

AUSTRALIAN ANTARCTIC SCIENCE STRATEGIC PLAN

MISSION

Conduct world-class scientific research for Antarctica and the Southern Ocean that has global benefits and that supports Australia's responsibilities for the region.

VISION

Leadership and excellence in Antarctic science

PRINCIPLES

- Providing Australian leadership in the Antarctic Treaty system through science
- Undertaking Antarctic science for societal benefits
- Collaborating to ensure multidisciplinary and diverse teams
- Open access to outcomes and data
- Leading a new generation of Antarctic researchers
- Technical and operational innovation at the forefront of endeavour
- Operating safely and efficiently
- Adaptability for a rapidly evolving world

ENVIRONMENTAL PROTECTION AND MANAGEMENT

Targeted research and monitoring for improved management of Antarctica and the Southern Ocean

- Climate change impacts
- Ecosystem conservation and management
- Area protection of natural values
- Fisheries management
- Environmental monitoring and assessment
- Environmental remediation

ICE, OCEAN, ATMOSPHERE AND EARTH SYSTEMS

Understanding the role of Antarctica and the Southern Ocean on Australia and the World

- High-latitude climate science
- Role of the East Antarctic ice sheet in global sea-level rise
- Interpreting past climate records to inform future climate understanding
- Southern Ocean circulation, heat and acidification
- Geophysical mapping
- Atmosphere and weather
- Climate change mitigation

HUMAN PRESENCE AND ACTIVITIES IN ANTARCTICA

Providing practical advice to address societal issues

- Polar medicine and human biology
- Social sciences – policy and law
- Monitoring pollution
- Space and astronomy
- Human Impacts
- Biosecurity

DIGITAL INTEGRATION

Bringing it all together with innovation in data collection and analysis in accordance with FAIR principles (Findable, Accessible, Inter-operable, Reusable)

- Innovative technology
- Remote systems
- Digital Model of Antarctica
- GIS platform integration
- Data communications
- Statistical analysis and data analytics

HOW WE WILL DELIVER SCIENCE

- We will build on existing data and samples to complement and underpin our field programs
- We will transition our activities to new Australian Antarctic Program logistics as they come on line
- We will work with Australian and international research, industry and policy partners, encouraging collaboration with recent and new Antarctic science participants
- We will encourage a simple, transparent project application and assessment process
- We will support integrated and cross-disciplinary research
- Our science will be supported through a digital integration platform
- Our science will be routinely assessed to evaluate relevance and performance and to pursue excellence

SCIENCE OUTCOMES

Science that responds to and delivers on national science and research priorities and the *Australian Antarctic Strategy and 20 Year Action Plan*, including:

- Understanding and protecting Antarctica, particularly its environmental and ecological resilience and its connection to global systems
- Antarctica's influence on Australia, particularly its impacts on the wellbeing of Australians
- Science that supports Australia's key role in the Antarctic Treaty system and Australian Government legislative and international obligations
- Science to support current Australian Government priorities, including: consolidating science capabilities on the RSV *Nuyina*; krill research to inform management decisions; integration of Commonwealth science funding measures; Davis Aerodrome Project; search for the million year ice core

