

### Hi-techs strategies reveal Europe's underwater map at ESOF 2008

Cold-water corals and the mud volcanoes of Europe remain a mystery to many Europeans. Despite EU waters covering an area much larger than the continent, little is known about this hidden underwater map of Europe. This knowledge gap was highlighted at the ESOF (EuroScience Open Forum) event, held on 21 July 2008 in Barcelona.

“Much progress has been made in the field of marine technology in recent years. Sophisticated remotely operated and autonomous underwater vehicles are providing us with images of deep ocean ecosystems like cold-water coral reef communities.” said **Albert Gerdes** from the University of Bremen, Germany, who was the moderator for the ESOF's science session: **Revealing Europe's Underwater Map**. “By deploying camera and video systems on these instruments, new and fascinating insights concerning the functioning can be gained. Moreover, mapping of mud volcanoes in the Mediterranean Sea with the aid of video camera systems have illustrated the scientific value of state-of-the-art diving tools.”

Supported by the European Science Foundation's Marine Board and the Total Foundation for Biodiversity and the Sea, speakers from Germany, Ireland, Norway, Poland and the UK highlighted the importance of communicating marine science to the public.

**Yvonne Robberstad** from the Institute of Marine Research Bergen detailed the project **MAREANO, insight into an unseen world** an interdisciplinary programme that provides detailed information about the seabed in Norwegian waters. “Norwegian waters cover over 2 million km<sup>2</sup>. As of today, the knowledge about the seabed in these waters is limited. In fact, we know more about the surface of the planet Mars than about the seabed of our own coastline,” said Robberstad. The seascape off the Norwegian coast is highly diverse, with dramatic changes from shallow banks to 2000 m deep ravines. Habitats are complex and not easily documented using standard sampling gears. As a result a specially designed video rig, providing high definition images of the seabed, has become a key tool in the MAREANO mapping. The footage provided by this video rig is also extremely valuable as a communication tool. Stunning images of coral reefs, starfish, sponges and crustaceans literally work as an eye-opener to the treasures of the deep and facilitate the communication of results to end-users and the society at large.

**Kim Marshall-Brown** from the UK's National Oceanography Centre, Southampton presented an original project using underwater cameras operated by the oil and gas industries to study animals in their own habitat. The SERPENT project – Scientific and Environmental ROV Partnership using Existing industrial Technology – is a collaboration with industry, academia and museums around the world. This global project makes ROV technology and data more accessible to the world's science community. The programme interacts with science and conservation groups globally to communicate the project to the public, increasing the awareness of our fragile marine resources. A vital part of this project is communication with the public to increase awareness of the marine environment. This talk – **Life in an**

**octopus' garden** featured images and footage acquired by the SERPENT team from around Europe and the world.

Education is also an important way to communicate marine science. This is evident in the presentation – **220 Million Acres under the sea - Ireland, marine science communication and the hidden map of Europe** given by **John Joyce** from the Marine Institute in Ireland. He discussed his organisation's effort in helping the country in dealing with the one of the world's most ambitious civilian marine mapping project. In 1999 Ireland started a project to accurately map its 220 million acres of undersea territory. This project had since laid the foundation for a growing interest in marine science and education in Ireland, which is being repeated in other European countries. His presentation has also demonstrated the results of the Irish National Seabed Survey as well as an innovative programme to bring the sea to the classrooms of primary schools in the west of Ireland.

The other communication strategy is via public outreach. **Slawomir Sagan** from the Institute of Oceanology of Polish Academy of Sciences in Poland used a Case study of Hel Peninsula Marine Station in Poland to validate this point in his presentation – **No longer off limits**. Hel Peninsula, one of the best pieces of recreational land on the Polish coast was dominated for over 40 years by a Polish naval base, located near the town of Hel. The town and the area around it, closed to foreigners and run-down facilities survived mainly from military related jobs and fishing, drawing little attention from tourists. Political changes, which started in 1989, swept the navy away and triggered unprecedented development of the area. The Hel Marine Station played an important role in those changes. Now the station is the national centre for the research of marine mammals that live in the Polish part of the Baltic. It carries out a program of reintroduction of seals and porpoises to the South Baltic area. The station became one of the most publicly recognizable tokens of research in marine biology in Poland attracting over 400.000 people every year.

The session concluded with an open discussion featuring comments from **Holger Wormer**, Professor for Science Communication at Dortmund University and former science editor of Germany biggest daily newspaper Süddeutsche Zeitung Munich.

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