



## **Ecosystem Functioning and Biodiversity in the Deep Sea: the EuroDEEP Programme**

I. Jonckheere

EUROCORES Coordinator for Environmental Sciences, Unit Life, Earth & Environmental Sciences, European Science Foundation (ESF), Strasbourg Cedex, France, [ijonckheere@esf.org](mailto:ijonckheere@esf.org)

The deep sea is the largest environment on the planet, the least well known and one of the least studied. It contains extremely large, continuous habitats such as the millions of km<sup>2</sup> of abyssal plains and the 65,000 km long mid-oceanic ridge system. At the same time, it encloses relatively small (hundreds of km<sup>2</sup> to only a few m<sup>2</sup>), localised geological features such as canyons, seamounts, deep-water coral reefs, hydrothermal vents and fluid seepages on mud volcanoes, pockmarks or faults, which support unique microbial and faunal communities. What little we know about deep-sea ecosystems supports the hypothesis that more species occur in the deep sea than anywhere else on Earth. As much as 90% of species collected in a typical abyssal sediment sample are new to science. The launch of this multidisciplinary EuroDEEP programme is foreseen in June 2007 aiming at the exploration and identification of the different deep-sea habitats, assessing both the abiotic and biotic processes that sustain and maintain deep-sea communities in order to interpret variations of biodiversity within and between deep-sea habitats and the interactions of the biota with the ecosystems in which they live. The resulting scientific data are a prerequisite for the sustainable use and the development of management and conservation options aiming at the sustainable use of marine resources that will benefit society as a whole.

EuroDEEP is a Programme for deep-sea biology and ecology that strongly depends and requires collaboration between taxonomists, microbiologists, ecologists, physical and chemical oceanographers and geologists [2].

For more information about the Programme, please check the Programme website: [www.esf.org/eurodeep](http://www.esf.org/eurodeep)