OSPAR COMMISSION

MSFD Advice document on Good environmental status - Descriptor 10: Marine Litter

A living document - Version of 17 January 2012

Biodiversity Series

2012

OSPAR Convention

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention") was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. The Contracting Parties are Belgium, Denmark, the European Union, Finland, France, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Convention OSPAR

La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998.
Les Parties contractantes sont l'Allemagne, la Belgique, le Danemark, l'Espagne, la Finlande, la France, l'Irlande, l'Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d'Irlande du Nord, la Suède, la Suisse et l'Union européenne.

Version of 17 January 2012

Prepared by the Intercorrespondence Group on Marine Litter of the OSPAR Committee of the Environmental Impact of Human Activities (EIHA)

Disclaimer

This Advice Document is a living document and reflects the state of discussion at expert level at the time of its drafting. The document is of a non-binding nature and aims at facilitating coordination between EU Member States that are parties to the OSPAR Convention, with regard to developing indicators and targets for MSFD Descriptor 10. It does not prejudice the ongoing decision making process in Contracting Parties and their final conclusions in 2012.

Contents

Advice Summary

Criteria and indicators from the commission decision:

10.1 Characteristics of litter in the marine and coastal environment

- Trends in the amount of litter washed ashore and/or deposited on coastlines, including analysis of its composition, spatial distribution and, where possible, source (10.1.1)
- Trends in the amount of litter in the water column (including floating at the surface) and deposited on the sea-floor, including analysis of its composition, spatial distribution and, where possible, source (10.1.2)
- Trends in the amount, distribution and, where possible, composition of micro-particles (in particular micro-plastics) (10.1.3)

10.2 Impacts of litter on marine life

- Trends in the amount and composition of litter ingested by marine animals (e.g. stomach analysis) (10.2.1).

Common approach toward indicators and targets for GES 10

The following table outlines the GES indicators and the advice on parameters, targets and preferred approach. The table is based on responses to a questionnaire, returned by all CPs except Portugal and Iceland and a subsequent discussion at the ICG-ML. Colours indicate the level of consensus between OSPAR CPs:
Green (bold) = high; *Orange (bold, italics) = some*; Red (normal)= none; black = not enough information

Below the table experiences or considerations on target setting are given.

Criterion	Indicator	Parameter	Target	Monitoring	Advice/consideration
10.1	10.1.1 – beach litter	**Number of items**	**Reduction percentage on number of items (a)**	**OSPAR Beach Litter Monitoring Programme**	There is good consensus between contracting parties on the approach to this indicator.
	10.1.1 – beach litter	Number of items	Reduction percentage on number of a specific category of items (a)	OSPAR Beach Litter Monitoring Programme	Some CPs are considering such a target, for example for the number of plastic/fishing/sanitary items.
	10.1.2 – a. floating litter – large items	***Number of items***	***Decreasing trend***	***Aerial surveys / visual surveys from ships***	There is no agreement on a protocol. A protocol for aerial surveys has been developed by De, which will be tested as part of a R&D project.
	10.1.2 – b. floating litter – small items	***Weight of plastic in stomach of fulmars***	***There should be less than 10% of northern fulmars (Fulmarus glacialis) having more than 0.1 g plastic particles in the stomach (1)***	***OSPAR Ecological Quality Objective (EcoQO) Fulmars***	The target has been set for the North sea only; it has to be adapted for other regions.
	10.1.2 – c. litter on the seafloor	**Number of items**	**Decreasing trend (b)**	**Scientific bottom trawl surveys**	There is good consensus between contracting parties on the approach to this indicator.
	10.1.2 – c. litter on the seafloor	Number of items	Decreasing trend (b)	Video recordings from pipeline monitoring	This is an option some CPs may consider
	10.1.2 – d. litter in the water column	-	-	-	Less is known on this indicator. Probably this part of the indicator is less important.
	10.1.3 – micro plastics	**Number of particles in CPR**	**Unknown (c)**	**Continuous Plankton Recorder (CPR)**	

		Number of particles in dredged sediments or in sediment samples/cores	***Unknown (c)***	***Include in analysis of dredged material***	
10.2	10.2.1 – litter ingested by animals	**Weight of plastic in stomach of fulmars**	**There should be less than 10% of northern fulmars (Fulmarus glacialis) having more than 0.1 g plastic particles in the stomach (1)**	**EcoQO Fulmars**	The target has been set for the North sea only; it has to be adapted for other regions.
10.2.1		Marine mammals, turtles or fish	tbd		This is an additional option that some CPs consider
Ne	w	Entanglement	tbd		This is an additional option that some CPs consider

Experiences in setting targets for GES 10

(1) This is the EcoQO target. The target is the amount of plastic in bird stomachs in a relatively pristine area, which is considered to go further than GES meaning this target as it is currently articulated may not be appropriate. There was no date attached to reaching the EcoQO target and it is unrealistic that this target will be reached by 2020.

Detailed consideration of approaches for target setting

Target setting is difficult for almost all indicators under this descriptor for a number of reasons. Firstly, understanding the relationship between the types and amounts of marine litter in the environment and the degree of 'harm' caused at a population and in some cases individual level are not fully understood. Secondly, recognising that Contracting Parties have in place monitoring programmes at differing stages of implementation, we do not yet have a comprehensive baseline thus it will take several years before enough data is available to robustly detect current trends across the OSPAR region. Finally the effectiveness of potential management measures to reduce inputs is not completely understood.

When setting targets the following advice should be considered;

(i) Given the lack of understanding, OSPAR CPs may consider to set targets based on the level of ambition – this might be a good option until more data is gathered and baselines can be set

(ii) (For targets marked a). Targets should be set as percentage reductions of total number of items where an appropriate baseline exists (conclusions from ICG-ML, Nov 2009). Additionally, overall reduction targets for total number of items in a region and subregion and/or specific reduction targets to address specific litter items or to reflect national or (sub)regional differences should also be considered (again based on the availability of appropriate baseline data). It is the task of member states to decide on the exact percentage.

(iii) Regional/national differences in monitoring methods do not have to be a major problem for target setting as long as monitoring is consistent and will allow for the generation of trends.

(iv) Baseline for beach litter could be set as a 5 year moving average (e.g. 2005-2010)

(v) (For targets marked b). There is currently in sufficient data* to assess impacts and current trends therefore a trend target would be most appropriate at this time.
* however some CPs may have data from IBTS bottom trawls that go back some years

(vi) (For targets marked c). There is very little information available on these i. There are no established monitoring programmes and only recently some monitoring methodologies have been developed. Before targets can be considered data is needed to define if microparticles are a problem and a baseline needs to be established. Setting a pressure target may be appropriate, for example the reduction or cessation of microplastic inputs derived from cosmetic products via rivers.

Monitoring

The following table lists all existing monitoring and shows for each CP whether this is monitored. Colours indicate the level of consensus between CPs that this monitoring should be part of the common approach.

Green = high; *Orange = some*; Red = none; black = not enough information (D = in development)

Indicator	Monitoring Type	Be	De	Dk	Fr	Ire	Ice	Nl	No	Por	Se	Sp	UK
10.1.1	**Beach litter**	**X**	**X**	**-**	**X**	**X**	**-**	**X**	**X**	**-**	**X**	**X**	**X**
10.1.2	***Aerial surveys***		***X***										
10.1.2	***EcoQO Fulmars***	***D***	***X***		***D***			***X***	***X***				***D***
10.1.2	**Litter in IBTS (scientific bottom trawl surveys)**		**X**		**X**	**X**						**X**	**X**
10.1.2	Videomonitoring of pipelines			D									
10.1.3	**Microparticles** **- CPR**	**D**									**D**		**D**
10.1.3	***- dredged sediments/sediment cores***												
10.2.1	**EcoQO Fulmars**	**D**	**D**		**D**			**X**	**X**				**D**
10.2.1	Litter ingested by stranded and dead marine mammals and turtles (stranded) and by fish											X	X
10.2.1	Entanglement of beached animals	X											

Appropriate scales of assessment

Litter is a global problem; once it enters the environment litter is transported easily, making it hard to determine its source. However, almost half of beach litter is sourced locally and clearly inputs from rivers and other sources in the EU region are significant. Litter will most likely only be controlled successfully through local measures. Therefore, undertaking more detailed regional analyses will allow for comparisons to be made with the overall results for the OSPAR Maritime Area. These regional differences could be a reflection of the geographical location of the region (external factors like currents, winds and shipping density/fishing intensity) and/or as a result of local/regional inputs and activities.

In addition, regional information could prove valuable when assessing the regional impact from various sources of marine litter and when selecting between management measures since responses may differ between regions.

For the OSPAR beach litter project the following regions have been used:

1 Northern North Sea;

2. Celtic Seas;

3. Southern North Sea;

4. Bay of Biscay;

5. Iberian coast.

Region 3 may be divided into two regions (3a Southern North Sea; 3 b. English Channel)

To conclude, the advice is to assess litter on a scale of the 5 regions above, and aggregate those to the scale of the defined MSFD regions for assessment under the MSFD.

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OSPAR's vision is of a clean, healthy and biologically diverse North-East Atlantic used sustainably

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