

## **EDMED PART A: DATA HOLDING CENTRE DESCRIPTION**

\***CENTRE-NAME:** HR Wallingford Ltd  
\***CENTRE-HOST:** HR Wallingford Ltd  
\***VISIT-ADDRESS:** Howbery Park, Wallingford, Oxfordshire, OX10 8BA  
\***COUNTRY:** UK  
\***CENTRE-WEBSITE:** <http://www.hrwallingford.co.uk>

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\***DESCRIPTION:** HR Wallingford is an independent company that carries out research and consultancy in civil engineering and environmental hydraulics worldwide. Established for over 50 years, we employ more than 200 engineers, scientists, mathematicians and support staff. Our predictive physical and numerical model studies, desk studies and field data collection are backed by large scale laboratory research. The UK Government, the European Commission and international funding agencies are amongst our major clients.

Data is available on a project-by-project basis, with project-specific access conditions. For general enquiries about data, contact Keiran Millard.

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\***ENTRY-DATE:** 30/5/01

## EDMED PART B: DATA SET DESCRIPTION

\***DATASET-NAME:** COAST3D Teignmouth

\***TIME-PERIOD:** 1999 (with some data from 1995-1998)

\***GEOGRAPHIC-COVERAGE:** Teignmouth, South Devon, UK (within 2km of coast) at 3 degrees 30 minutes west, 50 degrees 32 minutes north)

\***PROJECT:** COAST3D, Coastal Study of Three-dimensional Sand Transport Processes and Morphodynamics. EC MAST Project No. MAS3-CT97-0086

\***PARAMETERS:** Water Levels, currents, wave heights, wave periods, wave directions, wave orbital velocities, sediment concentrations, bed levels, water temperature, salinity, wind speed, wind direction, atmospheric pressure, sediment size, sediment grading.

\***INSTRUMENTS:** Pressure transducers, velocimeters, current meters, acoustic backscatter devices, optical backscatter devices, DGPS, grab sampler.

\***SUMMARY:** The COAST3D project set out to improve understanding of the physics of coastal sand transport and morphodynamics and to remedy the present lack of validation data of sand transport and morphology suitable for testing numerical models of coastal processes. Measurements took place at Egmond aan Zee in the Netherlands (see entry for COAST3D Egmond under Delft Hydraulics) and at Teignmouth, UK (reported here).

Teignmouth is a highly complex site with a headland, estuary and sandbanks. A Pilot Experiment was held in March 1999 and the Main Experiment in October/November 1999. Measurements included water-levels at 31 locations, wave heights and periods at 26 locations (22 directional) current speed and direction at 27 locations, bed-mounted and vessel-mounted Acoustic Doppler Profilers. There were also measurements of sediment concentration/transport at 14 locations, bed material (grab) at 50 offshore points and many intertidal points. Repeat bathymetric surveys were made of beach, nearshore and offshore. Meteorological parameters, water temperature/salinity and bedforms (by sidescan survey, altimeter and ripple profiler) were also recorded. Time series are available at many points, as well as derived parameters.

Data recorded, but not in this dataset, includes ARGUS images of wave-breaking and waterline over sandbanks (available for academic research from <http://cil-www.oce.orst.edu:8080/>) and X-band radar images of wave propagation (details from <http://www.pol.ac.uk/home/research>).

\***REFERENCE:** Whitehouse, R.J.S. and J. Sutherland, 2001. 'COAST3D data report – 3D experiment, Teignmouth, UK'. HR Wallingford Report TR 119 (data report) or Soulsby, R.L., 2001. 'Overview of COAST3D Project' Paper A1 of: COAST3D Final Volume of Summary Papers. Report TR121, HR Wallingford, UK, pp A1.1-A1.10.

\***DATA-WEBSITE:** <http://www.hrwallingford.co.uk/projects/COAST3D>

\***ORIGINATOR:** HR Wallingford Ltd, University of Caen, University of Utrecht, University of Plymouth, Proudman Oceanographic Laboratory, Delft Hydraulics, MAGELAS BVBA, Environment Agency.

\***CENTRE:** HR Wallingford Ltd

\***STORAGE-MEDIUM:** 2 CD-ROMs

\***AVAILABILITY:** Publicly available from HR Wallingford from 1 October 2001, on payment of a handling fee.

\***SUPPLY-DETAILS:** Data is on 2 CD-ROMs. The first CD covers the Pilot Experiment (in March 1999) plus the long-term monitoring (1995-1999) and the baseline survey (June 1998). The second CD contains measurements from the Main Experiment (October-November 1999). The CDs may be obtained individually or together. Much of the data is in Microsoft Excel '97 or Microsoft Access '97 formats. The time series have been compressed (zipped).

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\***ENTRY-DATE:** 30 May 2001