

Good Environmental Status and Environmental Targets:

Descriptor 11

1.1 Introduction

This report outlines the Good Environmental Status (hereinafter referred to as 'GES') and environmental targets established to achieve GES in terms of MSFD Descriptor 11 reproduced hereunder:

Introduction of energy, including underwater noise sources, is at levels that do not adversely affect the marine environment

1.2 Selection of relevant criteria and indicators

The Commission Decision on criteria and methodological standards on good environmental status of marine waters (2010/477/EU) acknowledges the fact that Descriptor 11 requires further development on the basis of scientific and technical progress. Within this context, the criteria and indicators established for the purposes of Descriptor 11 are mainly oriented towards the measurement of underwater noise, as a step towards addressing current knowledge gaps on this pressure:

- 11.1. Distribution in time and place of loud, low and mid frequency impulsive sounds
 - Proportion of days and their distribution within a calendar year over areas of a determined surface, as well as their spatial distribution, in which anthropogenic sound sources exceed levels that are likely to entail significant impact on marine animals measured as Sound Exposure Level (in dB re 1µPa 2.s) or as peak sound pressure level (in dB re 1µPa peak) at one metre, measured over the frequency band 10 Hz to 10 kHz (11.1.1)
- 11.2. Continuous low frequency sound
 - Trends in the ambient noise level within the 1/3 octave bands 63 and 125 Hz (centre frequency) (re 1µPa RMS; average noise level in these octave bands over a year) measured by observation stations and/or with the use of models if appropriate (11.2.1).

1.3 Good Environmental Status

The following statement is considered to reflect 'GES' in terms of underwater noise:

Adverse effects of underwater noise on key species groups are minimised to the extent possible

Nevertheless, it is acknowledged that assessment towards achievement of such GES would not be possible unless sufficient knowledge is available with respect to the generation of underwater noise, effects of such noise on relevant species and marine areas used by such species. At this stage, this information is not available and further work is necessary to define 'GES' in terms of Descriptor 11.

1.4 Environmental Targets and Associated Indicators

The proposed environmental target in relation to underwater noise constitutes an interim target aimed at addressing current knowledge gaps and building the capacity for to work towards achievement of GES for Descriptor 11.

Table 1: Proposed interim target for 'Underwater Noise'

Good Environmental Status	Environmental Target	Features	Indicators
Adverse effects of underwater noise on key species groups are minimised to the extent possible.	To work towards building capacity in the field of underwater noise through <i>inter alia</i> knowledge gain on key species groups which may be adversely affected by this pressure and streamlining of MSFD requirements in terms of underwater noise in licensing and permitting procedures.	Underwater Noise	Level of knowledge