Across Wales Drop-Down Video Survey

SeaStar Survey undertook a large number of drop-down video surveys for the Countryside Council for Wales in 2004 and 2005. The full report details survey methodologies and results of field surveys and video analyses associated with the establishment of surveillance and monitoring programmes for subtidal aspects of marine SACs throughout Wales.

Under the 1992 Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC), more commonly known as the 'Habitats Directive', the UK selected sites as Special Areas of Conservation (SAC). Each SAC was selected for one or more of the habitat types and species listed in Annexes I and II of the Directive. The Habitats Directive establishes that the management of SACs should achieve the 'favourable conservation status' (FCS) of those habitats and species 'features' for which it was selected. In Wales the following SACs are relevant to the present study: Menai Strait and Conwy Bay; Pen Llŷn a'r Sarnau; Cardigan Bay and Pembrokeshire Marine.

After trials in Pen Llŷn and Pembrokeshire cSACs drop-down video was the preferred methodology to establish continued monitoring and enable reporting on the FCS of wide areas of the subtidal zone of SACs in Wales. The drop-down video methodology has shown to be particularly useful for rapid assessments of sites but it is also cost-effective and can compliment other technologies and survey techniques such as diving surveys and acoustic methods.

A total of 387 successful drop-down video deployments were completed during 2004 and 2005 field surveys with 215 sites in north Wales (Menai Strait and Conwy Bay; Pen Llŷn a'r Sarnau), 105 in Cardigan Bay and 67 in Pembrokeshire Marine. These video records were subsequently analysed resulting in descriptions of the substrata, enumeration and identification of fauna and flora and designation of the sites into biotopes according to Connor *et al*. (2004).

The results of the analyses of the large number of different and varied areas along the Welsh coast can be exemplified by sites off Pen Llŷn and the Bishops and Clerks reef in Pembrokeshire Marine. The results from Pen Llŷn show a seabed environment where bedrock (with patches of clean sand) and kelp (*Laminaria* spp.) dominate the rich epifauna at the near shore sites while finer sediments (e.g. cobbles, pebbles and shell material) are increasing with distance from the shoreline and the visible fauna is dominated by hydroids, bryozoans, soft corals (e.g. *Alcyonium digitatum*) and sponges. Mussel beds (*Modiolus modiolus* and *Mytilus edulis*) were also present at some sites along this coastline.

The Bishops and Clerks reef consist of mounds of bedrock and boulders surrounded by channels of mixed coarse sediments dominated by cobbles, gravel and areas of clean sand. Kelp parks are present on the shallowest parts of the mounds (10-15 m) with areas of bedrock dominated by foliose red seaweeds immediately below. Surrounding the mounds are areas with mixed sediments with fauna including hydroids, bryozoans (including *Flustra foliacea*), *Alcyonium digitatum* and anemones.

The drop-down video methodology used in this study was developed and improved during the fieldwork period of this study but overall it is considered a success and an appropriate tool for long-term monitoring of the subtidal zones of SACs. However, additional methods (e.g. sidescan sonar, diving surveys) may be required to study particular impacts or features, such as the effects of fishing activities and to assess any changes to the communities and the FCS of these SACs.