What can collaboration with the British Antarctic Survey bring to your research and development?

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Research in the polar regions



- UK Government invests in polar research and infrastructure
- Critical for informing UK Government policy objectives for climate change, energy security, global food security, innovation and economic growth
- BAS is the national Antarctic operator, funded by NERC to support UK polar science community





About British Antarctic Survey



British Antarctic Survey



British Geological Survey



Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL



National Oceanography Centre



National Centre for Atmospheric Science



National Centre for Earth Observation

NATURAL ENVIRONMENT RESEARCH COUNCIL

- NERC-owned Research Centre
- Delivering research at both poles, and extreme environments globally
- Manages and provides operational support for UK polar infrastructure and science
- Core- and grant-funding from NERC, supplemented by EU and other grants
- Active programme of national and international science collaborations



BAS Science Teams

- Geology and Geophysics (Fausto Ferraccioli)
- Space Weather and Atmosphere (Richard Horne)
- Palaeo Environments, Ice Sheets and Climate Change (Dominic Hodgson)
- Atmosphere, Ice and Climate (John King)
 - Polar Climate and Prediction (John Turner)
 - Climate Processes (Tom Lachlan-Cope)
 - Tropospheric Chemistry (Anna Jones)
 - Meteorology and Ozone Monitoring (Steve Colwell)
- Polar Oceans (Mike Meredith)
 - Open Oceans (Andrew Meijers)
 - Shelf Seas (Paul Holland)





BAS Science Teams

Ice Dynamics and Palaeoclimate (Robert Mulvaney)

- Ice Sheet Modelling (Richard Hindmarsh)
- Ice Stream Modelling (Hilmar Gudmundsson)
- Glacial Processes (Andy Smith)
- Ice Cores (Liz Thomas)
- Palaeoclimate (Louise Sime)
- Ecosystems (Eugene Murphy)
 - Pelagic Ecosystems (Geraint Tarling)
 - Higher Predators and Conservation (Richard Phillips)
- Biodiversity, Evolution and Adaptation (Lloyd Peck)
 - Biodiversity (Peter Convey)
 - Adaptations (Melody Clark)





Collaborative science programmes







www.antarctica.ac.uk

Supporting UK polar science

- Based in Cambridge, worldclass laboratory and research support facilities
- 5 Antarctic research stations
- 1 Arctic research station
- Deep-field facilities
- 2 polar ships

British

• 5 polar aircraft

Antarctic Survey

Expert polar support teams

ENVIRONMENT RESEARCH COUNCIL

Integrated programme planning



UK science facilities Antarctica

- Rothera
- Halley
- Signy summer only
- Bird Island South Georgia
- King Edward Point South Georgia
- Ships research cruises
- Airborne campaigns
- Field season October to April







Globally relevant application of science

(personal and BAS-wide examples)

Remote sensing of water tables in desert environments (N Africa and Namibia) – local communities, subsistence agriculture, biodiversity and conservation

Modelling of Himalayan glacier mass balance (water resources, also disaster management)

Integration of biodiversity and ecological studies, via environmental philosophy, with societal engagement and development in Tierra del Fuego







Graduate research with the British Antarctic Survey

- BAS researchers collaborate extensively with UK universities, and internationally
- Currently host ~84 research students, c. 50% primarily based at BAS in Cambridge; students must be registered with a University to obtain their degree
- Close links with University of Cambridge, but can have joint supervision arrangements with any University, and BAS can be lead or supporting institution
- BAS has existing MoU with CONICYT, in principle agreeing to host up to 5 Chilean graduates or postdocs on collaborative projects at any one time (UCam has similar MoU)





How to make it happen

- Allow plenty of time to develop links and then the application
- Use BAS website and, if possible, your own university's lecturers and researchers to identify science teams and individuals with appropriate interests, and establish direct contact early; also to identify potential UK University links for degree registration
- Ensure you fulfil in detail the University's entrance requirements generally these require evidence of home degree grade elements, and appropriate English language qualification
- Get all supporting information and paperwork in place early, and do not leave actual application to last minute!





Summary

- Working in the polar regions advances scientific knowledge relevant to government and society
- BAS scientific expertise is applied wherever it is relevant globally
- Strong record of University collaboration and graduate student development, UK and overseas
- International collaboration brings great returns, and is often vital in Antarctic studies
- BAS science is keen to collaborate!



www.bas.ac.uk

