

Terms of Reference WODA Expert Group on Underwater Sound (WEGUS)

Introduction

Relevant to a number of regulatory frameworks and processes, including the EU Marine Strategy Framework Directive, the CEDA Environmental Commission (CEC) has identified underwater sound as an issue that needs further consideration. CEC therefore established a CEDA Working Group on Underwater Sound (CEDA WGUS). The Working Group has been very productive, enabling CEDA to recently publish a [position paper on underwater sound in relation to dredging](#). Results of the Working Group were presented at the CEDA Dredging Days in November 2011 in Rotterdam and were met with great interest both from within as well as outside CEDA.

The CEC has now recommended following this work by establishing a **WODA Expert Group on Underwater Sound (WEGUS)**. The group shall extend the previous achievements to a broader international level and has three main objectives:

1. Produce further state-of-the-art review of ambient sound, dredging induced underwater sound and impact of this on aquatic biota
 2. Develop an underwater sound monitoring protocol/procedure
 3. Provide technical guidance on how to assess underwater sound by dredging.
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The CEDA position paper made a very promising start in the description of sound emitted during the dredging process and reviewing the (sparse) knowledge on impacts. The comprehensive state-of-the-art review shall incorporate new information on dredging-related sound profiles, ambient sound levels in areas of dredging and impacts as these are available.

2. Develop an underwater sound monitoring protocol/procedure

Many studies on the effects of sound on aquatic life have been hampered by inconsistencies in measurement technologies. There is an urgent need for a standardisation of methods to be able to compare results from different studies. Recently there have been encouraging initiatives to develop standards for measurement and monitoring of underwater sound with regards to physical parameters, particularly with respect to pile driving activities and shipping in coastal waters from within the EU and ANSI. What is lacking is standardisation of measurements for characterization of dredgers. This particular objective aims at producing

advice and consultation on standards in close conjunction with existing initiatives especially those dealing with marine construction activities such as pile driving.

3. Provide technical guidance on how to assess underwater sound by dredging

There are a variety of methodologies for assessing sound related impacts. The CEDA paper has clearly acknowledged recent developments for assessing the impacts of sound on aquatic life and encourages further steps in refining existing methodologies in relation to underwater sound.

The guidance should be provided in the form of an overview linking very closely to existing methodologies. Thus, in order to avoid duplication of effort, WODA to the extent possible will develop its guidance based on available sources.

Deliverables

The Expert Group will prepare one technical / scientific report with separate chapters covering the above described three points. The detailed scope and format of the report shall be determined when the group meets for the first time.

Timeline

WEGUS is expected to deliver the report one year after the first meeting of the Expert Group.

Expertise required for joining WEGUS

- Advanced understanding of the marine dredging industry including a variety of dredging applications and dredger types
- Understanding of marine regulation and management, especially environmental impact assessments (EIAs)
- Experience in underwater sound and its effects on aquatic life
- Understanding of risk based approaches to environmental management.

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