

Dear United Nations Environment Programme

We are pleased to have the opportunity to input to the excellent draft of the UNEA3 background report, ***Towards a Pollution-Free Planet***. The information covered is both comprehensive and well presented.

We regret we didn't approach this process earlier because a particularly pervasive form of pollution in the marine environment—anthropogenic marine noise – is largely omitted from the background report. We are concerned this might be an oversight that UNEP will regret.

Anthropogenic (human-generated) marine noise pollution is the topic of considerable international discussion. Levels of marine noise pollution have doubled in some areas of the world, every decade, for the past 60 years. Animals exposed to elevated or prolonged noise can suffer direct injury or be displaced from important habitats. These impacts are experienced by a wide range of species including fish, crustaceans and cephalopods, marine turtles and marine mammals. The impact on fisheries and coastal livelihoods is serious. Recently published science by [McCauley et al.](#), (2017) has demonstrated that noise generated by offshore petroleum seismic surveys kills all zooplankton, that underpins the health and productivity of global marine ecosystems, out to a radius of 1.2km. The impact to fisheries resources is severe.

Last month (5 - 9 June 2017) the [United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development](#) discussed the mitigation of this form of pollution and adopted a [Call For Action: Our Ocean, Our Future](#) which calls on all stakeholders to, *inter alia*:

(g) Accelerate actions to prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris, plastics and microplastics, nutrient pollution, untreated wastewater, solid waste discharges, hazardous substances, pollution from ships, and abandoned, lost or otherwise discarded fishing gear, as well as to address, as appropriate, the adverse impacts of other human-related activities on the ocean and on marine life, such as ship strikes, underwater noise and invasive alien species.

We also attach the *Recommendations for addressing Ocean Noise Pollution: A Joint Statement to the Ocean Conference*, to demonstrate the breadth of civil society organisations that are involved.

There is a solid precedent for the overt inclusion of marine noise pollution in ***Towards a Pollution-Free Planet***.

The United Nations Convention on the Law of the Sea (UNCLOS) defines pollution of the marine environment as:

'the introduction by man, directly or indirectly, of substances or energy into the marine environment including estuaries which results, or is likely to result in such

deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities including fishing and other legitimate uses of the sea impairment of quality for use of sea water and reduction of amenities.'

The UN General Assembly Oceans Resolution A/70/L.22 adopted in 2015:

'Notes with concern that human-related threats, such as marine debris, ship strikes, underwater noise, persistent contaminants, coastal development activities, oil spills and discarded fishing gear, together may severely impact marine life, including its higher trophic levels, and calls upon States and competent international organizations to cooperate and coordinate their research efforts in this regard so as to reduce these impacts and preserve the integrity of the whole marine ecosystem while fully respecting the mandates of relevant international organizations'

The UN's Sustainable Fisheries Resolution A/RES/68/71, Operational paragraph 153:

'Encourages further studies, including by the Food and Agriculture Organisation of the United Nations, on the impacts of underwater noise on fish stocks and fishing catch rates, as well as associated socioeconomic effects.'

This week (10 - 13 July 2017), the *Scientific Council of the UNEP Convention on Migratory Species (CMS)* has endorsed the adoption of comprehensive environmental impact assessment guidelines for marine noise generating activities. As a Partner Organisation to CMS, OceanCare has been pleased to support the development of this work. The [CMS Marine Noise EIA Guidelines](#) are online as part of the CMS 12 Conference of the Parties (scheduled for October 2017) documents, as well as the [Technical Support Information](#) that supports the Guidelines.

CMS has previously adopted two resolutions specifically on the need to mitigate anthropogenic marine noise pollution. Two CMS daughter agreements have also progressed mitigation measures. The Convention on Biological Diversity adopted Decision XII/23, with specific emphasis on the impact of marine noise. Similarly, the International Maritime Organisation, the International Whaling Commission, the Convention for the Protection of the Marine Environment of the North-East-Atlantic, the Baltic Marine Environment Protection Commission and the European Union have all identified anthropogenic marine noise as a severe form of pollution.

We appreciate the draft ***Towards a Pollution-Free Planet*** report is in an advanced form, so have sought to limit our comments to areas of the report where anthropogenic marine noise could be included without a considerable rework of the document structure and design. We include some minor suggestions about plastic pollution as well.

Anthropogenic marine noise pollution

We propose the following minor additions (identified as underlined text) to the document. Our intention is to effectively weave marine noise into the text, without causing major re-work of the structure or design.

Executive summary (page I, para 4)

Add the following text:

The severity of pollution is based on its chemical nature, concentration, presence and persistence. Some types of pollution on land are easily noticed, such as contaminated water, poor air quality, industrial waste, litter and light, heat and noise. Others are less visible, for example, the presence of pesticides in food, nutrients in the sea and lakes, and endocrine disrupting chemicals in drinking water, personal care products and cleaning solutions.

Pollution in the marine environment, such as noise, are sometimes difficult to detect from land but are no less pervasive. Some, such as those coming from abandoned industrial and mines sites, armed conflict, nuclear power stations, and waste landfill form part of a longer-term legacy. And some others are totally intangible such as those causing the depletion of the ozone layer.

Introduction (page 2, para 2)

Add the following text:

Some types of pollution on land are easily noticed, such as certain forms of contaminated water, poor air quality, industrial waste, litter, and light, heat and noise. Others are less visible, for example the presence of pesticides in food, nutrients in the sea and lakes, and endocrine disrupting chemicals in drinking water, personal care products and cleaning solutions. Pollution in the marine environment, such as noise, are sometimes difficult to detect from land, but are no less pervasive. Some, such as those coming from abandoned industrial sites, armed conflict, nuclear power stations, and waste landfill form part of a longer-term legacy.

Marine and coastal pollution (page VI)

Add a new point 20:

18. Phase out single-use plastics and modify manufacturing in order to reduce packaging and phase out non-recoverable plastic materials;

19. Stop the production and use of plastic in non-recoverable items, such as microbeads in personal care products and cosmetics.

20. Limit activities that use anthropogenic marine noise from operating in important species habitats or fish spawning grounds

1.4 Marine and Coastal Pollution (page 15, new para 3)

Following the paragraph about the impact of oil spills, add the following:

Levels of anthropogenic marine noise have doubled in some areas of the world, every decade, for the past 60 years. This form of marine noise is generated by military sonar, seismic surveys, civil high power sonar, coastal and offshore construction works, offshore platforms, playback and sound exposure experiments, shipping and vessel traffic, with localised impacts from pingers, acoustic data transmission, offshore tidal and wave energy turbines and wind turbines. Animals exposed to elevated or prolonged anthropogenic noise can

suffer direct injury or be displaced from important habitats. These impacts are experienced by a wide range of species including fish, crustaceans and cephalopods, marine turtles and marine mammals. Published science has demonstrated that noise generated by offshore petroleum seismic surveys kills zooplankton, which underpin the health and productivity of global marine ecosystems, out to a radius of 1.2km. The impact on fisheries and coastal livelihoods is serious.

The following text, drawn directly from the CMS Marine Noise EIA Guidelines [Technical Support Information](#), could usefully be added to Annex 3:

Convention on Migratory Species (CMS)

'CMS Resolution 9.19: Adverse Anthropogenic Marine/Ocean Noise Impacts on Cetaceans and Other Biota' encourages Parties to:

'...to endeavour to control the impact of emission of man-made noise pollution in habitat of vulnerable species and in areas where marine mammals or other endangered species may be concentrated, and where appropriate, to undertake relevant environmental assessments on the introduction of systems which may lead to noise associated risks for marine mammals.'

'CMS Resolution 10.24: Further Steps to Abate Underwater Noise Pollution for the Protection of Cetaceans and Other Migratory Species' encourages CMS Parties to:

'...prevent adverse effects on cetaceans and on other migratory marine species by restricting the emission of underwater noise, understood as keeping it to the lowest necessary level with particular priority given to situations where the impacts on cetaceans are known to be heavy" and "[u]rges Parties to ensure that Environmental Impact Assessments take full account of the effects of activities on cetaceans and to consider potential impacts on marine biota and their migration routes ...'

'Resolution 10.24' further articulates that CMS Parties should ensure that Environmental Impact Assessments take full account of the impact of anthropogenic marine noise on marine species, apply Best Available Techniques (BAT) and Best Environmental Practice (BEP), and integrate the issue of anthropogenic noise into the management plans of marine protected areas. 'Resolution 10.24' also 'invites the private sector to assist in developing ...alternative techniques and technologies for coastal, offshore and maritime activities'.

Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS)

'ACCOBAMS Resolution 5.13: Conservation of Cuvier's beaked whales in the Mediterranean' and 'Resolution 5.15: Addressing the impact of anthropogenic noise' reinforces the commitments made in 'Resolution 4.17: Guidelines to Address the Impact of Anthropogenic Noise on Cetaceans in the ACCOBAMS Area (ACCOBAMS Noise Guidelines)' that urges ACCOBAMS Parties to:

'[r]ecogniz[e] that anthropogenic ocean noise is a form of pollution, caused by the introduction of energy into the marine environment, that can have adverse effects on marine life, ranging from disturbance to injury and death.'

This Resolution also encourages ACCOBAMS Parties to:

'... address fully the issue of anthropogenic noise in the marine environment, including cumulative effects, in the light of the best scientific information available and taking into consideration the applicable legislation of the Parties, particularly as regards the need for thorough environmental impact assessments being undertaken before granting approval to proposed noise-producing activities.'

The ACCOBAMS Noise Guidelines provide further comprehensive detail-specific considerations relating to military sonar, seismic surveys and offshore drilling, shipping and offshore renewable energy developments.

Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)

'ASCOBANS Resolution 5.4: Adverse Effects of Sound, Vessels and other Forms of Disturbance on Small Cetaceans', urges ASCOBANS Parties to:

'... develop, with military and other relevant authorities, effective mitigation measures including environmental impact assessments and relevant standing orders to reduce disturbance of, and potential physical damage to, small cetaceans, and to develop and implement procedures to assess the effectiveness of any guidelines or management measures introduced.'

'ASCOBANS Resolution 6.2: Adverse Effects of Underwater Noise on Marine Mammals during Offshore Construction Activities for Renewable Energy Production', further recommends that Parties:

'... include Strategic Environmental Assessments and Environmental Impact Assessments carried out prior to the construction of marine renewable energy developments and taking into account the construction phase and cumulative impacts'

and to:

'... introduce precautionary guidance on measures and procedures for all activities surrounding the development of renewable energy production in order to minimise risks to populations ... [that include] measures for avoiding construction activities with high underwater noise source levels during the periods of the year with the highest densities of small cetaceans, and in so doing limiting the number of animals exposed, if potentially significant adverse effects on small cetaceans cannot be avoided by other measures; [to include] Measures for avoiding construction activities with high underwater noise source levels when small cetaceans are present in the vicinity of the construction site; [and] technical measures for reducing the sound emission during construction works, if potentially

significant adverse effects on small cetaceans cannot be avoided by other measures.

Convention on Biological Diversity (CBD)

'CBD Decisions VIII/28: CBD Voluntary Guidelines on Biodiversity-inclusive Impact Assessment' provides detailed guidance on whether, when and how to consider biodiversity in both project level and strategic levels assessments. The document clearly articulates screening, scoping, assessment and evaluation of impacts, development and alternatives; transparency and consultation, reporting, review and decision-making. The guidelines suggest that environmental impact assessments should be mandatory for activities in habitats for threatened species and activities resulting in noise emissions in areas that provide key ecosystem services. 'CBD Decision XII/23: Marine and coastal biodiversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise' encourages CBD Parties and others:

'... to take appropriate measures, as appropriate and within competencies and in accordance with national and international laws, such as gathering additional data about noise intensity and noise types; and building capacity in developing regions where scientific capacity can be strengthened.'

In 'Decision XII/23' CBD Parties have agreed to a significant list of technical commitments, including gathering additional data about noise intensity and noise types, and building capacity in developing regions where scientific capacity can be strengthened.

The CBD Parties also encouraged Parties to take appropriate measures, including:

'... (e) Combining acoustic mapping with habitat mapping of sound-sensitive species with regard to spatial risk assessments in order to identify areas where those species may be exposed to noise impacts, (f) Mitigating and managing anthropogenic underwater noise through the use of spatio-temporal management of activities, relying on sufficiently detailed temporal and spatial knowledge of species or population distribution patterns combined with the ability to avoid generating noise in the area at those times, (g) Conducting impact assessments, where appropriate, for activities that may have significant adverse impacts on noise-sensitive species, and carrying out monitoring, where appropriate.'

'Decision XII/23' urges the transfer to quieter technologies and applying the best available practice in all relevant activities.

International Maritime Organization (IMO)

The International Maritime Organization (IMO), through 'Resolution A 28/Res.1061', has requested that the Marine Environment Protection Committee (MEPC) keep under review measures to reduce adverse impact on the marine environment by ships, including developing:

'[g]uidance for the reduction of noise from commercial shipping and its adverse impacts on marine life'

International Whaling Commission (IWC)

The Scientific Committee of the International Whaling Commission (IWC) continues to monitor and discuss the impacts of noise on cetaceans.

Convention for the Protection of the Marine Environment of the North-East-Atlantic (OSPAR)

The Convention for the Protection of the Marine Environment of the North-East-Atlantic (OSPAR) has reached agreement on an 'OSPAR Monitoring Strategy for Ambient Underwater Noise'.

The OSPAR Intersessional Correspondence Group on Noise (ICG-NOISE) is currently working closely with the International Council for the Exploration of the Sea (ICES) data team to produce the 2017 OSPAR Intermediate Assessment for impulsive noise. This is the first regional assessment of its kind, and will give policy-makers and regulators a regional overview of cumulative impulsive noise activity in the Northeast Atlantic, including the noise source type (e.g. pile driver, explosion) and intensity. The 2017 Intermediate Assessment will serve as a 'roof report' to inform the subsequent 2018 MSFD assessments of EU Member States within the OSPAR region.

Convention on Environmental Impact Assessment in a Transboundary Context (Espoo (EIA) Convention)

In 'Decision II/8' Espoo Parties endorsed the Good Practice Recommendations on Public Participation in Strategic Environmental Assessment set out in document 'ECE/MP.EIA/SEA/2014/2', including and requirement that

'... the public to be given an opportunity to comment on draft plans or programmes and the associated environmental reports.'

and that:

'[p]eople who are affected by a plan or programme and are interested in participating must be given access to all necessary information and be able to participate in meetings and hearings related to the SEA process'

This applies during the different stages of the assessment, including screening, scoping, availability of the draft plan/programme and environmental report, opportunity for the public to express its opinions and decision.

Baltic Marine Environment Protection Commission - Helsinki Commission (HELCOM)

The Baltic Marine Environment Protection Commission - Helsinki Commission (HELCOM) has two important programmes in development. The Baltic Sea Information on the Acoustic Soundscape Project surveyed national needs and requirements of information on noise and will recommend monitoring of

ambient noise in the Baltic Sea. A registry of impulsive sounds project is also being considered.

European Union Legislation and Implementation

A number of pieces of EU legislation on environmental impact assessment and nature protection are relevant and contain specific references to the marine environment and wildlife and noise.

Recital 12 of Directive 2014/52/EU of the European Parliament and the Council, which amends Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, specifically mentions the marine environment and gives the example of one source of noise-generating activity:

‘With a view to ensuring a high level of protection of the marine environment, especially species and habitats, environmental impact assessment and screening procedures for projects in the marine¹ environment should take into account the characteristics of those projects with particular regard to the technologies used (for example seismic surveys using active sonars).’

In addition, Recital 33 of this Directive also requires that:

‘Experts involved in the preparation of environmental impact assessment reports should be qualified and competent. Sufficient expertise, in the relevant field of the project concerned, is required for the purpose of its examination by the competent authorities in order to ensure that the information provided by the developer is complete and of a high level of quality.’

The marine environment is mentioned in Annex III paragraph 2 (ii) related to legal article 4(3) and noise and vibration are listed in Annex IV paragraphs 1 (d) and 5 (c) among information to be supplied according to Article 5 (1).

The EIA Directive applies to all Member States and requires that, for certain types of projects listed in its Annexes, public and private projects likely to have significant effects on the environment by virtue inter alia of their size, nature or location are made subject to an assessment of their environmental effects.

Under the EIA Directive “project” means ‘the execution of construction works or of other installations or schemes’ and ‘other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources’.

For projects listed in Annex I of the EIA Directive an assessment should always be carried out, whereas for projects listed in Annex II, Member States have to determine whether an assessment is to be carried out through a case-by-case examination or according to thresholds or criteria set by the Member State.

The so-called EU nature directives (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Council and European Parliament Directive 2009/147/EC on the conservation of wild birds (Birds Directive) are also relevant. For the Natura 2000 sites designated for the protection of features such as marine animal species listed in Annex II of the Habitats directive, measures are required under Art. 6(2) to avoid any significant disturbance of those species, while different human activities that are likely to have a significant effect on Natura 2000 sites need to be properly assessed and authorized in accordance with the provisions of article 6 (3) and (4) of the Habitats Directive. This provision also includes the obligation to assess the cumulative impacts of different activities on the conservation objectives of the site. Furthermore, the provisions of Article 12 of the Habitats Directive, which includes an obligation to prohibit deliberate disturbance of strictly protected species, are also particularly relevant in such situation, as all species of cetaceans and a number of marine vertebrates and invertebrates listed in Annex IV(a) benefit from a system of strict protection.

The Commission guidance document on ‘*establishing Natura 2000 sites in the marine environment*’ contains a specific section on noise pollution.

There is specific legislation on the marine environment. In 2008 the European Parliament and the Council adopted the Marine Strategy Framework Directive which requires Member States to achieve or maintain good environmental status of European Union marine waters by 2020, by developing marine strategies. Marine strategies contain 5 main elements: the initial assessment, the determination of good environmental status, the establishment of environmental targets, the monitoring programmes and the programme of measures.

When determining good environmental status, Member States shall determine a set of characteristics on the basis of 11 qualitative descriptors. One of these descriptors state:

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

This is further specified in Commission Decision 2010/477/EU which states that:

“... anthropogenic sounds may be of short duration (e.g. impulsive such as from seismic surveys and piling for wind farms and platforms, as well as explosions) or be long lasting (e.g. continuous such as dredging, shipping and energy installations) affecting organisms in different ways.”

The following criteria and indicators are laid down in that Decision:

“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 1µPa².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).”

Within the context of the Marine Strategy Framework Directive, Member States sharing a marine region or sub-region are also encouraged to cooperate to deliver on the objectives of the Directive.

Plastic pollution

We believe that Section 1.4. should mention of specific sources of plastic pollution, including washing machine fibres and debris from tyres or plastic bottles.

There are other binding measures in addition to those adopted by the Barcelona Convention in 2013, that should be included such as measures adopted by CMS (Resolution 10.4 and 11.30), CBD (Decision XI/18) and UNEA/UNEP (Resolution 1/6 and 2/11).

We trust these suggested amendments are welcomed, and that they don't appear as major revisions. We have specifically sought to add strategic text, to retain the document's accuracy and integrity, but without dramatically changing its direction.

We would be pleased to work with UNEP to provide some online text if marine noise was a pollution form to highlight on the website.

Your sincerely

Sigrid Lueber

OceanCare

Sigrid Lueber, President
Gerbestrasse 6, P.O.Box 372
CH-8820 Waedenswil - Switzerland