

Expert Group on Antarctic Biodiversity Informatics

Satellite meeting, SCAR OSC 2022

https://scar.github.io/EGABI/talks/osc_2022/egabi-osc-2022.pdf



Expert Group on Antarctic Biodiversity Informatics

- **2012–2020**: initial term (chief officer: Bruno Danis)
- structure: core group (~10 people) with wider membership open to anyone
- **extended in 2020**
 - change of chief officer, deputy, core group members
 - revision to mission and terms of reference
- **requested renewal in 2022**

ben.raymond@aad.gov.au



Mission

EGABI supports the Antarctic and Southern Ocean biodiversity science community with resources for data access, integration, analysis, and synthesis.

ben.raymond@aad.gov.au



Terms of reference

EGABI is primarily focused on **computational aspects of biodiversity science**, with particular value placed on transparent, **reproducible science** using open software and data.

EGABI promotes and contributes to the development of

- software tools
- analytical and collaborative platforms
- resources such as user guides, example workflows, tutorials
- other educational material

for biodiversity data access, integration, analysis, and synthesis.

ben.raymond@aad.gov.au



EGABI does this by

- encouraging collaboration and disseminating information regarding biodiversity informatics activities across the SCAR and broader Antarctic science communities
- hosting workshops, online discussion fora, and other channels for community engagement and capacity building
- working with other groups in SCAR and elsewhere to develop integrated or synthesized data products of value to the community
- providing advice to SCAR groups that are engaging in these areas
- engaging in biodiversity science projects and actively developing tools

ben.raymond@aad.gov.au



In collaboration with

There is clearly a close relationship between these activities and other areas of science, and so the EG-ABI group collaborates closely with a range of other groups and initiatives, including:

- the SCAR Standing Committee on Antarctic Data Management
- the Southern Ocean Observing System
- SCAR research programmes and groups
- the Antarctic Environments Portal (environments.aq)
- the SCAR Antarctic Biodiversity Portal (biodiversity.aq)

ben.raymond@aad.gov.au



EGABI is not

It is important to note that EGABI is not primarily about:

- *data publication or data management*, which are the focus of e.g. SCADM, SCAGI, and biodiversity.aq

EGABI's primary interest is in accessing and using such data, and improving community tools for doing so. However, as noted above, EGABI will collaborate in generating data synthesis products, particularly where these aid in downstream data usage by the community

- *domain-specific science under our own auspices.*

EGABI does not instigate its own biological science projects, for example, but we will partner with domain-specific groups on the computational aspects of such projects

ben.raymond@aad.gov.au



Core group

Ben Raymond (Chief Officer)
Anton Van de Putte
(Deputy chief officer, SCADM liaison)
Zephyr Sylvester* (Secretary)
Svenja Halfter* (Communications officer)
Briannyn Woods* (Ant-ICON liaison)

Claudia Andrade Díaz
Huw Griffiths
Kerstin Jerosch
(CoastCarb project liaison)
Lucas Krüger
Yan Ropert-Coudert (EGBAMM liaison)

* ECR

Past core group members

Anne-Sophie Archambeau, Horst Bornemann, Bruno Danis,
Claude De Broyer, Alison Murray, José Xavier

ben.raymond@aad.gov.au



Get involved

Mailing list: <https://lists.scar.org/mailman/listinfo/abi>

EGABI Slack: contact for invite

rOpenSci Slack (R-specific): contact for invite

Make suggestions

Collaborate!

ben.raymond@aad.gov.au



Project summaries

ben.raymond@aad.gov.au



The SCAR/rOpenSci initiative

Since 2017, a collaboration with the rOpenSci community to improve resources for users of the R software package in Antarctic and Southern Ocean science: <https://scar.github.io/ropensci/>.

- development of R packages and user guides
- social infrastructure through a welcoming and diverse community
- building the capacity of software users and developers
- hosting workshops (e.g. <https://github.com/SCAR/EGABICourse19>)
- Slack: contact for invite

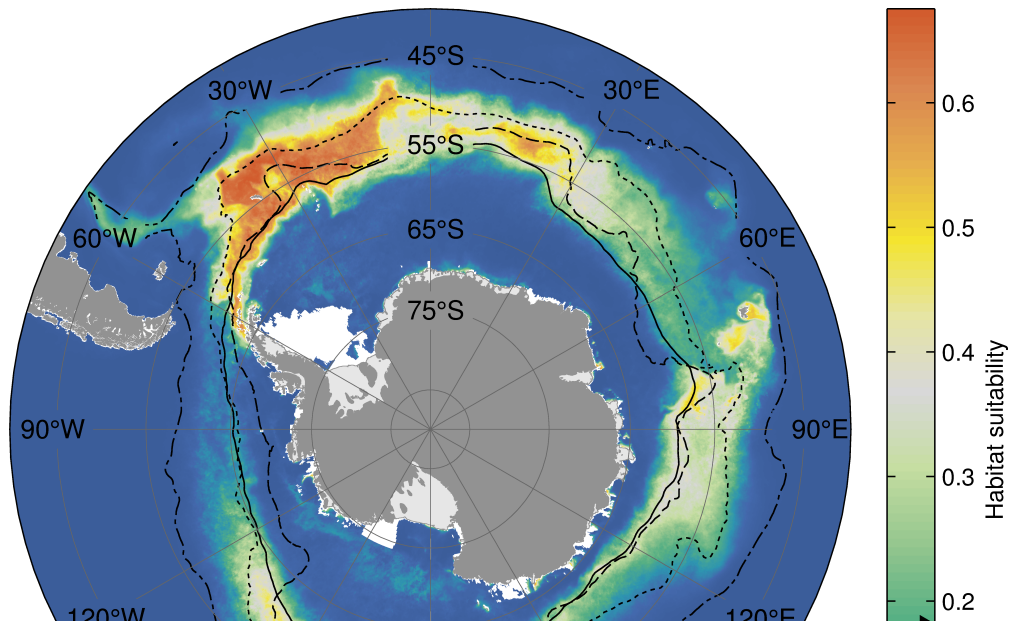


ben.raymond@aad.gov.au



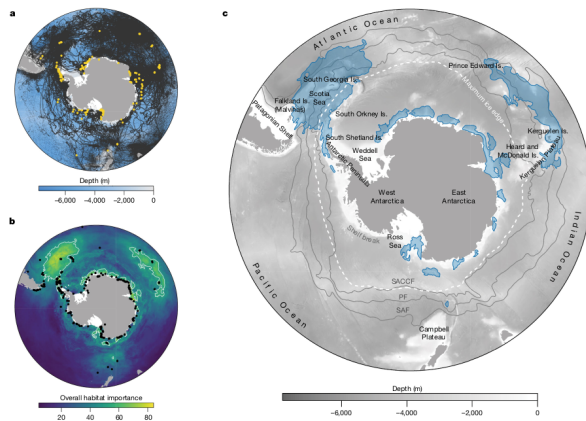
Spatial modelling

- spatial biodiversity modelling (e.g. species distribution and habitat selectivity)
- resources, access to software and data, community connection, sharing of expertise
- project scope and format TBD



The Retrospective Analysis of Antarctic Tracking Data

- with EGBAMM, since 2015: a multi-species assessment of Southern Ocean predator animal tracking data
- Areas of Ecological Significance (AES) ... regions that are important to multiple predators
- main publications in 2020
- follow-on projects continue (e.g. CESAB workshop 2021, KBA workshop at SCAR 2022)

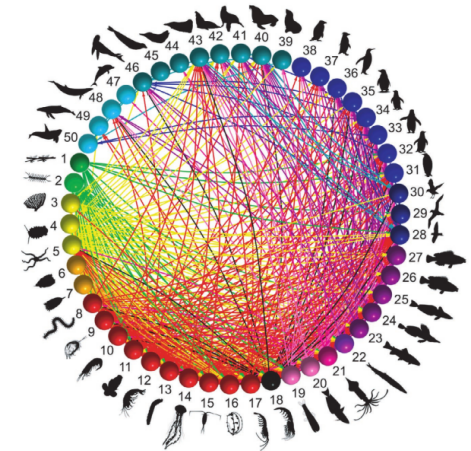


The Southern Ocean Diet and Energetics Database

<https://scar.org/resources/southern-ocean-diet-energetics/>

- diet (gut content, isotope, DNA) and energetic content data, allometric equations
- R packages to work with them
- publications and collaborations

We have begun discussions with Polar Biology on a mechanism to make it easier for authors of diet/energetics papers to get their data into the SCAR database.



ben.raymond@aad.gov.au



Register of Antarctic Species

<http://ras.biodiversity.aq>

- authoritative inventory of Antarctic And Southern Ocean Organisms
- EGABI engagement in conjunction with biodiversity.aq
 - using RAS in their analysis workflows
 - inclusion of trait data for e.g. mechanistic modelling approaches
 - crossover with Diet and Energetics work



ben.raymond@aad.gov.au



Other

- Slack channels (contact for invite)
- mailing list
<https://lists.scar.org/mailman/listinfo/abi>
- GitHub (see <https://github.com/SCAR/>)
- workshops



ben.raymond@aad.gov.au



