The Value of Collections – Lessons from the Oil & Gas Industry

Tammy Horton, National Oceanography Centre, Southampton

Deep-water drilling is global, with the industry active in 20+ countries on 6 continents, with UK companies active in most of those areas. For the last 40 years the UK oil and gas industry has been working in increasingly deep waters where the environment is little known.

Working in these deep-water environments is challenging. In most areas, the license to operate requires an appropriate assessment of potential environmental impacts and suitable management procedures to minimise such impacts. These industry marine surveys for baseline and environmental impact assessments frequently include samples of seabed fauna. A large proportion of the species taken during deep-sea surveys are new to science. Our understanding of the ecology of these new deep-water areas is limited by a shortage of expert taxonomists, and by poor curation of industry-collected samples. The petroleum industry is contributing to a legacy of global deep-sea samples to be used by current and future generations of taxonomists and ecologists, and improved management of these samples is critical.

For the last three years our work at NOC has included a review of Environmental Impact Assessment (EIA) survey practices in offshore areas, the re-drafting of industry documents for survey guidance including instructions for the tendering and execution of EIAs, as well as guidance to improve the utility of data and samples for both science and industry through updated curation practices. This also includes continuity to ensure that the curation of samples and data is to a standard that allows for greater transparency and making ecological information based on species lists directly comparable between survey companies and available for the global scientific community. Our research in relation to understanding oil and gas industry impact over time is also now being applied to the rapidly expanding seafloor mining industry sector.