

# 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

