# CIRCUMPOLAR SEABIRD EXPERT GROUP (CBIRD)

## WORKPLAN 2025-2026

ARCTIC COUNCIL

CAFF
Conservation of Arctic Flora and Fauna

# Circumpolar Seabird Expert Group (CBird) Workplan 2025-2026

## Contents

## Summary

The Circumpolar Seabird Expert Group (CBird) promotes, facilitates, and coordinates seabird conservation, management, research and monitoring among circumpolar countries and both local communities and indigenous peoples improves communication between seabird scientists, Indigenous Knowledge (IK) holders, managers, and the public inside and outside the Arctic.

The objectives of the work are:

- To identify current and emerging seabird conservation, management, research, monitoring, and public outreach problems and opportunities in the Arctic and corresponding information and coordination needs.
- To facilitate exchanging and publishing seabird information of mutual interest to scientists, IK holders and managers in circumpolar countries.
- To facilitate harmonizing objectives, field methods and data analyses for similar studies of seabirds in the Arctic.
- To facilitate development and coordination of cooperative research and management projects and conservation plans for circumpolar seabirds of mutual concern in the Arctic.
- To promote and facilitate coordinating conservation initiatives for those Arctic seabirds that primarily winter outside the Arctic.
- To coordinate CBIRD initiatives with activities of other seabird groups as appropriate.
- To develop an integrated package of cooperative seabird activities or initiatives for the Conservation of Arctic Flora and Fauna annual work plan.
- Coordinate the CAFF Circumpolar Seabird Monitoring Network project.

## Yearly or other regularly scheduled processes

- Annual meeting
- Compilation of country-specific reports to CAFF
- Reporting on seabird population trends and breeding success by colony
- Reporting on the implementation of the Circumpolar Seabird Monitoring Plan
- Arctic Biodiversity Assessment (ABA)
    - Arctic Migratory Birds Initiative (AMBI) (Circumpolar Flyway)
    - Circumpolar Biodiversity Monitoring Program (CBMP)
        - State of the Arctic Marine Biodiversity Report (SAMBR)
- Implementation of the species-specific conservation strategies and action plans
- Participation in conferences and other meetings
- Workplan updates

**Project title**: Circumpolar Review of Arctic Tern Population Trends

**Project (co-)lead**: Maarten Loonen, Netherlands

**Project partners**: Canada (Dominique Henri), USA, Greenland, Norway, Iceland, Finland, UK, Russia

**Project goal(s):** Local ecological knowledge in Canada from indigenous peoples suggested that Arctic tern (*Sterna paradisaea*) local populations were in decline, and surveys by seabird biologists around the circumpolar world suggested that this might be the case in other countries as well. As such, this project is pooling all current information on populations and trends of Arctic terns to provide a current status of the species, an estimate of the breeding population, and an evaluation of how widespread declines may be. This should serve as a basis for biologists in each country to assess whether they should undertake directed research on terns. This project originally started in 2014 with a questionnaire to CBIRD members. It was restarted in 2021, but there has been no progress since (e.g. covid). A new plan has been made in 2025. The plan is to send out a similar questionnaire again and update available information.

**Engagement of and relevance for local communities and Indigenous Peoples:**

**Indigenous Knowledge and local knowledge:**

**Key deliverables and timeline**: Send out a new questionnaire May 2024, Report with a draft manuscript January 2026.

**Budget**: $0

**Project status**: Ongoing

**Project title**: Status, trends and drivers of Leach's and European Storm-Petrel populations

**Project (co-)lead**: April Hedd, Environment and Climate Change Canada (Canada), and Erpur Hansen, South Iceland Nature Research Centre, Stephen Hurling, Agricultural University of Iceland and Thorkell Lindberg Thórarinsson, Northeast Iceland Nature Research Centre (Iceland).

**Project partners**: Faroes (Jóhannis Danielsen, Faroe Marine Research Institute), UK (Tim Dunn, JNCC), and Canada (Greg Robertson, Environment and Climate Change Canada).

**Project description**:
Leach's Storm-Petrel (LSP) was assessed as globally threatened in 2016 and uplisted to "Vulnerable" by IUCN. >90% of the Atlantic population breeds in the western North Atlantic, where numbers have declined >50% over the last three generations (COSEWIC 2020). Similar or steeper declines have also occurred in the largest eastern North Atlantic colonies, in Iceland and Scotland (Deakin et al. 2021; Burnell et al. 2023). Likely drivers of the decline vary among regions and are likely cumulative (Pollet et al. 2023), but include predation at colonies, disorientation and stranding in association with artificial light at night (ALAN), high contaminant loads (e.g. Hg; Calvert et al. 2024) and climate-related impacts on breeding and foraging. Adult survival in Canada and Iceland is low and, in the former, negatively correlated with colony-specific gull predation and Hg loads (Calvert et al. 2024), while in Scotland Great Skuas prey heavily upon storm-petrels on St Kilda (Deakin et al 2021). The synchrony in LSP declines across the Atlantic suggests that conditions in wintering areas (e.g., food availability, or risk exposure at-sea), in combination with local pressures during the breeding season, may be playing a role.

The world's largest population of European Storm-Petrel (ESP; "Least Concern", IUCN) breeds on Nólsoy Is., Faroes with smaller populations in Britain, Ireland and Iceland. Robust population estimates are lacking for most ESP colonies, however, recent surveys suggest stable or slightly increasing trends for many colonies in Britain and Ireland (Burnell et al. 2023). Demographic information for ESP is limited. While acknowledging the knowledge gaps, apparently divergent trends for LSP and ESP is curious given that they occupy similar ecological roles, have similar wide-ranging distribution in winter and are susceptible to similar suite of threats.

Our main objectives are to: (1) Compile existing data on population size and trends for both species in the Atlantic and, where possible, fill regional gaps; (2) Improve knowledge of foraging areas of both species during the breeding season, through GPS tracking; and (3) Identify migration and wintering areas of LSP, and quantify the degree of migratory connectivity for regional populations.

**Engagement of and relevance to local communities and Indigenous Peoples:** Participation of local fieldwork volunteers is important to the project in Iceland, and local landowner participation is fundamental for the project in the Faroes.

**Key deliverables and timeline:**
A key deliverable for the project is an Atlantic scale assessment of population status and trend for LSP and ESP. This will involve a report to be drafted in 2025, and to include analysis of LSP trend conducted using a novel Bayesian hierarchical GAMM framework (Iles et al. submitted). In Britain and Ireland, LSP and ESP surveys undertaken for the *Seabirds Count* 2015–2021 are complete (Burnell et al. 2023). In Iceland, the first comprehensive survey of LSP colonies was completed in 2023, while the first survey of breeding ESP on Elliðaey is planned for 2025, both as part of Stephen Hurling's PhD.

Much progress on the tracking components of our project has been made, with data collection completed in 2024. In Canada, GPS and GLS tracking at 6 key LSP colonies has been used to develop regionally representative dynamic species distribution models (SDMs) covering their breeding and non-breeding seasons, respectively. Predicted densities from these models are being used to understand colony-specific exposure to threats at sea year-round. A report to oil and gas funders, detailing our tracking and modeling efforts as they relate to industry activities, is being prepared for March 2025, with related publications expected later in this year. In Iceland, LSP and ESP breeding at Elliðaey Island have been tracked since 2019 during the breeding and non-breeding seasons as part of Stephen Hurling's PhD. Analyses, which demonstrate a very interesting ecological segregation between the species, are ongoing with a chapter/manuscript detailing the results expected by the end of the 2025.

A joint publication on basin-wide patterns of movement, migration and regional population-level mixing in winter for LSP is planned at the end of the project.

In Faroes, recent projects on LSP and ESP include both tracking and demographic studies. LSP at Mykines Is. and ESP at Koltur Island, the former as part of SEATRACK (Jón Aldará and Janus Hansen, Faroe Islands National Museum) and ESP through several partnerships on Nólsoy Island, including PhD and PDF projects conducted as part of SEAGHOSTS.  Research at both Mykines and Koltur Island form a part of the project.

**Relevance to other initiatives:** The information will be important for targeting conservation and management actions for LSP and ESP throughout the North Atlantic. For LSP, it has contributed to COSEWIC assessment in Canada, it will contribute to the species Recovery Strategy under the *Species at Risk Act* and it responds to conservation actions recommended by IUCN in 2016. In Iceland, it has contributed to the Icelandic Red list status evaluation for LSP by Institute of Natural history.

**Budget**: Each partner is self-funded. Canada ($560,00 CAD from ESRF 2021-2025), Iceland ($155,000CAD from Rannís IRF 2023-2026), Faroes volunteer based field work, and Scotland Seabirds Count census funding from 2015.

**Project status**: 2018-Ongoing.

**Project title**: International Ivory Gull survey

**Project (co-)lead**: Hallvard Strøm, Norwegian Polar Institute, Norway

**Project partners**: Russia (Maria Gavrilo, Association Maritime Heritage), Canada (Grant Gilchrist, Environment Canada/Mark Mallory, Acadia University), Greenland/Denmark (Anders Mosbech/David Boertmann, Aarhus University).

**Project goals**: The ivory gull is a high Arctic seabird associated with sea ice throughout the year. It breeds at high latitudes in the Atlantic sector of the Arctic. Scattered colonies occur in most remote areas of Arctic Canada, Greenland, Svalbard (Norway) and on the northern islands of Russia in the Barents and Kara Seas. Russia is thought to hold the majority of the population (ca. 80 %). There is growing concern in the circumpolar Arctic because the ivory gull population is declining, and the species is listed as Near Threatened by the IUCN and Threatened and/or Declining by the OSPAR Commission. Global warming and pollution have been identified as the major threats to the species. Both the IUCN and OSPAR urge for new populations surveys for better assessments of species status and to clarify the true magnitude of decline. This is also in accordance with the international circumpolar ''Conservation Strategy and Action Plan"developed by CBird that recommends regular population surveys to be conducted. The last surveys in each of the countries were made in the mid-2000s. This project aims to conduct a joint and coordinated survey of ivory gull breeding colonies in the four Arctic countries holding the entire global population, and thus present new national and global population estimates and assessment for this threatened species.

**Engagement of and relevance for local communities and Indigenous Peoples:** In Canada, local peoples in Nunavut have been engaged about the status of ivory gulls over the past 20 years through annual information pamphlets, and for the upcoming surveys, they have been informed through permit application processes, or in face-to-face consultations (Resolute Bay). Various local organizations have provided support letters for the work. In 2019, one local indigenous field assistant flew the surveys with the Canadian researchers on Ellesmere Island.

**Indigenous Knowledge and local knowledge:** Although there will be no new local ecological knowledge (LEK) work in 2024-25, the entire international ivory gull project was started as a response by scientists to concerns expressed by local peoples that they were seeing fewer gulls now than in the past. In Canada this was followed up with targeted LEK interviews in communities throughout Nunavut and Labrador, and this was used in national decision-making for assessing the status of the species, as well as in several peer-reviewed scientific papers. We continue to rely on this information as one basis for our sampling scheme. In Russia information has been collected through interviews and request to crews at polar weather stations.

**Key deliverables and timeline**: The coordinated national surveys were conducted in June-July 2019. New national population estimates/assessments have been published, and a new global population estimate/assessment is planned published in a scientific journal in 2026. A contribution to the Arctic Report Card was produced in 2019 and a new contribution is planned for 2026.

**Relevance for other initiatives**: The project will be important for future management of the ivory gull, and the work responds to recommendations given by the IUCN, the OSPAR Commission, national Red Lists, the Arctic Biodiversity Assessment, the AMBI goals and CBird Strategy and Action Plan for ivory gulls. The species is also recognized as a data gap and a sensitive species in the SAMBR.

**Budget**: Each country is self-funded. CBird members will provide data, analysis, written products, including a peer-reviewed paper and a contribution to the Arctic Report Card.

**Project status**: Ongoing.

**Project title:** North Atlantic Murre Harvest Management

**Project (co-)lead:** April Hedd and Bob Rogers, Environment and Climate Change Canada; Flemming Merkel and Aili Labansen, Greenland Institute of Natural Resources.

**Project partners:** Iceland and Norway

**Project goal(s):**
To develop a coordinated harvest management strategy for thick-billed murres among the countries Canada, Greenland, Iceland, and Norway with stakeholder and rightsholder collaboration. The goal is to sustain the breeding range and population size of thick-billed murres within each breeding area and to optimize sustainable hunting opportunities. The thick-billed murre populations are declining in several of the Arctic countries and the species is Red-listed in all of them (Vulnerable or higher) except Canada. The project aims to develop the necessary tools to provide scientific recommendations for international and national harvest schemes.

**Engagement of and relevance for local communities and Indigenous Peoples:** This is highly relevant, as there is a long and ongoing tradition among local communities and Indigenous peoples of harvesting murres, especially in Canada and Greenland. Stakeholders and rightsholders will be identified early in the process and engaged through regular consultations, including one or two workshops, ensuring their knowledge, perspectives, and concerns are integrated into the management plan.

**Indigenous Knowledge and local knowledge:** See above.

**Key deliverables and timeline:** By 2027, a technical document outlining the overall management strategy, biological background, and technical requirements for implementing an adaptive harvest management program will be produced. At the same time, a demographic harvest model will be developed to serve as the foundation for adaptive management decisions. An international workshop involving range states will be held in fall 2025, with a potential follow-up workshop at the end of the project period, subject to funding availability.

**Relevance for other initiatives:** Developed within the framework of Arctic Council, the project components will provide the tools and framework for future co-management of thick-billed murres in the North Atlantic. Additionally, this work contributes to ABA recommendations, the AMBI and SAMBR goals, the CBird Strategy and Action Plan for murres, OSPAR's Regional Action Plan for Marine Birds in the North-East Atlantic (2024 – 2030), the AEWA agreement on African-Eurasian Migratory Waterbirds, and national Red-lists.

**Budget:** This project component is funded for the period 2024–2027 through contributions from the Canadian Federal Government (Environment and Climate Change Canada's Canadian Wildlife Service and Global Affairs Canada, under the Global Affairs Leadership Initiative) and the Danish Environmental Protection Agency. The total budget is approximately 225,000 EUR or 330,000 CAD.

**Project status:** Ongoing: 2017–2027. The current project component with development of a coordinated harvest management strategy is expected to be completed by 2027.

**Project title**: Seabird – polar bear interaction: review and evaluation

**Project (co-)lead**: Maria Gavrilo (Russia, Association Maritime Heritage), Grant Gilchrist (Canada, Environment Canada)

**Project partners (Arctic States, Permanent Participant),**: Canada (Cody Dey, Environment Canada), Greenland/Denmark (Anders Mosbech), USA (TBD, U.S. Fish and Wildlife Service); Norway (Morten Ekker, Norwegian Environment Agency, Tycho Anker-Nilssen, NINA)

**Observer countries and organizations, other:** Netherlands (Maarten Loonen, Jouke Prop)

**Project goals**: Polar bear depredation on some seabird and marine waterfowl species has become an emerging issue recently, and perhaps as an indirect cascading effect of climate change. Increased predation pressure of polar bears on breeding and moulting birds is reported from circumpolar high-Arctic (i.e. Iverson et al., 2014, Prop et al., 2015, Syroechkovsky et al., 2018, Barnas et al. 2024). At the same time, there is no Arctic-wide evaluation of this process nor an assessment of the importance of polar bear depredation on marine bird populations throughout the circumpolar Arctic. In addition, the response of ground-nesting birds to increasing polar bear hunting pressure are not well described nationally or internationally across the Arctic regions. Thus, the goals of this project are to 1) compile a circumpolar review on the depredation of marine bird nests by polar bear depredation, 2) evaluate long-term responses and the relative vulnerability of different marine bird species populations to increasing polar bear predation pressure, and 3) initiate monitoring of the impact of polar bears on marine bird populations.

**Engagement of and relevance for local communities and Indigenous Peoples and Indigenous Knowledge:** There is strong potential to gather Indigenous Knowledge of bear-seabird interactions and particularly within Greenland, Canada (ongoing), and Alaska. In doing so, qualitative information could be collated from reports provided by Indigenous communities that could contribute to assessing the geographic scale of the situation and help identify the regional locations where bear predation of seabird nests is most pronounced. This new information would complement existing, published, peer-reviewed literature that would also be reviewed.

**Key deliverables and timeline**: 1) Paper 1: Increasing polar bear depredation on seabirds - a circum-Arctic overview and recommendations for further monitoring (first draft to CBird in 2025). 2) possibility of Paper 2: Projecting long-term impacts of polar depredation on seabird populations (coloniality) – synthesis paper (to be discussed at CBird 2025). 3) circumpolar monitoring framework and development of standardized, nationally-adopted monitoring schemes for the impact of polar bears on marine bird populations. (To be discussed at CBird 2025 – e.g. with leaflets and questionaries' distributed among Arctic cruise tourist operators).

**Relevance for other initiatives**: The project will be important for future population status assessment and management of the selected key species of seabirds, like ivory gull and common eider. The project responds to recommendations given by the IUCN, national Red Lists, the Arctic Biodiversity Assessment, SAMBR, and CBird Strategy and Action Plan for ivory gulls and eiders. It is also relevant as a cross-project to Circumpolar Action Plan: Conservation Strategy for Polar Bears (2015): CAP 9.3. Prey abundance and other food sources and recommendations of IUCN SSC Polar Bear Specialist Group.

**Budget**: No funding is identified. CBird members will provide national updates of the issue (e.g. data in some cases), analysis, and written products such as peer-reviewed papers and reports to include in the summary. Funds are needed for leaflets and questionnaires' layout and distribution, information system development and maintenance.

**Project status**: Ongoing: 2018-present.

**Project title:** Modelling Murre Egg Harvests in the Arctic

**Project (co-)lead:** Norman Ratcliffe, BAS, UK; Þorkell Lindberg Þórarinsson and Yann Kolbeinsson, Northeast Iceland Nature Research Centre, Iceland

**Project partners:** Greenland, Canada, USA, Faroe Islands.

**Project goal(s):** Egg harvesting provides an important source of seasonal food to communities in the Arctic. Maintaining traditional harvesting needs to be balanced against the need for conservation of target species through development of sustainable management. This project will examine the impacts of harvesting upon a unique study system in NE Iceland, where a time-lapse camera collects monitoring data from a cliff face occupied by common and Brünnich's guillemots. Half of the ledge is harvested and the other not, providing an experimental design to test for effects of egging on breeding success. We will estimate key components of productivity (phenology, daily stage-specific nest survival, relaying likelihood) and the effects of egging upon these. We will then build a simulation model representing a virtual colony and validate its estimates against empirical observations of productivity. The validated model will then be extended to harvesting practices at other locations in Canada, Alaska, Greenland and the Faroes to assess sustainability and make recommendations for best practice at a pan-Arctic scale.

**Engagement of and relevance for local communities and Indigenous Peoples:** We will collaborate with CBIRD national representatives in an attempt to engage with local egg collectors in order to obtain a better understanding of the patterns of egg collecting (timing, number of eggs, spatial extent) that occur at a sample of sites. We will share results with eggers and local decision-makers and co-produce sustainable harvesting practices.

**Indigenous Knowledge and local knowledge:** During discussions with eggers we and our collaborators will ask how traditional knowledge of the species breeding ecology leads to controls on harvesting that contribute to sustainability, such as closed seasons, areas or total harvests.

**Key deliverables and timeline:** A scientific paper by July 2026 published in a conservation management journal describing the findings and applications of the study. This will include R-shiny App that will allow sustainability of harvest scenarios to be tested (by input of basic breeding performance values into a form) in the Supplementary Material.

**Relevance for other initiatives:** The study is relevant to the North Atlantic Murre Harvest Model project currently underway in CBIRD which studies effects of hunting on upon overwinter juvenile and adult survival. Our project extends inferences to the impacts of egg harvesting upon breeding success.

**Budget:** The project uses core staff time from BAS and the Northeast Iceland Nature Research Centre for continued data collection, data analysis and write up.

**Project status:** New proposal: 2025–2026, ongoing

**Annex 1:** CBird work plan items that contribute (in part) to Arctic Migratory Bird Initiative (AMBI) implementation.

AMBI Circumpolar Flyway is focussed on the following priority species:

- Ivory Gull (*Pagophila eburnea*)
- Thick-billed Murre (*Uria lomvia*)
- Common Eider (*Somateria mollissima*)
- Snowy Owl (*Nyctea scandiaca*)
- Northern Fulmar (*Fulmarus glacialis*)

And the following priority conservation issues:

1. data collection and data input into habitat protection initiatives
2. unsustainable harvest
3. seabird bycatch in fisheries
4. environmental pollution
5. knowledge gaps, in particular to inform Snowy Owl conservation

| **CBird project** | **AMBI Action** | **Notes** |
|---|---|---|
| International Ivory Gull Survey | Relevant to: Circumpolar Flyway 1.2: Support country participation in circumpolar collaborations on collection and synthesis of marine bird tracking data (including Ivory Gulls). | As identified in AMBI plan:<br>*Through CBird, AMBI will support coordinated data collection throughout the Ivory Gull range, but particularly Russian Ivory Gull colony surveys and satellite tracking to understand key over-wintering habitat sites in Sea of Okhotsk where there are significant knowledge gaps.*<br><br>*AMBI will support ongoing Norwegian Institute for Nature Research (NINA) efforts to compile circumpolar seabird tracking data into a common repository (SEATRACK) to facilitate large-scale analysis of habitat use and data integration into habitat protection processes such as Marine Protected Areas planning and shipping assessments (link to Action 1.1).*<br><br>*Measurable target to evaluate action:*<br>• *Significant data gaps in Ivory Gull colony surveys and at-sea tracking are reduced.*<br>• *Coordinated data collection, management, and synthesis are advanced throughout the circumpolar region.* |
| North Atlantic Murre Harvest Management | Relevant to Circumpolar Flyway: Action 2.1: Work with CBird to promote dialogue with authorities for management plans to combine the knowledge of status of hunted species between countries. | As identified in the AMBI Plan:<br>*CBird has completed demographic modelling research to assess the impact of the Canadian and Greenland harvest on Thick-billed Murre breeding populations in the North Atlantic. The next step is to provide the scientific findings and recommendations to harvest managers through a fully-funded workshop that is scheduled for March 2021.*<br><br>*Given the importance of murres to the culture and livelihood of Canadian and Greenlandic residents, if an integrated management plan is developed, AMBI will support the inclusion of a communication and outreach strategy within the plan.*<br><br>*Measurable target to evaluate action:*<br>• *Relevant scientists and murre harvest managers are engaged in the process*<br>• *If it is decided that a North Atlantic Murre Harvest Management Plan is the appropriate course of action, a communication and outreach strategy is included within the plan.* |