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Frontpage: Yellow-billed Diver *Gavia adamsii.* Photo taken at the Finnmark coast in May, 2007 by Digger Jackson, Natural Research Ltd.©

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3.3.4 Wintering and migrating divers in the German part of the North Sea: occurrence, threats and perspectives

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At about the year 2000, mostly incomplete knowledge about the occurrence of Redthroated Diver (RTD) and Black-throated Diver (BTD) was available for the German section of the North Sea (territorial waters and Exclusive Economic Zone, EEZ).

Both migration counts at the offshore island of Helgoland and ship-based surveys have shown that the RTD dominates in numbers with a share of c. 95% compared to the much scarcer BTD. The observations at Helgoland revealed November –January and February-April as the main periods of passage, with both timing and numbers much reflecting the degree of winter severity (more divers flying in from the Baltic Sea during cold winters).

With the upcoming discussion about offshore windfarms, several large and smaller scaled projects were initiated in order to enhance knowledge about the distribution of seabirds by aerial surveys. Coastal waters and the seaa area up to about 100 km offshore could be identified – beneath being used during autumn migration and for wintering – as an important spring staging area, especially in March and April. This resulted in the declaration of a marine Special Protected Area (EU Birds Direktive) in the EEZ west of the Schleswig-Holstein coast. However, avoidance of operating offshore windfarms (e.g. Horns Rev, Denmark) and the proposal of 26 such windfarms (1280 km²), of which 13 (545 km²) are commissioned by spring 2007, gave concern of large-scale habitat loss for divers in German waters in future. With this state of commissioning, this would apply to about 40 divers in winter, but more than 800 during spring migration. As another impact factor regarding habitat use of divers, ship traffic was identified as negative factor, proven by aerial surveys in the shipping lane region off the Lower Saxony coast.

For further assessments of the impact of human activities in marine areas on divers, some gaps in the knowledge about diver behaviour in the North Sea have to be filled. A project with GPS data loggers is aimed to shed light on trajectories of divers during wintering and migration. Hopefully, such a project will also clarify the turnover rate in the staging areas, allowing to approach the number of individuals actually using these sites in the course of a migration season.