



SEAPOP manual for census of colonies and work at key-sites – a status update

Signe Christensen-Dalsgaard, Tycho Anker-Nilssen
& Svein-Håkon Lorentsen

© SEAPOP 2010

SEAPOP manual for census of colonies and work at key-sites – a status update

Background

From 2008 the SEAPOP programme was implemented on a nation-wide scale. With this, the programme now encompasses study sites in all the main Norwegian marine areas. This creates a unique possibility to compare trends for different species and parameters, both within and between colonies. The extent of the SEAPOP programme however presents the challenge of creating a standardised framework for the collection of data at all the sites. The need for a manual for this work was addressed in 2006 and a compilation of a detailed reference manual for the work at key-sites and for census and monitoring of seabird colonies was started in 2007.

Although parts of the manual have already been implemented at the various key-sites, a fully comprehensive manual is being developed and maintained as a collection of PDF documents that will be published on the SEAPOP-website (www.seapop.no) to serve as an easy access reference for all parties involved. The methods will describe parameter for parameter specific minimum requirements needed for the collection of data from different species or groups of species. The texts will be so self-explanatory and well illustrated that the methodology can be used at the key-sites without having to consult the background literature. Furthermore the manual will serve as a future reference documentation of the methods applied when collecting data within the framework of SEAPOP.



Figure 1

It is imperative that the methods used for taking biometric measurements are sufficiently standardised. Here is shown a way to measure head+bill of an adult puffin, the length of which strongly indicated this was a female bird. (© S. Christensen-Dalsgaard)

Status of the project

A first version of the manual will be finished in time for testing its practical use on the key-sites in summer 2010. The manual will consist of seven chapters, which mutually support each other by cross-references wherever appropriate. They are:

- Methods for population size census and monitoring
- Methods for documenting and estimating reproductive success
- Methods for capturing birds
- Methods for biometric measurements, blood sampling and bird ringing
- Methods for collecting survival rate data
- Methods for estimating survival and recapture rates in MARK
- Methods for collecting and processing diet samples

The manual will be based on existing literature on the methods used when working with seabirds (e.g. Lorentsen 1989, Walsh et al. 1995, Sutherland et al. 2004, Barrett et al. 2007), but will be modified for use in Norway and the specific requirements of the SEAPOP programme.



Figure 1

Details from census of the kittiwake colony on Store Ekkerøy in 2006. The extent of the study plot is marked with lines on the photo and the dots are the position of apparently occupied nests (AONs). (© R. Barrett)

References

Barrett, R.T., Camphuysen, C.J., Anker-Nilssen, T., Chardine, J.W., Furness, R.W., Garthe, S., Hüppop, O., Leopold, M.F., Montevecchi, W.A. & Veit, R.R. 2007. Diet studies of seabirds: a review and recommendations. **ICES Journal of Marine Science** **64**: 1675–1691.

Lorentsen, S.-H. 1989. Det nasjonale overvåkingsprogrammet for hekkende sjøfugl. Takseringsmanual. **NINA Oppdragsmelding 16**. 27 s.

Sutherland, W.J., Newton, I. & Green, R.E. 2004. Bird ecology and conservation – A handbook of techniques. **Oxford University Press**.

Walsh, P.M., Halley, D.J., Harris, M.P., del Nevo, A., Sim, I.M.W. & Tasker, M.L. 1995. Seabird monitoring handbook for Britain and Ireland. **JNCC / RSPB / ITE / Seabird Group**, Peterborough.

Cover photo: Breeding pair of kittiwakes on Anda, Vesterålen. The birds are marked with coded colour-rings, which make it easier to monitor their presence in the colony from year to year. (© S. Christensen-Dalsgaard)

Author contact information

Signe Christensen-Dalsgaard, signe.dalsgaard@nina.no, Tycho Anker-Nilssen, tycho@nina.no, and Svein-Håkon Lorentsen, shl@nina.no, Norwegian Institute for Nature Research (NINA), P.O.Box 5685 Sluppen, NO-7485 Trondheim

Publication series information

SEAPOP Short Report (SSR) is published by the Norwegian Institute for Nature Research (NINA), the Norwegian Polar Institute (NP) and Tromsø University Museum (TMU) as a web-based newsletter presenting individual progress reports and analyses of projects within the *SEAPOP* programme. The individual SSRs have no ISSN/ISBN coding, but the reports for each year will be collated and published in the registered report series *NINA Report* as a *SEAPOP* annual report.

SEAPOP (SEAbird POPulations) is a long-term monitoring and mapping programme for Norwegian seabirds that was established in 2005 and implemented on the full national scale in Norway, Svalbard and adjacent sea areas in 2008. The programme is financed by the Ministry of the Environment, the Ministry of Petroleum and Energy and the Norwegian Oil Industry Association, and aims to provide and maintain the most important base-line knowledge of seabird distribution, demography and ecology needed for an improved management of these marine environments. More info about *SEAPOP* is found on the programme's web site www.seapop.no, including an up-to-date list of associated publications from which all reports can be freely downloaded as pdf documents.

Series editors

Tycho Anker-Nilssen, tycho@nina.no
Robert T. Barrett, robb@tmu.uit.no

