

INFOMAR – INtegrated Mapping Survey FOr the Sustainable Developments of Ireland’s MARine Resources. Multi platform survey for terrestrial and marine integrated mapping.

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Between 1998 and 2005, the Geological Survey of Ireland and the Marine Institute worked together on the €32M Irish National Seabed Survey (INSS) project with the purpose of mapping the Irish marine territory using a suite of remote sensing equipment, from multibeam to seismic, achieving 87% coverage of the marine zone. Ireland was the first country in the world to carry out an extensive mapping project of their extended EEZ. The INSS was succeeded by the multiyear INFOMAR Programme. INFOMAR is now concentrating on mapping twenty six selected priority bays, three sea areas and the fisheries-protection ‘Biologically Sensitive Area’. It will then proceed to complete 100% mapping of the remainder of the EEZ. Designed to incorporate all elements of an integrated mapping programme, the key data acquisition includes hydrography, oceanographic, geological and heritage data. These datasets discharge Ireland’s obligations under international treaties to which she is signatory and the uses of these data are vast and multipurpose: from management plans for inshore fishing, aquaculture, coastal protection and engineering works, to environmental impact assessments related and integrated coastal zone management. During the last three year of activity, INFOMAR carried out integrated surveys from the national research vessels, the R.V. *Celtic Explorer* and *Celtic Voyager*. Hydrographic, geophysical and groundtruthing data were acquired from Bantry, Dunmanus, Galway, Donegal, Sligo, Tralee and Waterford bays. Airborne LiDAR (Light Detection And Ranging) and inshore- vessel survey have also been carried out, giving detailed bathymetric, topographic and habitat information for the shoaler waters and inshore areas. This paper will focus both on the general framework and scope of INFOMAR and the initial results and experiences of the last three years’ surveys. Galway Bay will be used as case study to present examples of multi platform data integration, including aspects of survey planning, tidal control and habitat mapping.