Marine Debris in the North- and Baltic Seas: spatio-temporal distribution patterns and its occurrence in marine mammals

Project data

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<tr>
<th>Project leader:</th>
<th>Prof. Prof. h. c. Dr. Ursula Siebert</th>
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<tbody>
<tr>
<td>Scientific work:</td>
<td>Dr. Bianca Unger</td>
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<td>Sponsoring:</td>
<td>Aerial survey data from 2010, 2011 and 2012 were analysed in the course of the project Kohärentes Monitoring der Belastungen deutscher Meeres- und Küstengewässer mit menschlichen Abfällen und der ökologischen Konsequenzen mit weiterem Fokus auf eingehende Identifizierung der Quellen (FKZ: 3713 25 220). This project was funded by the Federal Environmental Agency (UBA) and coordinated by AquaEcology GmbH &amp; Co. KG.</td>
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Project description

One of the major threats to marine environment is pollution and the discharge of marine debris, such as plastic items, into the world's oceans. Plastics are light and durable allowing the debris to remain in the marine environment for long periods of time which is a danger to marine mammals. Marine debris can cause a diverse range of health effects for animals. Along with external injuries caused by entanglement, swallowing of plastic items can cause internal injuries, suffocation or starvation. The marine debris project of the Institute for Terrestrial and Aquatic Wildlife Research covers both, the analysis of the extent and distribution of floating marine debris in the German Exclusive Economic Zone (EEZ). In addition, the project studies the consequences of marine debris contact for marine mammals inhabiting German waters (harbour porpoise [Phocoena phocoena], harbour seal [Phoca vitulina] and grey seal [Halichoerus grypus]) are of special interest. Aerial survey data from 2002 to 2014 will be analysed to gain information on the extent and distribution of floating marine debris and to reveal possible interferences with important harbour porpoise habitats. Also, data on floating debris will be integrated into a drift model (cooperation: Institute of Coastal Research, Helmholtz-Zentrum Geesthacht) in order to reveal the possible origin and further whereabouts of marine debris.

The second aspect of this research project will focus on the occurrence of marine debris related to marine mammals as well as its possible impacts (macrobezbris). By studying records of debris findings in harbour porpoises (since 1990), harbour seals and grey seals (both since 1996), documented during necropsies, the amount of detected macrobezbris will be determined, possible related injuries analysed and potential annual trends revealed.

Contact person
Stiftung Tierärztliche Hochschule Hannover
Institute for Terrestrial and Aquatic Wildlife Research
Werftstr. 6
25761 Büsum
Dr. Bianca Unger
send email