ChEssBase: a database for deep-water hydrothermal vent and cold seep species

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ChEss is a recently-funded field project aiming to determine the biogeography of deep-water chemosynthetically-driven ecosystems under the Census of Marine Life initiative. The main objectives of ChEss are to assess and explain the diversity, distribution and abundance of hydrothermal vent and cold seep species at a global scale and to understand the processes driving these ecosystems.

The international Scientific Steering Committee (SSC) of ChEss is responsible for coordination of the programme, for ensuring collaboration at international levels and for promoting application of ship time at national levels. ChEss will follow two approaches:

1- A long-term discovery and exploration field programme will be developed. The ChEss programme proposes to select a limited number of target areas chosen at key locations for the discovery of new hydrothermal vents and cold seeps. The intention is to identify the maximum scientific return that could be achieved from detailed investigation of the minimum number of sites at key locations.

2- A web-based, relational database (ChEssBase) will be created for all vent and cold species. ChEssBase will be bio- and geo-referenced and will be available on the web through the ChEss web site (www.soc.soton.ac.uk/chess/) and integrated in OBIS (www.iobis.org). At the biological level, ChEssBase will include taxonomical information, basic biological data, distribution and literature references. At the geographical level, the database will include location data for the vent and seep sites, general characteristics of the sites, faunal community descriptions and references. There will be links to images and video for both the specimens and the sites.

The ChEss programme encourages participation on the database from projects involved in hydrothermal vent and cold seep research. ChEssBase is expected to be a centralised source of information for deep-water chemosynthetic ecosystems.