Antarctic-fur-seal-IUCN-Assessment-2025 - CODE

Functions used to obtain fur seal abundant estimates, trends and population reduction for the Antarctic fur seal 2025 IUCN Red List assessment

Description

Analysis functions in R and BUGS code used to:

1. R script **SSBFemale_IPM_2001-2025.R** fits an IPM (Integrated Population Model) to count, demographic, and mark-recapture data collected at the Special Syudy Beach (SSB) of Bird Island from 2000/2001 to 2024/2025. Requires JAGS software installed to fit MCMC models. IPMs are coded in BUGS language, which is called from the R script.
2. Support function **glbpf.R** is sourced to fit a low pass Gaussian filter to summarise trends.
3. Support function **addTrans.R** is sourced to add colour transparency in summary plots.
4. Suport function **estBetaParams** to estimate shape parameters for Beta distribution priors.

Getting Started

Dependencies

- Describe any prerequisites, libraries, OS version, etc., needed before installing program.
- ex. Windows 10

Installing

- How/where to download your program
- Any modifications needed to be made to files/folders

Executing program

- How to run the program
- Step-by-step bullets

```
code blocks for commands
```

Help

Any advise for common problems or issues.

```
command to run if program contains helper info
```

Authors

Contributors names and contact info

ex. Dominique Pizzie
ex. @DomPizzie

Version History

- 0.2
  - Various bug fixes and optimizations
  - See commit change or See release history
- 0.1
  - Initial Release

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