The impact of hunting and oiling on Brünnich’s guillemots in the Northwest Atlantic


Key results:

Brünnich’s guillemot is an abundant pan-Arctic seabird, but several Atlantic breeding populations are declining by up to 6% per year. They are subject to traditional hunting in the wintering areas off west Greenland and Newfoundland, as well as chronic oil pollution in eastern Canada. Until recently, poor knowledge of the winter distribution has limited the possibility to assess the impact of these mortality sources on specific breeding populations.

Based on recent tracking studies, we constructed a spatially explicit population model that allocates hunting and oiling mortality to breeding populations in Canada, Greenland, Iceland and Svalbard to estimate the relative impact of associated mortalities on their annual population growth rate.

We found that annual population growth rate is depressed by 1 - 4% by anthropogenic mortality. Hunting in Greenland mainly affects declining breeding populations in Svalbard and Iceland, while hunting and oiling in Newfoundland mainly affect guillemots breeding in Canada and Northwest Greenland, where some populations are stable and others declining.

Management and Conservation implications:

- Most breeding populations are affected by anthropogenic mortality in a different country.
- International coordination is necessary for successful harvest management.
- A workshop is planned for April 2020 to discuss the need for an international management plan.

Monitoring recommendations:

- International management of guillemots requires regular tracking of migration patterns as well as robust and regular estimates of: colony size and numbers harvested including age and sex composition.