OSPAR COMMISSION

Protecting and conserving the North-East Atlantic and its resources

Press statement

New Court
48 Carey Street
London WC2A 2JQ
United Kingdom

t: +44 (0)20 7430 5200
f: +44 (0)20 7430 5225
e: secretariat@ospar.org
www.ospar.org

Contact number **Audrey Baconnais-Rosez +0044 (0)20 7430 5200**

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Listen up!
OSPAR's first analysis of man-made underwater sound pollution!

An international team of experts on marine acoustics from the OSPAR Contracting Parties and beyond has compiled on behalf of the OSPAR Commission an authoritative overview document on the effects of man-made underwater noise on marine life.

Sound is important for many marine organisms, including marine mammals, fish, and perhaps some invertebrates. In many species, it is used actively for communication, navigation and foraging and perhaps also passively for orientation. There are many sound sources in the ocean, some of them naturally occurring, others man-made. Our current knowledge on the impacts of underwater sound on marine life is incomplete, frequently inconclusive and occasionally contradictory. Nevertheless, it is clear that man-made underwater sound becomes a form of pollution when it harms or is likely to harm marine life.

Having established general information on the physics of underwater sound and a background on impacts of sound on aquatic life, the core part of the OSPAR document covers documented effects of sound from human activities on marine life; these activities include offshore construction and industrial works, shipping, sonar, seismic surveys, and other activities such as wave and tidal generators and acoustic harassment devices.

The report shows that the range of observed impacts on marine life from underwater sound are varied, from insignificant impacts to widespread behavioural disturbances to, in some cases, stranding events and deaths of marine mammals. The review also indicates that work could be prioritised by focussing on those high-energy sound sources which may be considered as having the highest potential for adverse impacts. It stresses the need to distinguish here between the effects of (short-term) exposure to intense sound levels which might in their worst cases result in injury and death on the one hand and effects of exposure to more moderate but generally increasing continuous (background) sound which can possibly influence long-term habitat quality and therefore might cause stronger effects on animal populations.

From a conservation perspective, estimating the effect of sound disturbance on populations is critical, and there have been some attempts to develop models. These attempts, based on studies of disruption of individuals and investigations into population parameters such as vital rates, are very much in their infancy. Noise exposure criteria are one way to regulate noisy activities. Another way is to set safety zones within which no marine mammals should be present during sound intensive

activities. Besides these measures, there are a variety of options for mitigating the effects of sound, dealing both with the source and the receiver.

This overview document lays the scientific basis for OSPAR to design future management measures in order to tackle this emerging source of pollution and also complements concerns raised by ASCOBANS. The 6th Meeting of the Parties to ASCOBANS (16-18 September 2009) agreed on guidelines to address the adverse effects of underwater noise on marine mammals during offshore construction activities for renewable energy production. Noting the difficulty of proving long-term detrimental effects of acoustic disturbance on cetaceans, governments agreed that a precautionary approach is necessary in dealing with activities associated with renewable energy.

This pioneering work will inform the current debate on energy levels, including noise, that can be introduced into the marine environment, one aspect of the European Commission's Marine Strategy Framework Directive. Further OSPAR work on noise will be undertaken in advance of an Environment Summit for The North-East Atlantic in September 2010.

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References

OSPAR publication number 441/2009

Overview of the impacts of anthropogenic underwater sound in the marine environment

OSPAR publication number 436/2009

Assessment of the environmental impact of underwater noise

ASCOBANS Press release 18/09/2009

UN Conference in Bonn agrees Action Plans for Harbour Porpoises in the North and Baltic Sea

Note for editors

1 The OSPAR Commission was set up by the 1992 OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic, which unified and up-dated the 1972 Oslo and 1974 Paris Conventions. It brings together the governments of Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom, together with the European Community.

2 ASCOBANS, the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas, is a UN treaty concluded to promote close cooperation amongst member governments with a view to achieving and maintaining a favourable conservation status for small cetaceans in the ASCOBANS Area. A Conservation and Management Plan, which forms part of the Agreement, obliges Parties to engage in habitat conservation and management, surveys and research, pollution mitigation and public information. To achieve its aim, ASCOBANS cooperates with all states in the Agreement area, relevant intergovernmental organizations and non-governmental organizations.
More information: www.ascobans.org

3 In a critical year for the future of the North-East Atlantic, OSPAR will hold the Ministerial meeting of the OSPAR Commission "North-East Atlantic Environment Summit" in Bergen, Norway. Ministers will be invited to take far-reaching strategic decisions based on the scientific evidence summarised in the QSR 2010. OSPAR is determined to face the challenges to our oceans and lead by example to create a sustainable marine environment for future generations.

4 The Quality Status Report (QSR) is a science based holistic evaluation of the quality status of the marine environment of the North-East Atlantic. It also assesses the progress OSPAR has made towards the objectives of its strategies on biodiversity and ecosystems, eutrophication, hazardous substances, offshore industries and radioactive substances.
The QSR is intended to direct future policies for the protection and conservation of the marine environment of the North-East Atlantic and will be launched at the OSPAR 2010 Ministerial Meeting. It will also provide a major component of the initial assessment that EU Member States are required to prepare under the EU Marine Strategy Framework Directive.
The draft Quality Status Report 2010 is available for an electronic consultation until 30 November 2009.