Science for Environment Policy
DG Environment News Alert Service
European Commission

1 December 2011

Seabird ingestion of plastic litter still exceeding policy targets

Data from studies monitoring the amount of plastic eaten by seabirds suggest that levels in the North Sea are well above targets established for the North East Atlantic Ocean by OSPAR (the Oslo and Paris Convention). For the most recent monitoring period, the target amount was exceeded in well over half the birds studied.

One of the main legal instruments safeguarding the North Sea is the Oslo and Paris Convention (OSPAR), an agreement between 15 countries of Western Europe, together with the European Commission, to protect the marine environment of the northeast Atlantic and to prevent human health effects related to its pollution and deterioration[1]. Since the Convention was signed in 1992, the OSPAR Commission, in partnership with the International Council for Exploration of the Sea, has developed ecological quality objectives (EcoQOs) to provide indicators for the status of the marine environment. OSPAR EcoQOs include indicators for marine mammals that require monitoring of annual by-catch and targets for the weight of spawning fish among commercial species. Also the EU's Marine Strategy Framework Directive[2], which provides a framework for achieving 'Good Environmental Status' in the marine environment mentions the example of the EcoQO for the fulmar (a common seabird related to the albatross) as an indicator.

The EcoQO for monitoring of marine litter is based on measuring the amount of plastic in the stomachs of fulmars. The target is a situation where less than 10% of beached fulmars carry more than 0.1g of plastic.

However, according to this international study, partly EU-funded[3], the OSPAR target was exceeded in 58% of the fulmars studied in the five-year period between 2003-2007. The data come from 1295 beached birds collected by volunteer groups, research institutes and bird rehabilitation centres in different North Sea regions. On average, around 0.3g of plastic was found in the stomach of each bird – three times the critical level in the target definition. The worst affected region was the English-French Channel, where the threshold was exceeded in 78% of birds.

Longer term monitoring data for the Netherlands goes as far back as the 1980s. The proportion of birds exceeding the 0.1g target decreased from 67% to below 60% during the 2000s, but has remained relatively stable since. Perhaps more notable is the downward trend in the amount of industrial plastics found in the birds' stomachs. Improved methods for reducing losses from processing plants and in wastewater treatment may have contributed to this trend, according to the researchers. However, the amount of consumer plastics has increased.

Under OSPAR, there is no deadline for meeting the EcoQO targets, but the MFSD sets a deadline of 2020 for achieving Good Environmental Status. EcoQOs have still to be developed further under the Framework, but could become legally binding. Based on their findings, the researchers say that trying to meet the marine litter target by 2020 could be considered too ambitious. However, in the longer term it is probably not an unrealistic target as it is almost achieved in the eastern Canadian Arctic, where only 14% of fulmars have been found to carry more than 0.1g of plastic.

Additional information: For further information from this research group on plastic waste in the sea and fulmars, please see: www.imares.wur.nl/UK/research/dossiers/plastic/

1. See: www.ospar.org
2. See: http://ec.europa.eu/environment/water/marine/directive_en.htm
3. This study was co-funded by the EU's Interreg IIIB Programme for the North Sea. See: www.savethenorthsea.com

Source: Van Franeker, J.A. *et al.* (2011). Monitoring plastic ingestion by the northern fulmar *Fulmarus glacialis* in the North Sea. *Environmental Pollution*. 159: 2609-2615.
Contact: Jan.vanfraneker@wur.nl
Theme(s): Marine ecosystems, Waste

Science for Environment Policy

DG Environment News Alert Service

European Commission

2 December 2011
Issue 264

IN THIS ISSUE

Seabird ingestion of plastic litter still exceeding policy targets

Data from studies monitoring the amount of plastic eaten by seabirds suggest that levels in the North Sea are well above targets established for the North East Atlantic Ocean by OSPAR (the Oslo and Paris Convention). For the most recent monitoring period, the target amount was exceeded in well over half the birds studied.
(**more...**) Download article (PDF)

'Effective mesh density': a useful measure of landscape fragmentation

Transport infrastructure and urban sprawl are increasingly dividing up landscapes in Europe, threatening wildlife. A new report has quantified landscape fragmentation across 28 European countries. To prevent further negative environmental impacts, it recommends protecting unfragmented areas, monitoring fragmentation and applying fragmentation analysis in planning. (**more...**) Download article (PDF)

Intensive farming methods affect birds and plants in Europe

Intensive farming methods have simplified landscapes across Europe, leading to a loss of biodiversity. A recent study has investigated the effects of intensive farming on plants, beetles and birds in Western European regions and found that plants and birds are particularly affected. (**more...**) Download article (PDF)

Thawing permafrost could lead to higher carbon emissions

Permafrost and wetlands in high latitudes could switch from carbon sink to carbon source by the end of the century, according to a recent study. Using a model of terrestrial ecosystems that showed how carbon is stored and released in soils at high latitudes, researchers revealed that climate change could cause these soils to release much more carbon than previously predicted. (**more...**) Download article (PDF)

Reductions in nitrate pollution through better monitoring

A better understanding of existing nitrate monitoring systems in European waters could greatly improve efforts to reduce nitrate pollution, a major cause of poor water quality, according to new research from Portugal.(**more...**) Download article (PDF)

Marine litter means significant economic damage too

Marine litter not only causes environmental damage, but has significant economic costs for industry. A recent study has now estimated that marine litter in the Asia-Pacific region is likely to cost over US$1.26billion per year in damage to marine industries. Policy options for reducing this cost are explored.(**more...**) Download article (PDF)

The contents and views included in this News Alert are based on independent, peer-reviewed research and do not necessarily reflect the position of the European