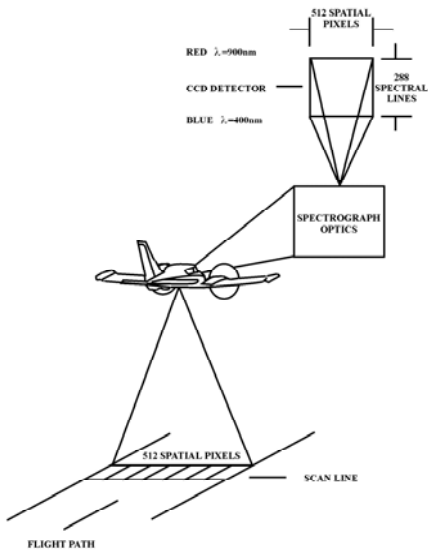
Regional Co-ordinator: Andy Bradbury
Andy.Bradbury@noc.soton.ac.uk

or contact the regional data management centre:
Channel Coastal Observatory
National Oceanography Centre
European Way, Southampton
SO14 3ZH
Tel: 02380 598467
cco@channelcoast.org

CASI (Compact Airborne Spectrographic Imager)

CASI is a remote sensing tool that is used to identify the location and extent of inter-tidal vegetation. The CASI sensor generates imagery by detecting the visible and near infra-red electromagnetic energy that is reflected from the earth's surface. The wavelengths of the reflected energy vary depending upon the surface type and therefore a digital image of ground classification can be developed.

Figure 1 Principle of operation of CASI



The CASI system can be installed and operated from a small aircraft as shown in Figure 1. CASI maps out a swath of the ground directly below the aircraft. The spatial resolution of the image can be varied from one to ten metres and is governed by the flying altitude. The

aircraft is positioned and navigated using GPS, corrected to known ground reference points. This enables highly precise geo-referencing of the imagery. Data can also be integrated with LiDAR to provide 3 dimensional images, providing the same ground control network is used.

The CASI provides multi-spectral imagery in up to 288 bands for use in:

- mapping coastal habitats and habitat change
- land cover and landscape studies
- algal biomass monitoring
- monitoring vegetation productivity and health

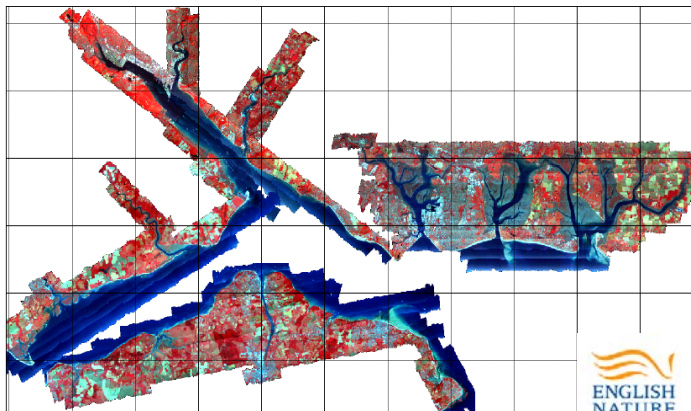


Figure 2 False colour CASI imagery of the Solent

Recent Application

In 2002, English Nature identified the need for a baseline set of survey data in digital form to provide both the area and the spatial distribution of the range of inter-tidal habitats around the Solent. English Nature, therefore, commissioned the Environment Agency to undertake a CASI survey of the inter-tidal vegetation in the Solent and Langstone, Chichester and Portsmouth Harbours. Figure 2 shows the false colour imagery, and the resultant classifications can be seen at Figure 3.

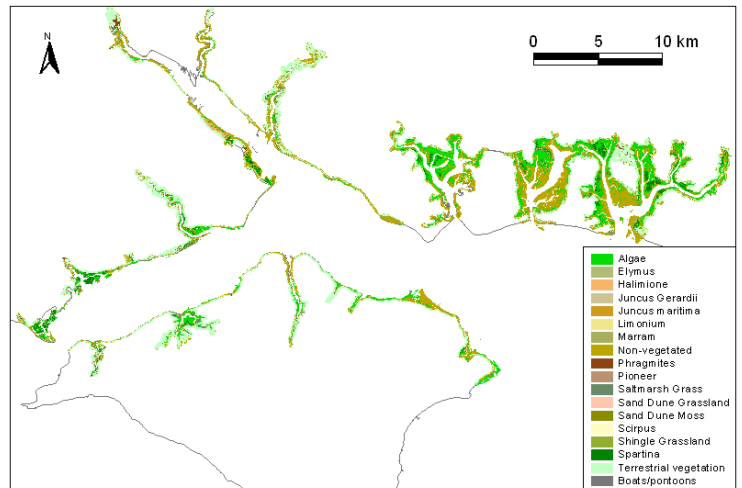


Figure 3 Classification of inter-tidal habitats, Solent

Figure 4 is an expanded extract of Figure 3 to illustrate the wealth of detail obtainable with this remote sensing technique (see Figure 3 for classification).

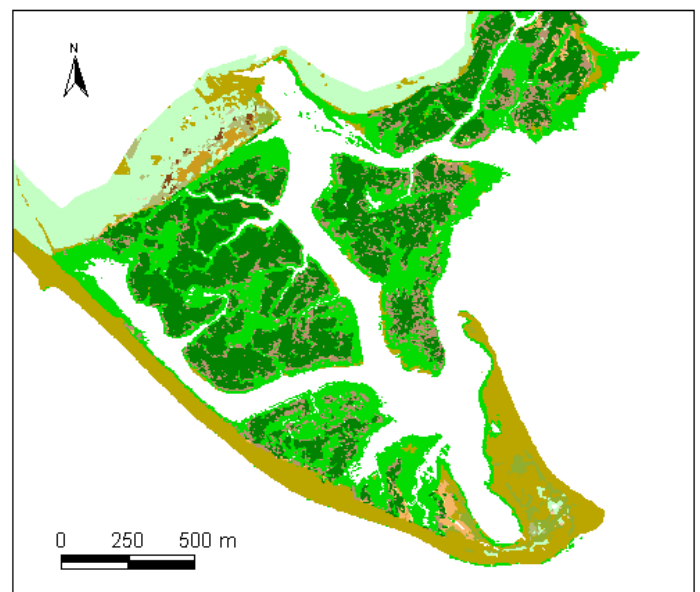


Figure 4 Classification of inter-tidal habitats, Hurst Spit

English Nature will use this baseline information to identify extent of cSAC and SPA inter-tidal habitats. The baseline data can also be used for Biodiversity Action Plan (BAP) habitat extent monitoring (DEFRA HLT 4).