Abstract No : 105

Trans-boundary pollution issues, legal context

Developing A Regulatory Framework For Underwater Noise

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This paper examines the recognition of the environmental impact of underwater noise as a transboundary pollutant and development to date of regulatory measures in Europe. The introduction of noise energy into the marine environment is of particular concern to those responsible for biodiversity protection and, specifically marine mammals and fish. In order to take steps to ban polluting activities or introduce mitigation measures it is important to establish a scientific case recognising adverse impacts and to fully understand the socio-economic implications and practicality of any proposed regulation. Issues to be resolved include clearly differentiating between impulsive and ambient noise impacts, understanding trends, and establishing significant impacts. In 2009 the OSPAR Commission, the competent authority for the protection of the marine environment of the North-East Atlantic, published an overview of the impacts of anthropogenic underwater sound in the marine environment. Together with a review of the nature of sound and its measurement, and consideration of impacts, this overview examined the noise signature of different activities (construction, shipping, sonar, seismic). At about the same time the European Union established an expert group to guide Member States considerations with respect to noise energy as one of the eleven descriptors of Good Environmental Status under the Marine Strategy Framework Directive (MSFD) (EU 2008/56/EC). European Regional Seas Conventions have a specific role to play in co-ordination of implementation of the MSFD. For the North-East Atlantic the OSPAR Commission has included noise considerations in its Quality Status Report 2010, the North-East Atlantic Environment Strategy 2010-2020 and committed to establishing an inventory of mitigation options. The EU expert Technical Sub-Group (TSG) continues to give consideration to indicators, thresholds, and monitoring guidelines. This paper sets out evolving mitigation including operational measures, habitat-based management, technology-based noise control and efforts to recognise cumulative noise impacts. Illustrative examples are also highlighted. The MSFD is the first legally binding instrument mentioning underwater noise. However, it excludes military activities and, being a Framework Directive, does not identify mitigation measures. It is concluded that sufficient evidence is in place to encourage widespread adoption of precautionary mitigation practices and recommended that such measures should, in the first instance, be linked to the conservation objectives of marine protected areas and hence those species most at risk from noise impacts.