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Title Ms.
Last Name of PRESENTING Author Loshchagina
Middle Name or initials of PRESENTING Author A.
First Name of PRESENTING Author Julia

Country of PRESENTING Author Russia

Institution, organization or general address Institute of Geography RAS

Theme 2: Observing in Support of Adaptation and Mitigation

Author list (in order) *Loshchagina, Julia; Glazov, Petr; Pollet, Ingrid L.; Karwinkel, Thiemo; Vardeh, Sandra; Kondratyev, Alexander; Bellebaum, Jochen; Kruckenberg, Helmut; and Quillfeldt, Petra

Poster title (brief) Understanding the decline of the Long-tailed duck in the Baltic Sea – study of the breeding population on Kolguev Island in the Russian Arctic

Abstract - text box
The wintering population of all sea ducks in the Baltic Sea declined by about 60% between 1994 and 2009. For long-tailed ducks (Clangula hyemalis), the decline was most severe (65%), resulting in the species' re-classification as globally threatened (vulnerable) on the IUCN Red List. Long-tailed duck is one of the most numerous duck species in the Arctic. Our understanding of threats and reasons for decline in the Arctic breeding grounds has substantial gaps due to inaccessibility of these areas. According to current knowledge, likely explanations for long-tailed duck declines are bycatch mortality in gillnet fisheries and reduced reproduction since 1994. One possible reason for this apparent decline could be a northern shift in wintering range of a portion of the population due to increased availability of ice-free waters in the Arctic. We deployed and recovered light level loggers on female long-tailed ducks on Kolguev Island breeding area over a period including two annual cycles, from 2017 to 2019. We obtained 73 migration tracks from 48 females. Most autumn staging locations were situated around the Novaya Zemlya archipelago. The vast majority of the females (93.6%) migrated to the Baltic Sea, while the remaining migrated to the White Sea and the Barents Sea, with no apparent longitudinal or latitudinal shift in the wintering range. During the 2017-2019 breeding seasons it was very low breeding success observed. This could explain the decline of the wintering population, suggesting a connection to climate change. This work was supported by the German Federal Agency for Nature Conservation (Bundesamt für Naturschutz, BfN) award MEERESENTEN (FKZ 3516821500).