

Reproductive output of the Black-throated Diver *Gavia arctica* in perspective of a dynamic climate in Western Norway

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The main objective of our Black-throated diver (BTD) study has been to improve the knowledge about the size and trend of BTD regional breeding population in the coastal and fjord landscapes in Western Norway.

In addition to surveys to map breeding pairs in the region (from 2000 onwards), including both coastal and lowland sites and alpine breeding lakes, we have also focused monitoring a number of breeding lakes to document the reproductive output of our BTD's. We search for pattern in success and failure, and will compare their performance to a set of environmentally factors which may influence their breeding outcome. Comparison with results from other Nordic BTD populations serves as an important perspective to what happens in this regional population.

In perspective of earlier reports we still observe a continuing (but slow) loss of breeding pairs at traditional lakes, but also seeing that a set of pairs continues to reproduce. The key question we have is what factors do influence our BTD population negatively. Are negative factors operating at the breeding grounds, or is it during migration and wintering that survival is too low? Our results so far document a low breeding success in our BTD population, clearly indicating that some negative factors really do operate at the regional level in Western Norway.