

The Australian Centre for Excellence in Antarctic Science (ACEAS) 2026–2028

Project plan



Image Credit: Pete Harmsen / AAD

Executive summary

This proposal delivers a **two-year extension of the Australian Centre for Excellence in Antarctic Science (ACEAS) to maximise national benefit from Australia's recent major investments in Antarctic field programs**. The project focuses on quantifying climate risks arising from East Antarctica and the Southern Ocean, with a particular emphasis on the Denman–Shackleton glacier system, which has the potential to contribute up to ~1.5 m to global mean sea level.

Building on the **established seven-university ACEAS partnership** funded by the Australian Research Council since 2020, **the 2026–2028 program will prioritise the final analysis, modelling, synthesis and publication of unique datasets collected during the tightly coupled, multi-disciplinary Denman Terrestrial Campaign (DTC) and the Denman Marine Voyage (DMV)**, both supported by the Australian Antarctic Program. By linking coordinated marine and terrestrial observations across ice-sheet, ocean, Earth, atmosphere and ecosystem domains, ACEAS enables genuinely transdisciplinary interpretation of Antarctic change. Activities will focus on integrated analysis of marine and terrestrial observations, delivery of peer-reviewed synthesis studies, and the development of new numerical modelling frameworks that link observations to future projections of East Antarctic ice-sheet evolution, ice-ocean and ecosystem changes, and sea-level rise. The outcomes will reduce uncertainty in high-impact climate risks and inform robust, risk-aware decision-making for Australian and global stakeholders.

To provide scientific context and coherence, a limited level of broader ACEAS activity will be maintained to support cross-disciplinary synthesis across East Antarctica and the Southern Ocean. This synthesis will emphasise ongoing national partnerships to deliver critical knowledge that will directly inform the Australian Antarctic Science Decadal Plan priorities. **The project will sustain critical capability** through targeted support for early-career researchers, national-scale collaboration within the Australian Antarctic Program, and robust data stewardship in accordance with FAIR principles.

At its core, ACEAS 2026–2028 focuses on **resolving the coupled physical, chemical and biological processes that control the stability of the East Antarctic Ice Sheet and its interaction with the Southern Ocean**. The program targets the basal conditions governing Denman-Shackleton Glacier dynamics, the pathways and variability of ocean heat reaching and potentially melting ice shelves, the role of subglacial meltwater and sediments in regulating nutrient supply to marine life, and the sensitivity of marine ecosystems to environmental change. By integrating geophysics and geology, marine and oceanographic observations, biogeochemical and ecosystem studies, palaeoclimate records, and process-based numerical modelling, the project links contemporary observations to past variability and future projections of East Antarctic ice-sheet evolution, ice-ocean and ecosystem changes, delivering system-level understanding of climate risk to Australia and our neighbours from one of East Antarctica's most vulnerable regions.

The program will deliver **high-impact scientific outputs, publicly archived datasets, and clear, authoritative communication of findings** to policymakers, stakeholders and the wider community. ACEAS will **strengthen Australia's leadership in Antarctic science** at a pivotal moment for understanding ice-sheet stability and sea-level rise.

This two-year project seeks to transform Australia's recent, significant Antarctic field investments—enabled by the state-of-the-art *RSV Nuyinia* and a coupled co-ordinated terrestrial campaign—into

integrated, system-level understanding of East Antarctic climate risk. By enabling linked observations of the icesheet, ocean, Earth, atmosphere and ecosystems, ACEAS will deliver enduring national value through synthesis, modelling and decision-relevant science.

International, focussed research, on Thwaites Glacier in West Antarctica has shown that coupling observations with modelling is essential to constrain projections of high-impact, low-likelihood ice-sheet change. Denman Glacier represents an East Antarctic system of comparable global significance. ACEAS adopts a similarly integrated observational and modelling approach to reduce uncertainty and deliver authoritative assessments of future risk.

This project proposes a nationally-coordinated consolidation and enhancement of ACEAS activity, focused on maximising the scientific, policy and societal return on previous ARC investment in Antarctic research. Building on ARC investment in ACEAS from 2020 to 2026, **the 2026–2028 Australian Government initiative will:**

- **advance Australia’s national interests in Antarctica** by delivering transdisciplinary science aligned with the Australian Antarctic Science Decadal Strategy;
- **secure Antarctic science jobs and continue to train the next generation of Antarctic researchers;**
- **build collaboration** amongst the Antarctic science community in Australia, and strengthened partnerships with DCCEEW;
- **enhance Australia’s leadership and excellence in Antarctic science**, and Australia’s influence in Antarctica.
- enhance Australia’s leadership and excellence in Antarctic science by **ensuring pathways to policy and broader societal benefit**, and in doing so, increase Australia’s influence in Antarctica

The project supports the ongoing development through employment of, and funding certainty for, a nationally distributed cohort of early- and mid-career researchers and technical experts. This vital support will strengthen Antarctic science capability in Australia during a critical transition period following major field campaigns.

The project directly advances Australia’s national interests in Antarctica by **addressing key priorities of the Australian Antarctic Science Decadal Plan**, particularly those relating to ice-sheet stability and sea-level rise, ice-ocean interactions, Southern Ocean climate variability, and ecosystem response. It also aligns strongly with **Australia’s Antarctic Strategy and 20 Year Action Plan** through delivery of science excellence, effective stewardship of national investments, and evidence-based knowledge to inform decision-making and international engagement.

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1. The need for quantifying climate risks from East Antarctica and the Southern Ocean

1.1. Problem statement

Australia now has unprecedented capability and observational evidence to address how East Antarctica and the Southern Ocean will respond to ongoing climate change, and what this means for future sea-level rise, climate extremes and marine ecosystems. Building on major advances delivered through ACEAS 2020-2026 and partner programs, recent observations show that parts of the East Antarctic Ice Sheet are undergoing rapid and potentially irreversible change. In particular, the Denman–Shackleton glacier system is now recognised as one of the most vulnerable sectors of East Antarctica, with the potential to contribute significantly to global mean sea level over coming centuries.

Lessons from the Thwaites Glacier, West Antarctica research program demonstrate that how ice-sheet models are constrained using observations fundamentally shapes projections of ice-sheet stability and sea-level rise. Denman Glacier, one of the most vulnerable marine-based glaciers in East Antarctica and a potential contributor of ~1.5 m of global sea-level rise, has emerged as a system of comparable global significance. Through ACEAS 2020–2026, Australia has already delivered major advances in observing, modelling and understanding this region. However, unlike Thwaites, Denman has not yet benefited from a fully coordinated synthesis that integrates coupled terrestrial and marine observations with targeted modelling to systematically reduce uncertainty in high-impact Antarctic climate risks. ACEAS 2026–2028 directly addresses this next, critical step.

In response to this recognised risk, Australia has made substantial recent investments in Antarctic field programs through the Denman Terrestrial Campaign (DTC) and the Denman Marine Voyage (DMV; Figures 1 and 2), generating globally unique datasets spanning geoscience, oceanography, palaeoclimate, biogeochemistry, and ecosystems. These observations represent a step-change in knowledge of the Denman system and reflect the success of Australia’s coordinated Antarctic science effort. However, these datasets are logistically complex, costly, and in many cases impossible to replace. Without a focused national synthesis program, their full scientific and policy value will not be realised. Fragmented analysis and lack of synthesis risks leaving key system-level questions unresolved, limiting the ability to link processes across disciplines and timescales, and reducing the long-term return on Australia’s investment.

At present, major uncertainties remain in the basal controls on ice-sheet dynamics, the pathways and variability of ocean heat delivery to ice shelves leading to ice melting, the role of subglacial meltwater and sediments in regulating nutrient supply, and the sensitivity of the health of marine ecosystems to physical and biogeochemical change. These uncertainties directly constrain projections of future sea-level rise, the assessment of climate variability and extremes, and understanding of Southern Ocean carbon and ecosystem responses. They also limit Australia’s capacity to provide authoritative scientific input into national policy, international climate assessments and Antarctic governance processes.

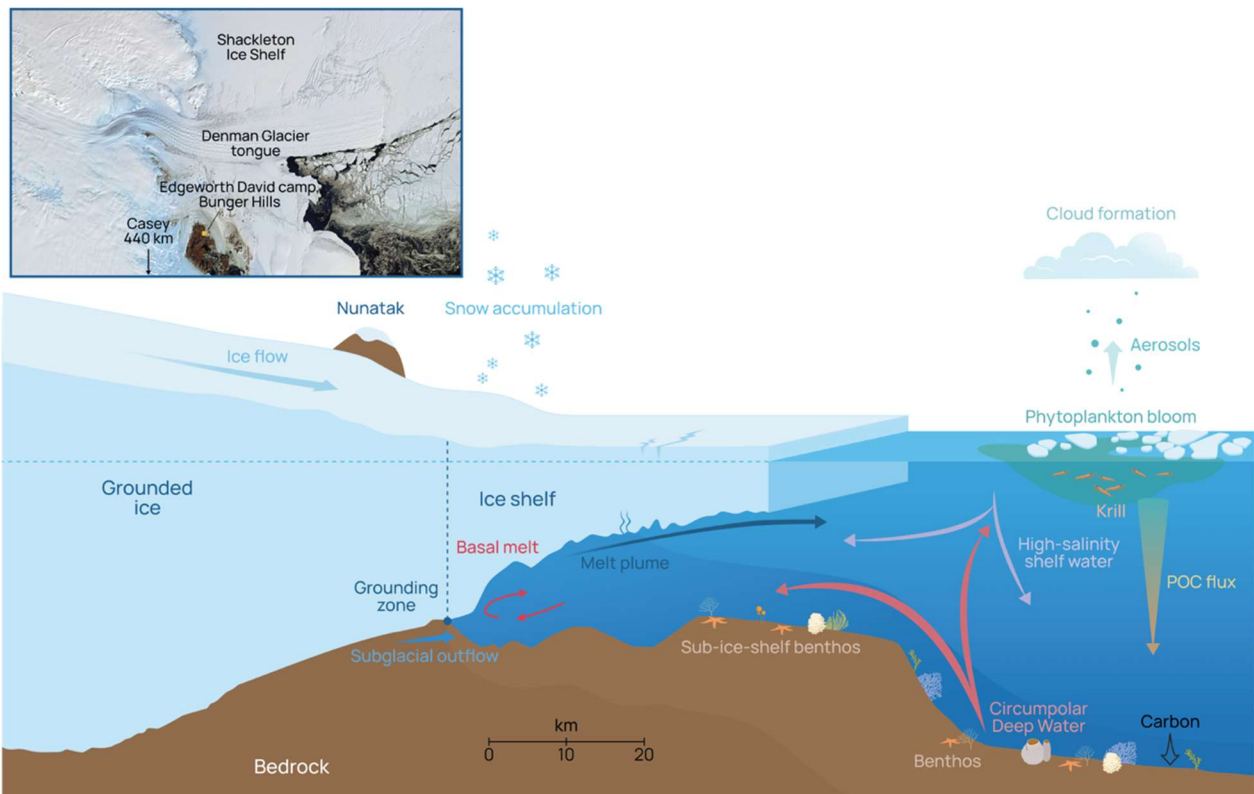


Figure 1. Ice shelf and ocean processes at work around the Denman Glacier, East Antarctica. Credit: N. Abram, D. Lannuzel, S. McCormark for the ARC Centre for Excellence in Antarctic Science (ACEAS), (2025).

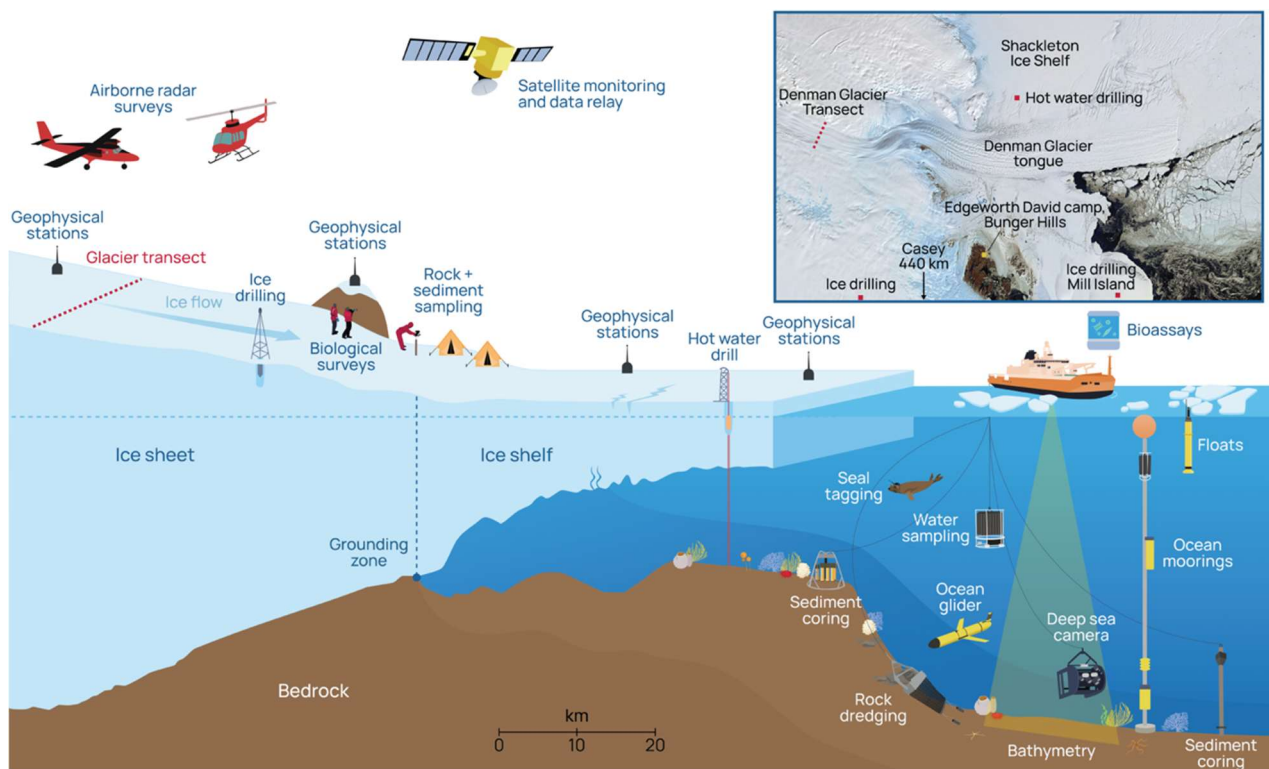


Figure 2. DTC and DMV observing platforms. Credit: N. Abram, D. Lannuzel, S. McCormark ACEAS (2025).

Addressing these challenges requires more than completion of individual analyses. It requires integrated, system-level synthesis that connects the terrestrial, marine, and modelling perspectives and places recent observations into a longer-term climate context. It also requires sustained national capability to ensure that expertise developed through earlier programs is expanded through exposure to this transdisciplinary project which will be the exemplar on which future coupled studies of ocean and the cryosphere are based. Similarly, the hard-won data, including the first from the state-of-the-art *RSV Nuyina*, are curated, synthesised and translated into decision-relevant knowledge.

Without ongoing support of the coordinated ACEAS program of research, there is a clear risk that Australia's recent Antarctic investments will deliver incomplete returns, that critical scientific capability will be lost, and that uncertainty around East Antarctic climate risk will persist at a time when informed decision-making is increasingly urgent. The extension to ACEAS is designed to address this problem directly by converting major observational investments into integrated understanding, robust modelling inputs, authoritative national science outcomes, and improved science underpinning projections of climate risk for Australia and our neighbours.

1.2. Building on ACEAS (2020–2026)

Building on the ACEAS program to date, ACEAS 2026–2028 delivers a focused, nationally coordinated program of analysis, synthesis and modelling that converts Australia's recent major Antarctic field investments into enduring scientific and policy value. By integrating field-based (terrestrial and marine datasets) and modelling research centred on the Denman–Shackleton system, the project resolves key uncertainties in ice-sheet stability, ocean heat delivery, nutrient cycling and ecosystem response across timescales from years to millennia.

Targeted postdoctoral projects across seven university partners complete and integrate analysis of unique datasets from the Denman Terrestrial Campaign and Denman Marine Voyage. These activities deliver robust boundary conditions for ice-sheet models, improved mechanistic understanding of interannual variability and extremes, and system-level interpretations of how ice-ocean-ecosystem interactions shape climate risk from East Antarctica.

Through coordinated synthesis, open data provision and alignment with national modelling and assessment frameworks, ACEAS 2026–2028 maximises return on prior public investment, sustains critical national expertise, and delivers authoritative evidence to inform Australia's Antarctic science priorities, climate risk assessments and international engagement.

National and international Antarctic and climate frameworks consistently emphasise the need for integrated system-level understanding, improved projections of future risk, effective stewardship of scientific investments, and sustained national capability. ACEAS 2026–2028 is explicitly designed to meet this need.

1.3. Global and National Strategic Alignment

1.3.1. Alignment with national science and strategy frameworks

ACEAS 2026–2028 is closely aligned with Australia's national Antarctic, climate and science priorities, supporting the delivery of authoritative, decision-relevant science on Antarctic change and its implications for Australia and the world.

At its core, ACEAS 2026–2028 directly supports **Australia’s Antarctic Strategy and 20 Year Action Plan** and the **Australian Antarctic Science Decadal Plan** by strengthening science excellence as a foundation of Australia’s presence, leadership and influence in Antarctica. ACEAS aligns with priorities relating to world-class science, coordinated national capability, effective stewardship of the Australian Antarctic Territory, and maximising the value of major investments in Antarctic infrastructure, logistics and field programs.

In particular, ACEAS 2026–2028 addresses **Decadal Plan** priorities to:

- reduce uncertainty in future sea-level rise through improved understanding of East Antarctic ice-sheet stability, including vulnerable marine-based sectors such as the Denman Glacier system;
- constrain ice-ocean interactions and ocean-driven ice loss;
- improve understanding of Southern Ocean climate variability, extremes and long-term change, including teleconnections that influence Australia; and
- advance knowledge of Antarctic biogeochemistry, carbon cycling and ecosystem responses to environmental change.

By integrating observations, analytical results and numerical models, ACEAS 2026–2028 delivers system-level synthesis across the coupled Earth-ice-ocean-atmosphere system. Open, well-curated datasets and synthesis outputs ensure enduring national benefit and enable reuse across disciplines, consistent with the Decadal Plan’s goal of a coherent, nationally coordinated Antarctic science program.

1.3.2. Contribution to national climate risk and adaptation priorities

ACEAS 2026–2028 contributes to Australia’s national climate risk and adaptation objectives, including those articulated through the **National Climate Resilience and Adaptation Strategy 2021–2025** and subsequent national climate risk assessments. A persistent constraint identified in national assessments is limited observational coverage and duration in critical Antarctic regions. ACEAS responds directly by integrating new observations from the Denman region – a key uncertainty hotspot for rapid Antarctic melt – with existing datasets and advanced modelling. This approach maximises the value of sparse observations, constrains uncertainty, and improves projections of long-term and high-impact outcomes.

Through its emphasis on synthesis, validation and interpretation, ACEAS delivers immediate, decision-relevant improvements in climate risk information. The project supports risk-informed planning approaches that remain robust under deep uncertainty, including low-likelihood, high-impact sea-level rise scenarios, and strengthens the evidence base for coordinated adaptation planning and adaptive management across government.

1.3.3. Alignment with National and DCCEEW Science & Research Priorities

ACEAS 2026–2028 aligns strongly with the **DCCEEW Science Strategic Statement and Science and Research Priorities**, released in April 2026. These emphasise trusted, integrated science to inform policy and regulatory decision-making across climate, environment, water and communities. In particular, ACEAS directly contributes to the **Science and Research Priority 5: Building a secure and resilient nation**, by resolving critical uncertainties associated with Antarctic ice-sheet stability, Southern Ocean variability and climate extremes. Its multidisciplinary, collaborative design and

commitment to open data align closely with DCCEEW principles of connected, innovative and evidence-based science, and support Australia's leadership within the Antarctic Treaty System.

The DCCEEW priorities map to **Australia's National Science and Research Priorities (2024)**, which define the areas of science and research collaboration required to address Australia's most significant national challenges over the coming decade. ACEAS 2026–2028 makes its most direct contribution to **Priority 5: Building a secure and resilient nation**, by delivering critical knowledge on Antarctic contributions to future sea-level rise, Southern Ocean climate variability and high-impact climate risk. Improved understanding of long-term and extreme outcomes from East Antarctica is essential for national coastal planning, infrastructure resilience, disaster risk management and international climate risk assessment frameworks. ACEAS also contributes substantively to **Priority 4: Protecting and restoring Australia's environment**, through advances in understanding Antarctic and Southern Ocean ecosystems, biogeochemical cycles and climate feedbacks that influence both regional and global environmental systems.

Consistent with the National Science Statement that underpins the priorities, ACEAS focuses on science that delivers long-term public value, leverages national research infrastructure, fosters collaboration across institutions, and translates fundamental research into decision-relevant knowledge for government and society.

1.3.4. Responding to science-user needs and international priorities

ACEAS 2026–2028 responds directly to national science-user needs, including those identified through the DCCEEW-led **Sea Level Rise Science for Adaptation and Engineering Needs workshop** (June 2025). That process highlighted the need for stronger, sustained engagement between scientists and decision-makers, particularly where risks are high and deep uncertainty persists around low-likelihood, high-impact sea-level rise scenarios and Antarctic ice-sheet contributions.

By strengthening the scientific foundations required to characterise uncertainty rather than relying on single-number projections, ACEAS 2026–2028 supports risk-informed planning approaches that remain robust under high-end and long-term sea-level rise scenarios. Synthesis outputs and accessible datasets improve the translation of evolving science into forms usable for national guidance, adaptation pathways and future benchmark development.

Internationally, ACEAS research aims to feed into Australia's contributions to **Antarctic Treaty System** strategies, such as the **Climate Change Response Work Programme**. The research will also have pathways into the **Intergovernmental Panel on Climate Change's** upcoming reportage into the broader **UN Climate Framework**. Consistent with the **Australian Academy of Science's** expectations for national leadership, ACEAS 2026–2028 addresses concerns about fragmented effort by operating as a nationally coordinated program, strengthening Australia's capacity to provide authoritative scientific leadership within the Antarctic Treaty System and beyond.

ACEAS 2026–2028 aligns with priorities of the **Scientific Committee on Antarctic Research (SCAR)** by advancing integrated, interdisciplinary Antarctic science and open data stewardship, including multiple areas of focus listed within the SCAR Horizon Scan. Our proposed partnership with the Alfred Wegener Institute (AWI, Germany) exemplifies our approach to partnering with the leading Antarctic research groups globally. The project also strengthens Australia's contribution to future International Polar Year initiatives by ensuring that recent Antarctic field investments are translated into high-quality, integrated scientific outputs with long-term legacy value.

2. Team Capability

This project brings together a nationally coordinated, multidisciplinary team with deep expertise in undertaking world-leading Antarctic and Southern Ocean research, its dissemination, delivery of data products, and communication of outcomes and outputs to stakeholders and the public. The project is led by the University of Tasmania (UTAS), in collaboration with the ACEAS network of experienced delivery partners: the University of New South Wales (UNSW), Australian National University (ANU), University of Canberra (UC), University of Melbourne (UM), University of Western Australia (UWA), and Curtin University (CU). UTAS is the world's leading Antarctic university as measured by research outputs¹.

The Australian partners in ACEAS are complemented by a formal partnership with the AWI which has led parallel fieldwork in the Denman Glacier region. This partnership enables close collaboration, data sharing and synthesis across complementary national programs. AWI is the second most prolific publisher of Antarctic research globally, and AWI researchers are already well integrated with ACEAS teams through joint field activities, data analysis and modelling collaborations in the Denman region.

UTAS (Lead Applicant) brings national leadership in Antarctic science. UTAS has extensive experience leading national collaborations and coordinating complex, grant-funded research programs. The UTAS team has substantial experience in leading large-scale, nationally coordinated research programs focused on Antarctica and the Southern Ocean, including the establishment, governance and delivery of ACEAS and the Australian Antarctic Program Partnership (AAPP). UTAS has led large-scale Antarctic research continuously since the early 1990s.

ACEAS 2026–2028 will be led by Professor Jo Whittaker, who has been appointed by UTAS to direct ACEAS through the current proposal and the 2026–2028 delivery period. Professor Whittaker is an ACEAS Chief Investigator and ARC Future Fellow with research expertise spanning plate tectonics, marine geophysics and geodynamics, and she brings a deep understanding of the breadth and integration of the ACEAS research portfolios. She has first-hand experience with ACEAS flagship field programs, including participation in and voyage-coordination support for the Denman Marine Voyage, and is now leading synthesis and analysis of those datasets to develop palaeo-environmental reconstructions of the Denman-Shackleton glacier system.

Professor Whittaker's leadership experience includes roles as Dean of Graduate Research at UTAS and Deputy Centre Head (Oceans & Cryosphere), providing strong institutional expertise in research governance, workforce development and national collaboration. Her appointment ensures continuity of ACEAS leadership following Professor Matt King's directorship, while allowing the outgoing Director to focus on complementary ARC Laureate research on East Antarctic change. This transition maintains stability in governance and scientific direction while strengthening synthesis and delivery capacity for ACEAS 2026–2028.

¹ Larson, K., D. W. Aksnes, R. Danell, M. A. King, E. Leane, and I. Olofsson (2025), Patterns and emerging trends in Antarctic and Southern Ocean academic publishing 2016-2024 *Rep.*, 59 pp, Thematic Network on Research Analytics and Bibliometrics, Arctic Centre, Umeå University, Umeå, Sweden. <https://zenodo.org/records/18402791>

Professor Whittaker will be supported by a highly experienced, effective and collaborative leadership team with deep experience across ACEAS and the Australian Antarctic Program Partnership. This leadership is complemented by senior UTAS researchers including Professors Delphine Lannuzel, Nathan Bindoff and Matt King, who collectively bring decades of experience in administering and delivering national research centres, major national facilities, international collaborations and government-engaged Antarctic science programs.

The scientific program will be supported by a dedicated ACEAS administration and communications team based at UTAS, providing national coordination, governance support, monitoring and evaluation, and proactive communication of project outcomes. This capability is complemented by technical, data and research support staff embedded within partner universities, together with established institutional support from university research offices, contracts teams and data services. Drawing on systems and expertise developed through ACEAS and the Australian Antarctic Program Partnership, this integrated support structure enables efficient delivery, compliance and workforce development, allowing the academic team to focus on high-quality science, synthesis and publication, while supporting effective engagement with government, stakeholders and the wider community.

UTAS contributes extensive scientific capability, including co-leadership of the Denman Marine Voyage, deep familiarity with the marine datasets, many of the Denman Terrestrial Campaign records, and expertise in oceanographic and ice-sheet modelling. UTAS hosts a world-leading data repository compliant with Australian Antarctic and international open-data standards and works closely with the Australian Antarctic Data Centre.

Partner institutions contribute complementary expertise essential to program delivery:

- **University of New South Wales (UNSW)** provides expertise in Southern Ocean dynamics and numerical modelling of ocean processes and change.
- **Australian National University (ANU)** contributes expertise in observation and modelling of Southern Ocean and Antarctic Ice Sheet change, including trace-metal biogeochemistry and high-resolution physical models.
- **University of Canberra (UC)** brings experience in co-leadership of the Denman Terrestrial Campaign and expertise in terrestrial and marine proxy data for past ice-sheet and ocean change.
- **University of Melbourne (UM)** contributes expertise in high-resolution and theoretical modelling of ocean and ice-sheet processes.
- **University of Western Australia (UWA)** provides expertise in Denman Terrestrial geophysical datasets underpinning ice-sheet geometry and solid-Earth controls.
- **Curtin University (CU)** contributes expertise in satellite remote sensing of the Southern Ocean, with a focus on marine bioproductivity.

Together, the ACEAS leadership and partner institutions demonstrate proven capability to manage complex, multi-institutional Antarctic research programs and to deliver high-quality scientific data and policy-relevant outcomes on national timescales.

The program supports a total of 14 Postdoctoral Fellows hosted at five ACEAS Universities, each one associated with a major project under the program. Demonstrating continuation from the first phase of ACEAS, nine of the Postdoctoral Fellows will continue into 2026–2028. These researchers bring world-leading knowledge and capabilities to the research program. Seven of these

researchers were involved in the DTC or DMV field programs and have deep knowledge of the datasets they will be analysing and interpreting.

Investigator expertise summary

Name, Institution	Expertise summary
Jo Whittaker, UTAS	Director. Plate tectonics; Australia–Antarctica separation and palaeo-ocean circulation.
Alan Aitken, UWA	Integrated geophysics; tectonic controls on Antarctic continent structure and evolution.
David Antoine, CU	Marine optics and satellite ocean colour; primary production and ocean biogeochemistry.
Linda Armbrecht, UTAS	Marine palaeo-genomics; ancient DNA from Antarctic seafloor sediments.
Sophie Bestley, UTAS	Southern Ocean ecology; links between ocean–ice dynamics and marine predators.
Luke Bennetts, UM	Marginal ice-zone dynamics; waves, sea ice and ice-shelf stability.
Nathan Bindoff, UTAS	Physical oceanography and climate change; observed and projected ocean change and sea level.
Julia Blanchard, UTAS	Global-change ecology; biodiversity and food-web responses to climate change.
Philip Boyd, UTAS	Ocean biogeochemistry; carbon cycling and climate decision support.
Zanna Chase, UTAS	Marine chemistry; nutrient cycles and Southern Ocean climate regulation.
Poul Christoffersen, UTAS	Glaciology; ice-sheet flow, subglacial processes and ice-ocean interaction.
Emiliano Cimoli, UTAS	Remote sensing, sea-ice ecosystem dynamics.
Rhodri Davies, ANU	Geodynamics; links between deep Earth processes and surface evolution.
Michael Ellwood, ANU	Marine geochemistry; plankton, nutrients and Southern Ocean carbon cycling.
Matt England, UNSW	Large-scale ocean circulation and climate dynamics.
Bishakhdata Gayen, UM	Physical oceanography; turbulent convection and ice-shelf melt modelling.
Jacqui Halpin, UTAS	Tectonics; crustal evolution and continental dynamics.
David Heslop, ANU	Rock magnetism; palaeo- and environmental magnetic methods.
Nicole Hill, UTAS	Applied marine ecology; Antarctic biodiversity mapping for decision-making.
Fraser Kennedy, UTAS	Microbial ecology; polar microbial communities, productivity and carbon cycling.
Matt King, UTAS	Geodesy and ice-sheet mass balance; Earth deformation, Antarctic ice change and sea-level rise.
Delphine Lannuzel, UTAS	Sea-ice biogeochemistry; iron cycling; and climate feedbacks.
Vanessa Lucieer, UTAS	Marine biodiversity analysis and seafloor mapping

Laurie Menviel, UNSW	Ocean circulation, abrupt climate change and carbon cycles.
Adele Morrison, ANU	Southern Ocean circulation and Antarctic ice-shelf melting.
Max Nikurashin, UTAS	Physical oceanography; ocean mixing and circulation.
Taryn Noble, UTAS	Marine geochemistry; palaeo-ocean circulation and ice-shelf retreat.
Helen Phillips, UTAS	Ocean dynamics and small-scale heat transport processes.
Anya Reading, UTAS	Seismology and data science; deep Earth–ice-sheet interactions.
Alex Sen Gupta, UNSW	Ocean–climate interactions and ecosystem impacts.
Paul Spence, UTAS	Ocean climate modelling; Southern Ocean processes.
Pete Strutton, UTAS	Physical–biological coupling; productivity and air–sea CO ₂ exchange.
Paul Tregoning, ANU	Space geodesy; satellite observations of ice sheets and sea level.
Tessa Vance, UTAS	Palaeoclimatology; Antarctic ice-core records and past climate variability.
Cat Vreugdenhil, UM	Polar oceanography; ice-shelf–ocean interaction and convection.
Duanne White, UC	Quaternary climate, landscape and biotic change.
Chen Zhao, UTAS	Antarctic Ice sheet and ice shelf modelling.
Jan Zika, UNSW	Theoretical oceanography; overturning circulation and energetics.

Postdoctoral Fellows (PD)

PD	Personnel	Theme	Org	Project title
PD1	Tobias Stål	1	UTAS	Computational geophysics – Denman trough
PD2	Jodi Fox	1	UTAS	Antarctic geology – volcanic and glacial history
PD3	TBC	1	UWA	Geopotential imaging – deep crust and mantle
PD4	Yuhao Dai	2	ANU	Marine biogeochemistry – silicon and metal cycling
PD5	TBC	2	UTAS	Marine geochemistry – pore water
PD6	TBC	2	UTAS	Marine geochemistry – sea water
PD7	TBC	2 & 3	UTAS	Diatoms – seawater and sediment
PD8	David Green	2	UTAS	Pelagic productivity, benthic communities, and predator foraging
PD9	Wilma Huneke	3	ANU	Ocean–ice shelf modelling – interannual variability and future change
PD10	Zhi Li	3	UNSW	Drivers of marine heat waves and anomalous sea-ice
PD11	TBC	3 & 1	UTAS	RAID ice chip – decadal to centennial climate variability
PD12	Matt Jeromson	4, 2 & 3	UC	Palaeo ice sheets – Shackleton Ice Shelf sediment core
PD13	Katharina Hochmuth	4, 1 & 3	UTAS	Tectonics and ice sheets
PD14	Josef Bisits	4 & 2	UNSW	Vertical transfer of carbon in the Denman region

3. Program Structure

This project leverages previous investments, consolidates national capacity, and fills critical Antarctic science gaps by advancing research across four integrated themes:

- **Basal controls on Denman ice dynamics**, integrating geophysics, geology and modelling to constrain subglacial geometry, properties of the ice-bed interface, geothermal heat flow, crust–mantle structure and glacial isostatic adjustment that govern ice flow and grounding-line stability.
- **Meltwater, nutrients and ecosystem response in the Denman–Shackleton marine system**, tracing the sources, pathways and biological utilisation of meltwater-derived elements and nutrients from sediments, through the water column, to marine ecosystems and higher trophic levels.
- **Denman climate variability and change across timescales**, combining ocean–ice shelf modelling, analysis of ocean heat content and marine heatwaves, and palaeoclimate records to explain why the region alternates between warm and cold states and what this implies for future melt sensitivity.
- **System-level synthesis across Earth system components and timescales**, integrating terrestrial, marine, biological and modelling outputs to deliver coherent, policy-relevant understanding of past, present and future change in East Antarctica within a broader regional context.

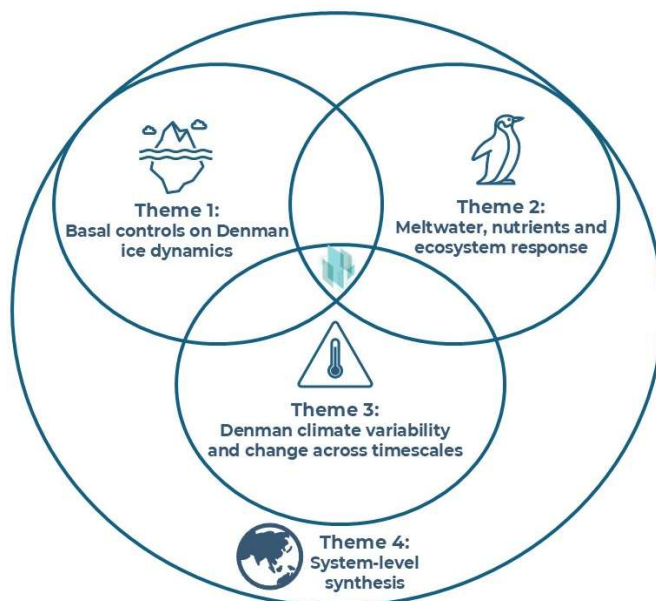


Figure 3. Integration of research threads across the four ACEAS themes, showing linkages between terrestrial processes, ocean dynamics, biogeochemistry, ecosystems and modelling.

3.1. Theme 1: Basal Controls on Denman Ice Dynamics

Unifying research question: What are the basal boundary conditions that govern Denman Glacier dynamics across past, present and future timescales?

This theme integrates new geophysical and geological data from DTC and DMV with existing knowledge to deliver improved constraints on subglacial trough geometry, ice-bed properties, geothermal heat production, crust-mantle structure and glacial isostatic adjustment.

Computational geophysics resolve subglacial geometry, hydrology and heat flow; geological studies provide volcanic, tectonic and glacial context; and geopotential imaging constrains crust and mantle structure and viscosity. Together, these results define the basal environment controlling ice flow, grounding-line stability and freshwater delivery to the ocean, providing essential inputs to ice-sheet and Earth system models.

Core contributors: PD1, PD2 and PD3.

Cross-cutting contributors: PD11 and PD13.

Key datasets:

- On-ground seismic and magnetotelluric datasets
- Denman-Shackleton bathymetric compilations
- Ice motion and subglacial hydrology products from in situ geophysical instruments
- Geological age, geochemistry and lithological datasets
- Deep crust and upper-mantle geophysical models (geothermal heatflow and glacial isostatic adjustment inputs)

3.2. Theme 2: Meltwater, Nutrients, and Ecosystem Response

Unifying research question: What are the sources, pathways, and biological utilisation of meltwater- and sediment-derived elements and nutrients, through the water column, into marine ecosystems and higher trophic levels?

This theme integrates measurements from sediment cores, pore waters, seawater and biological samples and images collected during DMV with existing data and samples to resolve how subglacial meltwater, sedimentary processes, and ocean circulation regulate nutrient supply and marine productivity. Isotope geochemistry (Si, Fe, Zn, Nd, Be, Th) constrains elemental sources and benthic-pelagic exchange; diatom assemblages reconstruct productivity, carbon export and past ocean conditions; and predator foraging studies link physical and biogeochemical processes to ecosystem-level responses. Together, these activities provide a system-wide understanding of how marine ecosystems in the Denman-Shackleton region respond to ice-sheet change.

Core contributors: PD4, PD5, PD6, PD7 and PD8.

Cross-cutting contributors: PD12 and PD14.

Key datasets:

- Isotope datasets from seawater, particulates and porewaters (Fe, Si, Zn, Nd)
- Fully curated porewater concentration and benthic flux datasets (Fe, Si, Zn, Nd)
- Seawater isotope datasets tracing subglacial meltwater (Be, Th, Nd)
- Sediment and seawater diatom assemblage datasets
- Annotated benthic imagery, animal-borne fluorometry profiles, and predator tracking products
- Organic carbon accumulation rates

3.3. Theme 3: Denman Climate Variability and Change

Unifying research questions: What are the patterns and drivers of interannual to multi-millennial variability in ocean and ice conditions in the Denman system, and what does this imply for sensitivity over coming decades and centuries?

This theme combines ocean-ice shelf modelling, analysis of observations made during the DMV, and ocean temperature and sea-ice variability, and ice-core records to explain why the Denman region experiences extreme warm and cold states. Numerical experiments quantify the mechanisms controlling modified Circumpolar Deep-Water intrusions, ice-shelf melting and cavity circulation, while reanalysis and observations constrain a range of temperature variability and anomalous atmosphere and sea-ice conditions. RAID ice-chip analysis provides centennial context for precipitation and surface mass balance variability, enabling recent changes to be interpreted relative to historical variability.

Core contributors: PD7, PD9, PD10 and PD11.

Cross-cutting contributors: PD12 and PD13.

Key datasets:

- High-resolution ACCESS-OM3 interannual simulations with interactive ice-shelf cavities
- Curated satellite, reanalysis and DMV conductivity, temperature, depth (CTD) datasets for temperature, heat content and sea-ice extremes
- Ice-core isotope, chemistry and accumulation datasets spanning the 20th century
- Derived datasets linking ocean variability to basal melt processes
- Sea ice regimes and deep-water incursions during glacial to interglacial climate states

3.4. Theme 4: Denman In Context: across systems and timescales

Unifying research questions: What are the East Antarctic and Southern Ocean system-level patterns, processes, and drivers across timescales, and critical ice-ocean-atmosphere-ecosystem-Earth interactions, that the Denman system is part of? How does the Denman system influence, and respond to, broader Antarctic and Southern Ocean systems?

This theme ensures that Denman-focused findings are placed in a broader East Antarctic and Southern Ocean context. It draws together terrestrial, marine, and modelling results into internally consistent, system-level interpretations of the Denman glacial system and its connections to regional and circum-Antarctic processes. It ensures close collaboration between ACEAS partners and key collaborators including AAD, Securing Antarctica's Environmental Future (SAEF), AAPP, and AWI. For example, tectonic and ice-sheet reconstructions link geological evolution to ice dynamics; biogeochemical and physical modelling integrates observations across domains.

Theme 4 includes explicit support for investigator-led effort with a primary focus outside of the Denman region, including at regional and circum-Antarctic scales, within which the Denman system sits. East Antarctic and Southern Ocean research across ACEAS partners and collaborators provides essential spatial and temporal context, within which the focussed Denman glacial system results in the previous three themes are interpreted. By integrating Denman-specific results with broader Antarctic and Southern Ocean science, Theme 4 enables synthesis across space, time and disciplines. Synthesis activities translate findings into high-impact publications and underpin policy-relevant outputs.

Cross-cutting contributors: PD12, PD13 and PD14.

Key datasets:

- Cross-theme synthesis datasets combining physical, chemical and biological outputs
- Integrated Denman onshore-offshore tectonic and basement/bathymetric reconstructions
- ACCESS-OM/WOMBAT biogeochemical hindcasts linked to Denman observations

4. High Level Project Plan

4.1. Overview of Project Delivery

This two-year, nationally coordinated research delivery program focusses on maximising return on Australia's recent Antarctic field investments. Delivery is centred on the final analysis, integration and synthesis of datasets generated during the Denman Terrestrial Campaign and the Denman Marine Voyage, supported by targeted numerical modelling and cross-disciplinary synthesis.

The project brings together a nationally coordinated consortium of delivery partners across seven universities. Activities are distributed across partner institutions according to disciplinary expertise and coordinated nationally through ACEAS to ensure integration across terrestrial, marine, and modelling domains.

Delivery emphasises:

- timely recruitment and retention of postdoctoral researchers;
- structured coordination across research threads;
- integration of observational and modelling activities;
- production of high-impact publications and accessible datasets; and
- clear communication of outcomes to government and other stakeholders.

Additional Notes:

- All partners have confirmed participation through formal Letters of Support submitted with this application.
- UTAS will coordinate all partner interactions through regular meetings, reporting, and a national integrated projects.

4.2. Key Performance Indicators (KPIs)

Key Performance Indicators (KPIs) for the program are presented here and have been designed to measure ongoing progress. They are measurable results tailored for our operations and research program.

KPIs are divided into the following categories:

- **Future Workforce:** Development of personnel that will be critical for the future of Antarctic Research.
- **Strategic Partnerships:** Development of a solid network of collaborators and the strength of these partnerships
- **Research Impact:** Research outputs and their uptake
- **Stakeholder Engagement & Communications:** Stakeholder outreach and communications
- **Operations:** Operational status of the centre

The table below presents KPI descriptors, category, metrics and monitoring frequency for specific targets.

Category	KPI descriptor	Targets for program total	Monitoring
Future Workforce	Number of Postdoctoral Fellows in the program	14 Postdoctoral Fellows	Quarterly
	Gender balance metrics:	50±10% overall	Bi-annual
	- gender balance overall - gender balance within career stage (HDR, Postdoc, CIs, Leadership)	50±10% within career stage	
Strategic Partnerships	% of strategic partners engaged	100	Annually
	% of papers with >1 ACEAS participating university	30%	Quarterly
	Number of national-scale Antarctic workshops hosted	4	Annually
Research Impact	Number of publications	120	Quarterly
	% of papers in top-quartile journals	90%	Annually
	Number of citations	2000	Annually
	Number of datasets released	10	Quarterly
Stakeholder Engagement & Communications	Number of plain-language policy briefings, explainers and other policy-related documents	4	Annually
	Number of presentations, briefings, submissions and engagement events delivered to government, end users and/or the public	4	Annually
	Number of quarterly external newsletters sent to key stakeholders	8	Quarterly
	Number of internal monthly newsletters sent to ACEAS national consortium of researchers (11/year)	22	Quarterly
	Number of news articles and media releases	50	Annually
	Number of website views	10,000	Annually
	Number of social media followers	10,000	Annually
Operations	% of deliverables achieved from project plan	100%	Bi-annually

% of risks monitored and managed

100%

Bi-annually

4.3. Project Phases

The project is structured into three main phases following standard Project Management methodology adjusted for extending the existing centre: Transition, Execution, and Closure, with ongoing monitoring throughout. This phased approach ensures that governance, staffing and coordination are transitioned and appropriate to enable full research execution, while maintaining flexibility to adapt to emerging scientific insights and operational constraints.

Each phase has clearly defined objectives, actions and progress indicators, aligned with DCCEEW reporting requirements and milestone-based delivery. The key action focus areas for each phase are summarised in the table below:

	Phase	Action Focus
P1	Transition	Project mobilisation, governance transition and streamlining, staffing transitions and recruitment, documentation, risk planning, project planning for each research thread, transition of communications strategy, and adaption of monitoring and evaluation frameworks
P2	Execution	Integrated data analysis, numerical modelling, cross-theme synthesis, publication and delivery of datasets and science outputs, ongoing communication of research and stakeholder engagement
P3	Closure	Project evaluation, publication of validation results, knowledge transfer and sustainability planning, final report and national dissemination

By the end of this project, ACEAS 2026–2028 will have delivered an integrated, system-level understanding of the Denman–Shackleton glacier system, underpinned by peer-reviewed publications, openly archived datasets and improved modelling frameworks. These outputs will be embedded within Australia’s Antarctic science and climate assessment capability, leaving a legacy of enduring scientific value and strengthened national leadership in Antarctic research.

Project phases, actions, milestones and deliverables are presented below at a high level. Details by Research Theme and Centre are covered in **Appendix I**.

4.3.1. Phase 1: Transition

Objective: *Ensure an effective transition from ACEAS 2020–2025 to ACEAS 2026–2028 to maintain a strong foundation for national delivery through governance streamlining, staffing transition and recruitment, partner engagement, documentation, and risk management and project planning – enabling the project to transition to full-scale implementation immediately upon DCCEEW funding activation.*

Phase 1 focuses on rapid mobilisation following funding activation to ensure a smooth transition into the ACEAS extension. Key activities include streamlining of the governance structure and revision of the national leadership team, execution of delivery partner agreements, transition and onboarding of postdoctoral researchers, and refreshing of project monitoring and communication systems.

Phase 1 ensures the program is operationally ready for coordinated scientific delivery across all partners. This phase will be led by the University of Tasmania (UTAS) and involve close collaboration with all delivery partners.

During this phase, research plans aligned to four ACEAS themes will be developed, including coordinated cross-project integration to ensure compatibility of datasets, modelling approaches and synthesis objectives, including:

- refinement of publication and data-release strategies;
- coordination of modelling and synthesis activities across institutions;
- early planning for stakeholder communication, policy-relevant outputs and key engagement activities.

UTAS will lead ACEAS, working closely with partners and national and international collaborators to ensure the program of research is robust, covers national needs, and delivers national value.

4.3.2. Phase 2: Execution

Objective: *Deliver the core scientific program, including data analysis, modelling, synthesis and dissemination.*

Phase 2 represents the primary scientific delivery period for ACEAS 2026–2028. Activities focus on completing and integrating analysis of terrestrial, marine, biological, palaeoclimate, and synthesis datasets, alongside targeted numerical modelling, to deliver system-level understanding of the Denman–Shackleton system.

Execution is organised around the four ACEAS research themes, with coordinated workflows that link observations to models and synthesis across disciplines and timescales. Within each theme, postdoctoral researchers lead focused analyses and publications, while cross-theme coordination ensures consistency of assumptions, datasets and interpretation.

Key execution activities include:

- analysis of Denman Terrestrial Campaign geophysical and geological datasets to constrain basal boundary conditions for ice-sheet models;
- analysis of Denman Marine Voyage seawater, sediment, porewater and biological samples to quantify meltwater pathways, nutrient cycling and ecosystem response;
- numerical modelling of ocean-ice shelf interactions, interannual variability, extremes and future change;
- integration of palaeo-records to place recent variability and extremes into longer-term context; and
- cross-theme synthesis to link ice-sheet dynamics, ocean processes, biogeochemistry and ecosystems.

Execution emphasises close collaboration between postdoctoral researchers, Chief Investigators and partner organisations through regular scientific workshops, synthesis meetings and shared modelling and data frameworks. Outputs include peer-reviewed publications, curated and publicly archived datasets, synthesis papers, plain-language summaries of key findings, and contributions to national and international assessments.

Monitoring of progress, milestones and risks is embedded within Phase 2 as part of routine scientific coordination.

4.3.3. Phase 3: Closure

Objective: *Complete final reporting, synthesis, and transition to post-project sustainability. This phase ensures the project delivers a lasting national asset by consolidating achievements, transferring ownership of data and intellectual property.*

Phase 3 consolidates project outcomes and ensures accountability for public investment. Activities include finalisation of publications and datasets, submission of final project reports, and documentation of lessons learned.

An independent audit of the project will take place as required in the funding guidelines.

This phase also focuses on transitioning project outputs into long-term national assets through established data repositories, ongoing collaborations, and alignment with future Antarctic science initiatives, ensuring enduring value beyond the funding period.

4.3.4. Ongoing Monitoring

Objective: *Monitoring of the program to ensure that the research program is progressing as planned, delivering outputs on time, within scope and budget, and in alignment with its stated objectives and ethical, governance and funding requirements.*

Monitoring occurs throughout the project and is coordinated by the lead institution. Progress against milestones, risks, data-delivery commitments and resourcing is reviewed regularly, enabling early identification of issues and timely corrective action.

This approach supports accountability, maintains research integrity, and ensures the project delivers high-quality outcomes within the two-year window, with a clear pathway to impact.

Project governance and monitoring will be embedded directly into the scientific operations through a tiered but lightweight structure designed to support coordination, quality assurance and accountability. Strategic oversight will be provided by an independent Advisory Board, chaired by a highly respected external expert, with senior representation from the UTAS, AAD, DCCEE, and selected independent members with experience in national science policy and program delivery. The Advisory Board will meet annually, or as necessary, to review scientific progress, strategic alignment and emerging risks, providing external guidance rather than day-to-day management.

Operational leadership will sit with the ACEAS Director at UTAS, supported by a Management Committee comprising node leads from each partner university and an early-career researcher representative. This committee will meet quarterly and will be responsible for coordinating delivery across themes, tracking progress against milestones, identifying dependencies and integration issues, and ensuring data delivery and publication commitments are met. By locating monitoring responsibilities within this operational leadership structure, progress review becomes part of routine scientific coordination rather than a separate compliance exercise, enabling early

identification of delays or risks and timely corrective action while maintaining scientific focus and flexibility.

4.4. Dependencies and Risk Integration

The delivery of ACEAS 2026–2028 relies on a small number of known and well-understood dependencies, including the availability of skilled personnel across partner institutions, timely recruitment and contract execution, and access to shared data, computing and institutional support. These dependencies have been explicitly identified, assessed and incorporated into the project's planning, scheduling and governance arrangements.

Risk identification, mitigation and escalation are managed through the **ACEAS 2026–2028 Risk Management Plan**, which is submitted as a companion document to this proposal. That plan sets out the project's risk governance framework, key risk categories, mitigation strategies, escalation pathways and monitoring arrangements, consistent with Commonwealth grant requirements and University of Tasmania policies.

Dependencies and associated risks are monitored as part of routine project operations through the ACEAS governance structure, with regular review at leadership meetings and formal reassessment at key milestones. This integrated approach ensures that emerging risks are identified early and managed proactively, without duplicating reporting structures or introducing unnecessary administrative overhead.

4.5. Data Management and Access Principles

ACEAS 2026–2028 is committed to best-practice data management and open access in accordance with the Australian Antarctic Data Policy and FAIR (Findable, Accessible, Interoperable, Reusable) data principles. The project is designed to ensure that all data generated or synthesised under ACEAS 2026–2028 are curated, documented and made publicly available to maximise national and international benefit.

All primary datasets, derived data products and associated metadata produced through the project will be archived with the **Australian Antarctic Data Centre (AADC)** or other appropriate endorsed repositories, in line with established Antarctic data standards and timelines. Data management planning and stewardship are embedded in project delivery, drawing on existing institutional capability and experience within the ACEAS partnership.

To ensure scientific integrity and appropriate interpretation, datasets generated through ACEAS 2026–2028 will be released in alignment with associated peer-reviewed scientific publications or at defined project milestones, consistent with disciplinary best practice. Where necessary, short-term managed access may be used during active analysis and quality-assurance phases. This approach allows adequate time for validation, contextual analysis and peer review, while ensuring that final datasets, metadata and documentation are made openly accessible through the AADC in a timely and transparent manner.

This approach ensures that ACEAS 2026–2028 delivers reliable, high-quality scientific outputs while supporting collaboration, synthesis and long-term stewardship of nationally significant Antarctic datasets.

5. High Level Budget

The ACEAS 2026–2028 budget has been deliberately structured to maximise scientific return on Australia's recent major Antarctic field investments while maintaining a lean, delivery-focused cost profile. The request prioritises people, analysis of existing samples, and synthesis, recognising that the most cost-effective way to generate national benefit is to fully exploit existing, unique datasets generated through the Denman Terrestrial Campaign and the Denman Marine Voyage.

The budget is directed to the employment and retention of postdoctoral researchers across partner institutions. These positions are essential to complete the analysis, integration and publication of nationally significant datasets and to deliver the synthesis and modelling outputs required to address key uncertainties in East Antarctic climate risk. Concentrating resources on postdoctoral researchers ensures continuity of expertise following the completion of earlier ARC funding and avoids loss of capability at a critical transition point.

Operational and coordination costs have been kept intentionally modest. The budget supports only the minimum centre-level functions required for effective national coordination, governance, reporting, data stewardship and communication of outcomes. Indirect costs are capped in accordance with funding guidelines, and ineligible costs are covered through institutional contributions.

Overall, the proposed budget represents a highly efficient investment that converts prior expenditure on Antarctic field programs into enduring national benefit. By focusing resources on people, coordination and synthesis, ACEAS 2026–2028 delivers high-impact scientific outputs, open datasets and policy-relevant knowledge at a fraction of the cost of new Antarctic field operations, while sustaining critical national capability and leadership in Antarctic science.

The total value of the project is \$8.2 million, comprising Commonwealth funding, co-contributions, and in-kind support from project partners. This includes:

- \$5 million requested from DCCEEW;
- Over \$3.2 million cash and in-kind contributions including:
 - \$262,486 financial co-contributions
 - \$2,969,897 in-kind co-contributions

Major cost components requested from DCCEEW for this project include:

Major cost components	Costs (\$)
Salaries including oncosts	4,297,424
Specialised computers and software	27,776
Laboratory costs	103,800
Domestic travel	125,000
Visa and relocation costs	8,800
Independent audit	8,000
Publication preparation costs	267,000
Communication materials	50,000
Other (Consortium management, staff training, workshops and conference sponsorship)	112,200
TOTAL	5,000,000

Payment schedule is detailed in the detailed budget attached to this proposal and follows the five milestones in the application form and the detailed project plan (Appendix I).

5.1. Value for Money

ACEAS 2026–2028 represents excellent value for money by maximising the return on substantial prior Commonwealth and institutional investments in Antarctic research, infrastructure and capability. The project focuses on completing, integrating and synthesising nationally significant datasets that have already been acquired through major public investment.

Institutional co-investment and leverage

ACEAS 2026–2028 is underpinned by \$3.2M of cash and in-kind contributions from participating universities, including senior investigator and staff time, access to laboratories and computing infrastructure, facilities, professional support and data stewardship. These contributions significantly amplify the impact of requested funding and ensure that the project delivers outcomes that exceed what could be achieved through direct Commonwealth investment alone. These contributions are essential to delivery but are not charged to the funding body, significantly increasing value for money. Partner universities also contribute cash through support for postdoctoral travel, and further unquantified in-kind coverage of research cost overheads. The ACEAS 2026-2028 project value is \$8.23M with \$5M contributed by DCCEEW and \$3.23M contributed by partners. This represents a 60:40 matching by DCCEEW and ACEAS partners.

The distributed, nationally coordinated structure of ACEAS 2026–2028 further reduces duplication of effort, maximises collaboration across institutions, and ensures that expertise developed under the project is retained within Australia's Antarctic science system.

Maximising return on major Antarctic field investments

These Commonwealth costs are fully justified by the project's high funds leverage ratio. The minimum ratio of DCCEEW funds leveraged if past ARC contributions are accounted for is 8:1. This is comprised of ACEAS 2020-2028 non-DCCEEW cash and in-kind contributions valued at \$40.3M in relation to the \$5M cash requested for ACEAS 2026-2028.

Over the past several years, Australia has made exceptionally large investments in Antarctic field programs, including the Denman Terrestrial Campaign (DTC) and the Denman Marine Voyage (DMV), supported by AAD logistics, aircraft operations and the new national icebreaker RSV *Nuyina*. These campaigns represent investments of >\$2B when logistics, ship, and personnel support are considered.

Including AAD field support for DTC (\$30M) and DMV (\$15M) while omitting capital costs brings the estimated funds leverage ratio to 17:1.

ACEAS 2026–2028 converts these high-cost field investments into enduring scientific and policy value by completing the analysis, synthesis and integration of the datasets they generated. This approach ensures that the scientific value of unique, high-value, difficult to obtain observations is fully realised. Without this funding, analysis of nationally significant datasets from DTC and DMV would remain incomplete, substantially diminishing the return on prior Commonwealth investment.

Leveraging national modelling and computing infrastructure

ACEAS 2026–2028 is explicitly designed to leverage Australia's major investments in national modelling and computational infrastructure, including the Australian Community Climate and

Earth System Simulator (ACCESS) and the National Computing Infrastructure (NCI). The project builds directly on ongoing ACCESS development, including incorporation of ice-sheet and ice-ocean interaction capability, ensuring that Antarctic processes are credibly represented within Australia's national climate modelling environment.

By using NCI-hosted infrastructure rather than duplicating computing or data-management capability within the project, ACEAS 2026–2028 delivers high-impact modelling and synthesis at low marginal cost, while strengthening the value of national research infrastructure for a broad user community beyond the life of the project.

Leveraging observing systems and NCRIS infrastructure

The project also builds on and enhances returns from long-standing investments in national observing systems, including IMOS-supported oceanographic and biogeochemical observations such as profiling floats and animal-borne sensors. ACEAS 2026–2028 integrates these observations with field campaign data, and numerical models to generate system-level understanding that cannot be achieved through isolated datasets.

This integrated approach increases the value of observational infrastructure by ensuring that data are not only collected, but fully contextualised, interpreted and translated into decision-relevant knowledge.

6. Project Governance

The University of Tasmania acts as the sole applicant and grant counterparty, delivering the project on behalf of the ACEAS consortium.



The governance framework for ACEAS 2026–2028 has been deliberately designed to be effective and proportionate to the scale and scientific nature of the project. It builds on the successful governance model established under ACEAS 2020–2026, while streamlining structures to support focused delivery, rapid decision-making and strong accountability over the two-year program.

Governance arrangements provide clear strategic oversight and operational leadership, with defined roles and escalation pathways, without introducing unnecessary administrative burden. The governance structure is illustrated in Figure 4 and going forward will comprise two core bodies: an Advisory Board and a Management Committee. These arrangements are consistent with governance approaches previously adopted for nationally coordinated Antarctic science programs funded by DCCEEW.

Figure 4. Governance structure ACEAS 2026–2028

Project governance will be guided by **five core principles**:

Transparency	All decisions, financial controls, and reporting will be documented and made accessible to partners and stakeholders.
Accountability	Roles and deliverables are clearly assigned and monitored against defined milestones, with risk and performance reviewed regularly.
Inclusiveness	Governance structures embed jurisdictional and community representation, ensuring that diverse perspectives shape delivery.
Evidence-Based	Scientific and technical expertise will inform all decision-making and communications, ensuring rigor and adaptability.
Proportionality	Governance processes are scaled to match project complexity and evolving risk levels, with mechanisms in place to escalate high-impact decisions appropriately.

Advisory Board

Strategic oversight of ACEAS 2026–2028 is provided by an **Independent Advisory Board**, chaired by the highly respected Professor Mary O’Kane. The Advisory Board will include the AAD Chief

Scientist, and the University of Tasmania Deputy Vice-Chancellor Research as ex-officio positions, plus with senior representation from DCCEEW, and selected independent members with experience in national science leadership and policy. There will be a mix of existing Advisory Board members and new incoming members to reflect the ACEAS 2026–2028 focus and size.

Advisory Board meeting cadence and approach will be the right size for this phase of ACEAS, with annual meetings plus ad hoc as required, and offers independent guidance to ensure ACEAS remains aligned with national priorities and delivers high-impact outcomes. The Advisory Board provides high-level advice on scientific quality, strategic alignment and emerging risks, but does not undertake day-to-day management. The refreshed Advisory Board will incorporate the existing roles of the previous Science Advisory Committee and Early Career Committee.

Management Committee

Operational leadership of the project sits with the ACEAS **Management Committee**, chaired by the ACEAS Director, Professor Jo Whittaker, based at the University of Tasmania. The Committee comprises node leads from each partner university and an early-career researcher representative, ensuring both disciplinary coverage and workforce perspectives.

The Management Committee meets at least quarterly and is responsible for:

- coordinating delivery across research themes and institutions;
- tracking progress against milestones and deliverables;
- identifying interdependencies and integration requirements; and
- overseeing data delivery, publications and reporting obligations.

Project support and reporting

As the lead institution, University of Tasmania is responsible for national coordination, financial oversight, reporting and contractual compliance. The Director is supported by a small professional team at UTAS, including project management, finance, stakeholder engagement and communications, research office and legal expertise, particularly during project initiation and agreement execution.

Project reporting will follow DCCEEW reporting requirements and timelines, including scheduled progress reports, final reporting and audit requirements, as set out in the funding agreement. Financial management will follow standard University of Tasmania processes, with oversight by the Director and escalation through governance structures as required.

Post-project governance transition

Following completion of the funded period, governance arrangements will transition to existing national and institutional mechanisms that support ongoing Antarctic science coordination and data stewardship. These arrangements will ensure continuity of access to project outputs, safeguard public investment, and maintain nationally significant datasets and collaborations beyond the life of the grant.

7. Stakeholder Management Plan

ACEAS undertakes Antarctic and Southern Ocean research that is directly relevant to Australia's environmental, scientific, strategic and economic interests. This Stakeholder Management Plan sets out how ACEAS will manage and coordinate engagement to support the effective delivery, dissemination, uptake and evaluation of outcomes funded through the *Advancing Australia's National Interests in Antarctica* grant.

A central focus of the project is strengthening collaboration across Australia's Antarctic science community, including coordinated activity across the ACEAS partner universities and structured, complementary collaboration with national Antarctic science programs, research infrastructure and the Australian Government.

The plan recognises that **high-quality dissemination and engagement** is a core obligation and aspiration of the grant, including publication of peer-reviewed research, provision of datasets, and communication of findings to end users. Building on this foundation, ACEAS will also undertake targeted, fit-for-purpose engagement to support collaboration, refinement of scientific effort, informed decision-making and appropriate uptake of research outputs.

Sustained and consistent engagement with key Commonwealth stakeholders is central to achieving uptake and impact. ACEAS will maintain regular, structured engagement with the Australian Antarctic Division, including its Policy and Strategy Branch, and relevant areas of DCCEEW, DFAT and other agencies, to ensure that emerging science is understood early and positioned for use in policy development. This includes targeted briefings aligned with key policy and international decision cycles, and proactive contribution to working and information papers that support Australia's interests in forums such as the IPCC, UNFCCC, Antarctic Treaty Consultative Meeting (ATCM) and Committee for Environmental Protection (CEP). This approach reflects ACEAS' demonstrated impact to date and is designed to ensure that scientific outputs are translated into policy-relevant knowledge through ongoing dialogue rather than one-off dissemination.

Science engagement under this plan aims to align with formal policy and assessment cycles relevant to Australia's Antarctic and climate interests. ACEAS aims to sequence scientific synthesis, briefings and engagement to inform key inputs to international and national processes, including IPCC assessment timelines, UNFCCC negotiation cycles, ATCM and CEP papers. This approach builds on ACEAS' demonstrated contribution to national climate risk assessments and international reporting and ensures that scientific outputs are positioned in advance of decision points where evidence is required.

This Stakeholder Management Plan is designed to complement the ACEAS Communications Plan, which addresses messaging, channels, visibility and dissemination of outputs. The Stakeholder Management Plan focuses on managing relationships, coordinating engagement activities and supporting delivery of project milestones and outcomes. Together, the Communications and Stakeholder Management plans provide a coherent and proportionate approach to stakeholder engagement over the 2026–2028 project period.

7.1. Purpose and Objectives

Purpose

To ensure that stakeholder engagement activities are planned, coordinated and aligned with project delivery, supporting ACEAS to meet its obligations under the grant agreement and to demonstrate progress, outcomes and value for money.

Stakeholder Engagement Objectives

Over the 2026 to 2028 project period, ACEAS will continue to:

- build and support collaboration across the Australian Antarctic science community, consistent with the objectives of the grant;
- support timely dissemination of research outputs, including publications, datasets and plain-language summaries of research to end-users;
- maintain effective working relationships with the Australian Government, particularly DCCEE and AAD, to support reporting, data provision and outcome monitoring;
- engage end users to support an understanding and application of Antarctic science in policy, planning and risk assessment contexts; and engage end users to support appropriate understanding and application of Antarctic science in policy, planning and risk assessment contexts; and
- ensure two-way engagement, where stakeholder needs and feedback inform prioritisation of outputs and engagement activities.

7.2. Alignment with Program Objectives

This Stakeholder Management Plan directly supports the objectives of the *Advancing Australia's National Interests in Antarctica* program by:

- **advancing Australia's national interests in Antarctica** through engagement with policy, operational and research stakeholders to support informed decision-making based on ACEAS science;
- **building collaboration across the Australian Antarctic science community** by coordinating activity across the ACEAS partner universities and actively supporting collaborative connections with national Antarctic science programs and related research infrastructure;
- **strengthening partnerships with DCCEE**, identified as the primary Commonwealth partner for the project, through written and in-person briefings, and reporting; and
- **enhancing Australia's leadership and influence** through online/remote and university funded in person participation in international Antarctic science and governance forums.

7.3. Building Collaboration Across Australia's Antarctic Science Community

A central objective of this project is to build and strengthen collaboration across Australia's Antarctic science community, consistent with the intent of the grant. ACEAS plays a formal coordination and integration role across its partner universities, and a collaborative, complementary role with other national Antarctic science programs, research infrastructure and Commonwealth partners.

7.3.1. Collaboration Across ACEAS Partner Universities

ACEAS acts as a convenor and integrator across its seven partner universities, supporting collaboration through:

- coordinated planning of research, synthesis and analysis activities;
- shared prioritisation of publications and datasets;
- internal engagement forums and working groups; and
- alignment of methods, timelines and outputs across institutions.

This coordination supports efficient delivery of project milestones, reduces duplication, and strengthens the collective impact of ACEAS research outputs.

7.3.2. Collaboration with other Australian Antarctic science programs

ACEAS works collaboratively with other Australian Antarctic science programs, including the AAPP, SAEF, and AAD through established researcher-led and organisational mechanisms, while respecting the distinct roles and governance of each organisation. Key collaboration mechanisms include:

- research-led collaboration, where researchers from ACEAS, AAD, SAEF and AAPP collaborate directly on scientific outputs, synthesis activities and publications;
- monthly meetings between Communications Leads from ACEAS, SAEF, AAPP and a representative from AAD, to identify opportunities for closer collaboration and engagement, and to manage issues if they arise;
- joint communication and engagement activities, such as coordinated media campaigns or national engagement events;
- open channels of communication between organisational leadership, supporting alignment, awareness of priorities and opportunities for collaboration; and
- the Australian Antarctic Research Conference (AARC) as a major national forum for knowledge exchange, collaboration and alignment across the Antarctic science community.

7.3.3. Collaboration with National Research Infrastructure

ACEAS works closely with national research infrastructure providers, including ACCESS-NRI and the NCI, and relies upon their support to deliver components of our science. ACEAS also acts as a conduit to facilitate collaboration between ACEAS partner university research teams and these national capabilities. This includes:

- supporting connections between researchers and infrastructure providers to enable access to modelling, computing and data capabilities;
- facilitating alignment of research requirements with national infrastructure priorities; and
- enabling collaboration that supports efficient synthesis, analysis and delivery of project outputs.

Effective stakeholder engagement with ACCESS-NRI and NCI and across our partner network supports effective use of national infrastructure while strengthening collaboration across the Antarctic science system.

7.4. Strategic Approach to Stakeholder Management

ACEAS will adopt a proportionate, delivery-focused approach to stakeholder management that reflects the scope and purpose of the grant. Stakeholders are prioritised based on:

- **Influence** – capacity to contribute to policy development, operational decisions, research coordination or project delivery.
- **Interest** – level of engagement with Antarctic science outputs and outcomes.
- **Relevance to project delivery** – direct connection to milestones, reporting, data provision or dissemination obligations.

Engagement will be tailored to stakeholder needs and project requirements, with an emphasis on clear roles, realistic engagement mechanisms and demonstrable outcomes.

7.5. Stakeholder Engagement Matrix

7.5.1. Australian Government Stakeholders

Stakeholder	Influence	Level of Engagement	Engagement Objective	Engagement Approach
DCCEEW	High	High	Support project governance, reporting, data provision and deliver policy-relevant science	Briefings, progress reporting, plain language summaries of research, external newsletter, stakeholder events, social media
AAD	High	High	Align research outputs, data provision and program priorities	Briefings, progress reporting, ongoing coordination, plain language summaries of research, joint initiatives, external newsletter, stakeholder events, social media
Department of Foreign Affairs and Trade (DFAT)	High	Medium	Support Antarctic diplomacy and international engagement	Briefings, plain language summaries of research, external newsletter, stakeholder events, social media
Department of Defense	High	Medium	Inform strategic and security-related assessments	Briefings, plain language summaries of research, external newsletter, stakeholder events, social media
Geoscience Australia	High	Medium	Support geophysical and ice-sheet science alignment	Briefings, plain language summaries of research, external newsletter, stakeholder events, data and science exchange (where relevant), social media
Bureau of Meteorology (BoM)	High	Medium	Inform climate system science and forecasting	Briefings, plain language summaries of research, external newsletter, stakeholder events, researcher-level engagement, social media
Australian Fisheries Management Authority (AFMA)	High	Medium	Inform Southern Ocean ecosystem and fisheries management	Briefings, plain language summaries of research, external newsletter, stakeholder events, researcher-level engagement, social media
Chief Scientist of Australia	High	Medium	Support national science leadership and coordination	Plain language summaries of research, external newsletter, stakeholder events, social media
State and Territory Governments	High	Medium–High	Inform coastal adaptation and risk planning	Plain language summaries of research, external newsletter, stakeholder events, social media

Other Australian Government Departments and Agencies, Statutory Authorities (i.e. Australian Institute of Marine Science) & Local Government

Medium

Low–Medium

Maintain awareness of ACEAS research relevant to policy and operations

Plain language summaries of research, external newsletter, stakeholder events, social media

7.5.2. Industry and End-User Stakeholders

Stakeholder	Influence	Interest	Engagement Objective	Engagement Approach
Insurance Sector	Medium	Low–Medium	Support understanding of Antarctic-linked risk	Plain language summaries of research, external newsletter, stakeholder events, social media
Infrastructure & Engineering Sector	Medium	Low–Medium	Inform climate-resilient design and planning	Plain language summaries of research, external newsletter, stakeholder events, social media
Financial Institutions	Low–Medium	Low–Medium	Support incorporation of long-term climate risk	Plain language summaries of research, external newsletter, stakeholder events, social media
Energy Sector	Medium	Low–Medium	Inform climate risk considerations	Plain language summaries of research, external newsletter, stakeholder events, social media

7.5.3. National Research Partners

Stakeholder	Influence	Interest	Engagement Objective	Engagement Approach
ACEAS Partner Universities	High	High	Support collaboration and coordination amongst Australia's Antarctic science community	Active involvement in ACEAS consortium, structured and collaborative research projects, researcher-led collaboration, joint peer-reviewed research papers, regular ACEAS Management Committee meetings, regular internal communication and coordination, internal workshops, AARC Conference

CSIRO	High	High	Align national science outputs and synthesis, use of Antarctic infrastructure through National Marine Facility (MNF)	Researcher-led collaboration, joint initiatives, plain language summaries of research, external newsletter, stakeholder events, social media, coordinated media planning for MNF activities involving ACEAS researchers
ACCESS-NRI	High	High	Support modelling and analysis through national infrastructure	Researcher-led collaboration, capability alignment, external newsletter, stakeholder events, social media
NCI	High	High	Support data-intensive analysis and storage	Strategic research partnerships, facilitated access, researcher-led collaboration, capability alignment, external newsletter, stakeholder events, social media
Integrated Marine Observing System (IMOS)	High	High	Enable effective use of national marine and Southern Ocean observational data to support Antarctic research, synthesis and modelling underpinning ACEAS outputs	Researcher-led collaboration, facilitated connections between ACEAS researchers and IMOS capabilities, alignment of data usage with project outputs, external newsletter, stakeholder events, social media
AAPP	High	High	Co-development of synthesis and outputs, coordination and alignment of communications for shared research promotion and engagement opportunities	Researcher-led collaboration, joint peer-reviewed research papers, open communication between leadership of ACEAS/AAPP, regular meetings between Comms Leads, collaboration on national stakeholder events (where appropriate), joint media/comms activities, social media
SAEF	High	High	Co-development of synthesis and outputs, coordination and alignment of communications for shared	Researcher-led collaboration, joint peer-reviewed research papers, open communication between leadership of ACEAS/SAEF, regular meetings between Comms Leads, collaboration on national stakeholder events (where appropriate), joint media/comms activities, social media

research promotion and
engagement opportunities

7.5.4. International and Antarctic System Stakeholders

Stakeholder	Influence	Interest	Engagement Objective	Engagement Approach
Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)	High	High	Support evidence-based conservation and management of Antarctic marine living resources through provision and interpretation of relevant Antarctic and Southern Ocean science.	Research-led engagement; contribution of scientific evidence and synthesis outputs via established advisory and expert pathways (in alignment with CCAMLR processes), plain language summaries of research, peer-reviewed papers, external newsletter, social media
Scientific Committee on Antarctic Research (SCAR)	High	High	Contribute to international coordination and synthesis	Committee participation, knowledge sharing, researcher-led collaboration, plain language summaries of research, peer-reviewed papers, external newsletter, social media
Southern Ocean Observing System (SOOS)	High	High	Support coordinated observing systems	Data integration (where applicable), researcher-led collaboration, joint initiatives, plain language summaries of research, external newsletter, social media, stakeholder events
Other international Antarctic organisations and international research partners	Medium–High	High	Maximise international impact and collaboration	Researcher-led engagement, joint peer-reviewed research publications (as appropriate), partnerships, external newsletter, social media, stakeholder events

7.5.5. Media and Science Communication Stakeholders

Stakeholder	Influence	Interest	Engagement Objective	Engagement Approach
National media	Medium	Medium	Support accurate public understanding of Antarctic science and its national relevance	Proactive media engagement, expert commentary, reactive media (as required)
Specialist science and environment media	Medium	High	Ensure accurate reporting of research findings and context	Proactive media engagement, expert commentary
Public broadcasters (e.g. ABC)	Medium	Medium–High	Explain Antarctic science and its relevance to Australia	Proactive media engagement, expert commentary, interviews, long-form features
International science media	Medium	Low	Highlight Australia’s leadership in Antarctic science	Periodic, targeted outreach (where applicable to research outputs)

7.5.6. NGO, Civil Society Stakeholders and General Public

Stakeholder	Influence	Interest	Engagement Objective	Engagement Approach
Environmental NGOs (climate, oceans, Antarctica)	Medium	High	Support understanding of evidence-based Antarctic science	Dissemination of public reports, plain language summaries of research, media, social media, stakeholder events (as applicable)
Conservation organisations	Medium	Medium	Inform policy-relevant discussions with credible science	Dissemination of public reports, plain language summaries of research, media, social media, stakeholder events (as applicable)
International NGOs active in Antarctic policy forums	Medium	High	Support consistent use of Australian Antarctic science	Indirect engagement via publications, media, and social media
General Public	Low	Medium	Support scientific literacy of Australian Antarctic science, and understanding of the climate risks from East Antarctica and the Southern Ocean	Media, plain language summaries of research, social media

7.6. Stakeholder Prioritisation and Engagement Tiers

Tier 1 – High Influence / High Relevance: DCCEEW (including Ministers, their advisors, and public servants working across the department), AAD, ACEAS partner universities and major national collaborators

Focused, regular engagement directly linked to project delivery, reporting and outputs

Tier 2 – High Influence / Moderate Relevance: Other government agencies, Federal Ministers and Members of Parliament (MPs), elected representatives of State Government and State Government agencies, national programs, international Antarctic organisations and key industry sectors

Targeted engagement aligned to dissemination and application of findings

Tier 3 – Moderate Influence / Medium Relevance: Media, NGO and civil society organisations, specialist audiences and the broader community/general public

Primarily engaged through coordinated dissemination, media activity and public-facing communication products, aligned with the ACEAS Communications Plan.

7.7. Governance and Internal Coordination

Effective stakeholder management will be supported through:

- clear assignment of relationship leads for Tier 1 stakeholders;
- regular internal coordination and communication across ACEAS nodes and partners;
- integration with the ACEAS Communications Plan to ensure consistent messaging; and
- alignment of engagement activities with project milestones and reporting requirements.

ACEAS Roles and Responsibilities for Stakeholder Engagement

Stakeholder engagement activities are coordinated through a clear and proportionate governance structure, with defined roles across ACEAS leadership, researchers and communications functions, as outlined below.

Role	Primary responsibilities for stakeholder engagement
ACEAS Director	Provides overall leadership and strategic oversight of stakeholder engagement. Leads engagement with senior Commonwealth stakeholders (including DCCEEW and the Australian Antarctic Division) and represents ACEAS in high-level national and international forums.
Chief Investigators	Lead researcher-level engagement with research partners, national programs (e.g. SAEF, AAPP) and international collaborators. Support collaboration on synthesis, publications and datasets, and contribute expert input to briefings, workshops and engagement events.
Communications and Stakeholder Engagement Advisor	Supports the ACEAS Director by leading stakeholder engagement and communications planning across ACEAS and execution of key deliverables. Develops and delivers stakeholder engagement events for government decision makers and end users of our research, develops written policy briefings and explainers, writes and collates end-user surveys, writes and distributes all key external communications materials (with sign-off from Director), manages

	relationships with the media, supports collaboration and coordination with Communications Leads across national Antarctic science programs, and ensures alignment with the ACEAS Communications Plan.
Project Office	Supports scheduling, documentation and coordination of engagement activities, including maintenance of stakeholder registers and recording engagement outcomes for reporting purposes.
Partner University Node Leads	Act as local points of contact for stakeholder engagement at the node level. Support coordination of engagement activities across the ACEAS network and contribute to national-level engagement as required.

7.8. Ongoing Stakeholder Monitoring and Risk Management

Stakeholder engagement KPIs are defined under **Section 4.2 Key Performance Indicators**.

Stakeholder engagement risks and mitigation strategies are identified within the attached **Risk Management Plan**.

8. Communication Management Plan

Our Communication Management Plan supports the objectives and intended outcomes of the *Advancing Australia's National Interests in Antarctica* program by enabling effective dissemination, translation and uptake of Antarctic science outputs funded under the grant.

Communication is treated as an integral component of project delivery, supporting the program objectives to:

- advance Australia's national interests in Antarctica through evidence-based science;
- strengthen collaboration across the Australian Antarctic science community; and
- enhance Australia's leadership, credibility and influence in Antarctic science.

By focusing on the communication of research findings, datasets and synthesis outputs from the **Denman Glacier terrestrial and marine campaigns**, and by translating complex science into accessible and policy-relevant formats, this plan ensures that funded research contributes directly to informed decision-making by government, industry and other end users.

Communication activities are aligned with project milestones and outputs, ensuring that dissemination is timely, targeted and demonstrably linked to program outcomes.

8.1. Relationship to the Stakeholder Management Plan

The Communication Management Plan has been developed to operate in close alignment with the Stakeholder Management Plan, with the two documents together providing a coherent and integrated framework for engagement and communication over the project period.

The Stakeholder Management Plan defines ACEAS's approach to identifying, prioritising and managing relationships with key stakeholders, including government, research partners, industry, NGOs, media and the broader Antarctic science community.

The Communication Management Plan complements that approach by articulating how information, research outputs and insights are communicated to those stakeholders to support engagement objectives.

In practice:

- the **Stakeholder Management Plan** focuses on *who* ACEAS engages with and *why*; whilst
- the **Communication Management Plan** focuses on *how* ACEAS communicates to support that engagement.

Together, the two plans ensure that stakeholder engagement activities are supported by consistent, well-coordinated and fit-for-purpose communication, aligned with project governance, delivery and reporting requirements.

8.2. Purpose of the Communication Management Plan

The Communication Management Plan sets out how ACEAS will plan, coordinate, deliver and evaluate communications activities in support of the *Advancing Australia's National Interests in Antarctica* project.

The plan provides a structured framework to ensure that communications:

- support delivery and visibility of funded project outputs;
- enable translation of complex Antarctic science for non-technical audiences;
- reinforce stakeholder engagement activities;
- support collaboration across the ACEAS consortium and nationally; and
- provides evidence of communication activity to support reporting and evaluation.

8.3. Communications Objectives

Over the 2026 to 2028 project period, ACEAS communications will:

1. **Enable dissemination of project outputs:** ensure publications, datasets, synthesis outputs and key outcomes – with a focus on the Denman Glacier terrestrial and marine campaigns and science supported by the Australian Antarctic Program – are communicated clearly and reach intended audiences.
2. **Help translate complex science into accessible formats:** provide plain-language interpretations of key research findings to support decision making by government, end users of our research, and to improve Antarctic scientific literacy in the broader community.
3. **Support stakeholder engagement activities:** provide wrap-around communications support to enable effective stakeholder engagement, during and after events and consultations, including seeking feedback from end users of our research.
4. **Demonstrate leadership and collaboration in Antarctic science:** communicate outcomes in a way that highlights collaboration, capability and evidence-based leadership across Australia's Antarctic science community.
5. **Maintain internal alignment across ACEAS' nationally distributed network of university partners:** ensure researchers and staff across seven partner universities are informed and coordinated to support effective collaboration and world-class science outcomes.
6. **Provide evidence for reporting and evaluation:** generate measurable outputs and metrics aligned with project milestones and reporting requirements.

8.4. Target Audiences

Communications are tailored to audience needs, recognising differences in technical expertise, decision-making contexts and information requirements. Core audiences relating to this plan are listed below.

A more detailed list of our stakeholders is included in the Stakeholder Management Plan 'Section 6 Stakeholder Engagement Matrix'.

Key External Audiences

- Federal and State Government policy practitioners and decision makers (particularly DCCEEW and AAD).
- National and international partner institutions and collaborators, including Australia's Antarctic science community;
- international Antarctic science organisations and related bodies (i.e. SCAR, ATCM, CCAMLR, IPCC).
- General public, including industry end users, NGOs and civil society organisations.

Key Internal Audiences

- ACEAS leadership, researchers and staff across seven university nodes, including Early Career Researchers (ECRs).

8.5. Key Messages

ACEAS communications are underpinned by the following core messages that should be incorporated in published materials wherever appropriate:

- ACEAS research helps communities prepare for climate risks emerging from Antarctica and the Southern Ocean.
- ACEAS science supports Australia's long-term science objectives in Antarctica, and the delivery of the Australian Antarctic Science Decadal Plan.
- ACEAS research supports informed decision making by government, industry and the community by providing access to the latest scientific insights.
- ACEAS science directly supports Australia's long-term environmental, scientific, strategic and economic interests.
- Collaboration across institutions is a central strength of Australia's Antarctic science capability.
- Data and research outputs generated through this project are public goods, managed transparently and responsibly. Datasets and/or metadata are lodged with the Australian Antarctic Data Centre or, in limited cases, subject-specific open data centres.

Messages are adapted for different audiences while maintaining consistency with these core themes. Importantly, communication supports understanding and dissemination of our research, not advocacy or promotion.

8.6. External Communication Channels and Activities

ACEAS uses a mix of directly managed communication channels (such as the ACEAS website, social media channels, and newsletter) and mediated channels (such as earned media) to disseminate project outputs to external audiences. However, peer-reviewed publications and research outputs provide the authoritative foundation for all communication and engagement activities. This approach recognises that different channels serve different audiences and purposes, and that validated research outputs underpin effective dissemination, translation and uptake. Collectively, these activities support the project's pathways to impact and ensure research outputs are accessible, usable and relevant to identified end-users.

Peer-reviewed publications

Peer-reviewed publications are a primary dissemination pathway for the *Advancing Australia's National Interests in Antarctica* project and represent the authoritative, validated evidence base for all subsequent communication and engagement activity.

Publication of research findings arising from the project is central to demonstrating scientific excellence, transparency and credibility, and underpins the application of Antarctic science in policy, planning and operational contexts.

While peer-reviewed publication is led by ACEAS researchers and partner institutions, communication activities are closely aligned with publication timelines to ensure that:

- key findings are translated into plain-language, accessible formats at appropriate points in the publication process;
- policy-relevant insights are communicated once research has been validated; and
- engagement activities, briefings and media engagement draw on published or submitted research.

In this way, peer-reviewed publications form the foundation upon which all other plain-language science communications, policy briefings, stakeholder engagement materials and media activity are built. To aid widespread access, all ACEAS publications will be openly provided immediately upon acceptance.

ACEAS Corporate Website

The ACEAS website functions as the authoritative public repository for ACEAS project outputs, including publications, datasets, reports, policy briefings and explainers, plain-language news articles and multimedia content. ACEAS researchers are responsible for uploading evidence of peer-reviewed publications to the website portal. Other front-facing website content is updated by the Communications and Stakeholder Engagement Advisor, with support from the Project Office, who looks after staffing updates, and inputs from external graphic design and web consultants, as required.

Website updates are closely aligned with project delivery and publication schedules. All public-facing content uploaded to the website, such as policy briefings, explainers and plain-language news stories communicating research outputs, is approved by the ACEAS Director prior to publication.

Plain-Language Science Communications

Accessible, plain-language articles explain recent research findings, relevance and implications – acting as a bridge between peer-reviewed publications and applied contexts. These articles are published on the ACEAS website under the *News* section and are promoted via ACEAS newsletters and social media channels.

Articles are written by ACEAS Communications and Stakeholder Engagement Advisor in close consultation with the relevant academics, and are published following sign-off by the ACEAS Director.

Policy Briefings and Explainers

Concise, plain-language policy briefings and explainers support the translation of complex science for end users across government and industry, as well as general audiences. The ACEAS Communications and Stakeholder Engagement Advisor works closely with lead researchers to develop periodic policy briefings and explainers, with topics approved by the ACEAS Director. Sign-off is sought from both the ACEAS Director and lead academics to ensure academic rigour and quality control.

Where appropriate, ACEAS will collaborate and copublish policy briefings and explainers with partners across the Australian Antarctic science community, such as AAPP and SAEF. Wherever possible, publication of policy briefings and explainers will be aligned with major synthesis

research papers to help leverage uptake, dissemination and impact of key research outputs during the project period.

Stakeholder Engagement Events

ACEAS delivers periodic and targeted stakeholder engagement events to share policy-relevant science with decision makers and end users of our research. These events are managed by the ACEAS Communications and Stakeholder Engagement Advisor, under the leadership of the ACEAS Director, with administrative support from the Project Office.

Where appropriate, ACEAS collaborates with partners across the Australian Antarctic science community, such as AAPP and SAEF, in the delivery of stakeholder engagement activities. This fosters collaboration and helps ensure cohesion across Australia's university-led Antarctic science community, while reducing the workload and resource commitment on individual organisations. Messaging reflects that science undertaken as part of these research programs supports the Australian Antarctic Program. ACEAS has an established track record of delivering collaborative events with these organisations.

Feedback mechanisms are incorporated into stakeholder engagement events where appropriate. This supports two-way communication and helps ACEAS better respond to end-user needs.

Traditional Media

Strategic media engagement is used by ACEAS to support the translation of Antarctic and Southern Ocean research into public, policy and operational contexts, and to promote accurate, evidence-based reporting of Australian Antarctic science. Proactive and responsive media activity contributes to the broader uptake, understanding and use of research outcomes beyond academia.

Where appropriate, ACEAS issues media releases to mainstream and specialist outlets to communicate significant research outputs, major publications, program milestones and collaborative activities. Media releases are drafted by the ACEAS Communications and Stakeholder Engagement Advisor and published following sign-off by the ACEAS Director and other relevant stakeholders, ensuring accuracy, appropriateness and alignment with ACEAS objectives.

ACEAS researchers are frequently sought by media organisations for expert commentary on Antarctic and Southern Ocean science and related issues. This engagement is supported by the ACEAS Communications and Stakeholder Engagement Advisor, who provides advice, preparation and training – including interview practice where required – to ensure researchers are well equipped to explain their work clearly and confidently to non-specialist audiences.

Researchers are encouraged to contribute to evidence-based public discussion by pitching articles to *The Conversation* and participating in radio interviews. The Communications and Stakeholder Engagement Advisor may also proactively identify and coordinate appropriate broadcast opportunities for researchers and students, supporting dissemination to broader nonspecialist audiences.

Where relevant, and in consultation with the ACEAS Director, the Communications and Stakeholder Engagement Advisor may pitch longer form content to editors of newspaper opinion pages, magazines and other media outlets.

Media coverage relating to ACEAS programs, research and organisational activities is recorded and maintained in a central log. This information supports reporting, evaluation and impact assessment, and informs ongoing refinement of communications approaches.

Social Media

ACEAS uses social media as a strategic communications channel to increase awareness, engagement and impact for Antarctic and Southern Ocean science, in line with ACEAS's research, collaboration and impact objectives. These platforms enable ACEAS to extend its reach beyond traditional audiences and to contribute to contemporary public discussion about research, evidence and decision making.

Social media is also used to promote Antarctic and Southern Ocean employment opportunities, research positions, events and collaborations, and to highlight the value of the scientific infrastructure and partnerships that support ACEAS. Wherever possible, content directs audiences to authoritative information and news published on the ACEAS website.

Content shared on ACEAS social media channels aims to be engaging, accessible and visually compelling. Emphasis is placed on clear storytelling and high-quality presentation, supported by relevant imagery and formats.

Social media activity supports engagement with a broad range of audiences, including decision makers and users of ACEAS science, researchers and research organisations, journalists and media outlets, and members of the public with an interest in Antarctica and the Southern Ocean. Priority audiences include Australian Government agencies, international science and policy bodies such as SCAR and CCAMLR, and national and international research networks in polar, marine and climate science.

ACEAS maintains an active presence on LinkedIn, Bluesky (@antarcticsciaus.bsky.social), X/Twitter (@AntarcticSciAus), and YouTube.

The ACEAS Communications and Stakeholder Engagement Advisor administers official social media accounts and is authorised to publish content on behalf of ACEAS. Additional administrators may be appointed as required. ACEAS leaders, staff and students are encouraged to share information about their research, in a professional context, through their own social media channels and to tag ACEAS. This distributed approach supports greater reach and visibility through researcher-led communication.

All ACEAS social media content must be relevant to Antarctica and the Southern Ocean, uphold scientific integrity and protect the reputation of ACEAS. Content must remain apolitical. Posts reinforce ACEAS's standing as a trusted, credible and collaborative research organisation.

ACEAS may periodically review the mix of platforms to ensure they continue to serve project and communication objectives effectively.

External Newsletter

ACEAS's flagship quarterly external newsletter curates and contextualises research outputs for key stakeholders, including government, industry and research sector audiences. Content focuses on major research announcements and program updates, plain-language articles translating recent peer-reviewed publication outputs, policy briefings, stakeholder engagement activities and shares relevant media articles which may interest stakeholders.

The newsletter is developed by the ACEAS Communications and Stakeholder Engagement Advisor and approved by the ACEAS Director prior to distribution.

Communications Skills Development

Training early-career researchers (ECRs) in best practice science communication strengthens long-term Antarctic science capability and supports high-quality engagement linked to peer-reviewed research outputs.

ECR development is managed by the ACEAS Director, or their delegate. The ACEAS Communications and Stakeholder Engagement Advisor provides support on an 'as-needed' basis, including responding to requests for communication advice and facilitating practice or preparation sessions where appropriate.

8.7. Internal Communications

Internal communications support coordination across ACEAS nationally distributed consortium and include:

- a monthly internal newsletter with leadership updates from ACEAS Director and Deputy Directors, and sharing recent research publications and opportunities – prepared by Project Office, with sign-off from ACEAS Director;
- regular Management Committee meetings involving ACEAS' Director, node leads, the Project Office and Communications and Stakeholder Engagement Advisor;
- periodic emails for time-sensitive updates, sent by ACEAS Director, Communications and Stakeholder Engagement Advisor, or the Project Office; and
- university-level meetings and correspondence to facilitate and coordinate research at a university level across the ACEAS consortium.

8.8. Roles and Responsibilities

Roles and responsibilities outlined in this Communications Management Plan are aligned with those set out in the ACEAS Stakeholder Management Plan. However, where the Stakeholder Management Plan focuses on relationship management and engagement objectives, this plan defines responsibilities for the coordination, delivery and governance of communications activities that support and operationalise those engagement priorities and manage risk.

Role	Primary responsibilities for communications
ACEAS Director	Provides strategic leadership and oversight of ACEAS external communications and engagement activities. Approves major communications outputs, including media releases, policy briefings, explainers and other key public-facing content. Provides leadership for stakeholder engagement activities and internal communications, and ensures communications align with ACEAS objectives, partnerships and pathways to impact.
Communications and Stakeholder Engagement Advisor	Supports the Director and ACEAS by managing the planning and delivery of ACEAS external communications and engagement activities. Develops and implements communications plans; writes media releases, plain-language articles, policy briefings and

	explainers; administers social media channels and the external newsletter; and leads media engagement. Manages the planning and delivery of stakeholder engagement events, including coordination, messaging and logistics. Supports researchers with advice, training and preparation for public and policy communication, and manages content approval processes with ACEAS Director and researchers to ensure quality, governance and risk requirements are met.
Chief Investigators and Researchers	Lead the generation of peer-reviewed research outputs and provide subject matter expertise to inform communications products. Contribute to plain-language content, policy briefings, explainers, media commentary and stakeholder engagement activities, where appropriate. Support accurate and responsible translation of research findings into public, policy and operational contexts.
Partner University Node Leads	Act as local points of contact for communications at ACEAS node level. Support coordination of communications activities across the ACEAS network and contribute to national-level communication as required.
Project Office	Provides administrative and logistical support for communications and engagement activities, including stakeholder events, conferences, website updates and coordination across ACEAS activities. Prepares the internal monthly newsletter and supports record keeping and reporting of communications outputs where required.
External Service Provider/s	Provide specialist support for the design of communications materials, website maintenance and design work, and assistance with engagement initiatives – as required, and under the direction of ACEAS.

8.9. Two-Year Communication Timeline

Communications activities over the two-year project period are outlined below. This plan assumes:

- continuous baseline activity across core channels;
- activity peaks aligned with publications, dataset releases and engagement events;
- quarterly external newsletters; and
- annual reporting.

Detailed timing will be refined as project milestones progress.

Date	Activity
July 2026	Update ACEAS corporate website with to reflect staff changes and any other relevant changes relating to new project scope
August 2026	Australian Antarctic Research Conference
September 2026	Quarterly external e-newsletter (July to Sep 2026)
December 2026	Quarterly external e-newsletter (Oct to Dec 2026)

March 2027	Quarterly external e-newsletter (Jan to Mar 2027)
June 2027	Quarterly external e-newsletter (Apr to Jun 2027)
September 2027	Quarterly external e-newsletter (July to Sep 2027)
December 2027	Quarterly external e-newsletter (Oct to Dec 2027)
March 2028	Quarterly external e-newsletter (Jan to Mar 2028)
June 2028	Quarterly external e-newsletter (Apr to Jun 2028)
Ongoing (to be scheduled)	Peer-reviewed publications (ongoing, in accordance to project requirements) Production of plain-language news stories sharing key research outputs – published on the ACEAS website (regular) Social media posts (regular) Internal newsletter (monthly) Targeted outreach to media (ongoing, and aligned with key research outputs) Communications and media training and support for ECRs and other researchers (ongoing) Plain-language policy briefings and explainers for end users, including dissemination (ongoing, and aligned with key research outputs) Stakeholder engagement events for end users (ongoing, and aligned with key research outputs)

8.10. Ongoing Communications Monitoring, Risk Management and Summary

Communications KPIs are defined under **Section 4.2 Key Performance Indicators (KPIs)**.

Communications risks and mitigation strategies are detailed in the **Risk Management Plan** attached with this grant proposal.

This Communications Management Plan provides a structured, integrated and grant-aligned framework for delivering communication activities that support dissemination, engagement and impact of ACEAS research under the Advancing Australia's National Interests in Antarctica project.

Together with the Stakeholder Management Plan, it demonstrates ACEAS's capability to deliver coordinated communication that contributes directly to program objectives and outcomes.

Appendix I: Detailed project plan

Phase 1 (P1): Transition

Centre Or Theme	Phase and Actions	Milestones	Milestones timeline	Deliverables
Centre	P1-A1. Head agreement and partner agreements execution	P1-M1. ACEAS activation: The Centre is active with head agreement executed	Q3 2026	P1-D1. Head Agreement
	P1-A2. Set up of the new governance structure (new ToR, board members confirmation)			P1-D2. Terms of Reference (ToR) for governance
	P1-A3. Risk management plan is activated			P1-D3. Risk registry
	P1-A4. Project plan is activated			N/A
	P1-A5. Staffing transition and recruitment			N/A
	P1-A6. Research planning for all themes			P1-D2. Research Strategy
	P1-A7. Stakeholder and communication plans are activated			P1-D3. First external newsletter sent and website content refreshed to reflect new Centre priorities

Phase 2 (P2): Execution

Centre Or Theme	Phase and Actions	Milestones	Milestones timeline	Deliverables
Centre	P2-A1. Continuous monitoring and running of operations, governance, risk management and project planning. Including continuous implementation of the stakeholder plan (see details in section 7) and continuous implementation of the communications plan (see details in section 8)	P2.M1. Mid-financial year 2026/2027 KPI report	Q4 2026	P2.D1. Quarterly KPI tracking
		P2.M2. Mid-project report: Includes KPI reporting, stakeholder and communication management reporting and new insights and datasets for each of the research themes	Q3 2027	
		P2.M3. Mid-financial year 2027/2028 KPI report	Q4 2027	

Centre Or Theme	Phase and Actions	Milestones	Milestone s timeline	Deliverables
Theme 1	P2-A4. Analysis of geophysical datasets from the Denman Terrestrial Campaign	P2-M1a. (Included in mid-term and final report) Basal Controls on Denman Ice Dynamics: New insights into the basal boundary conditions (geometry, geothermal heat flow, lithology, mantle viscosity and isostatic response) that govern Denman Glacier dynamics across past, present and future timescales	Q2 2027 Q2 2028	P2-D1. New insights/peer-reviewed papers related to Theme 1 P2-D2. FAIR-compliant datasets archived with AADC and others (e.g. GEOTRACES IDP and Seamap Antarctica, AusPASS etc) for Theme 1
	P2-A5. Generation of ice motion and subglacial hydrology products from in situ geophysical instruments			
	P2-A6. Analysis of geological age, geochemistry and lithological datasets from DTC and DMV rock samples			
	P2-A7. Generation of deep crust and upper-mantle geophysical models			
	P2-A8. Compilation, analysis, and interpretation of bathymetric datasets			
Theme 2	P2-A9. Analysis of silicon, iron, zinc and neodymium isotope datasets from seawater, particulates and porewaters	P2-M2b. (Included in mid-term and final report) Meltwater, Nutrients, and Ecosystem Response: New insights into the sources, pathways, and biological utilisation of meltwater-derived elements and nutrients from sediments, through the water column, into marine ecosystems	Q2 2027 Q2 2028	P2-D3. New insights/peer-reviewed papers related to Theme 2 P2-D4. FAIR-compliant datasets archived with AADC and others (e.g. GEOTRACES IDP and Seamap Antarctica, AusPASS etc) for Theme 2
	P2-A10. Curation and analysis of porewater concentration and benthic flux datasets (Fe, Si, Zn, Nd)			
	P2-A11. Analysis of Be, Th and Nd seawater isotope datasets tracing subglacial meltwater			
	P2-A12. Generation and analysis of diatom assemblage datasets from DMV sediment cores and seawater samples			
	P2-A13. Generation and analysis of annotated benthic imagery, animal-borne fluorometry profiles, and predator tracking products			
Theme 3	P2-A14. Generation and analysis of organic carbon accumulation rates	P2-M3c. (Included in mid-term and final report) Denman Climate Variability and Change: New insights into the patterns and drivers of interannual to centennial variability in ocean and ice conditions in the Denman system, and what this implies for melt sensitivity over coming decades and centuries.	Q2 2027 Q2 2028	P2-D5. New insights/peer-reviewed papers related to Theme 3 P2-D6. FAIR-compliant datasets archived with AADC and others (e.g. GEOTRACES IDP and Seamap Antarctica, AusPASS etc) for Theme 3
	P2-A15. Generation and analysis of high-resolution ACCESS-OM3 interannual simulations with interactive ice-shelf cavities			
	P2-A16. Data processing resulting in curated satellite, reanalysis and DMV CTD datasets for temperature, heat content and sea-ice extremes			
	P2-A17. Analysis of RAID ice-core isotope, chemistry and accumulation datasets spanning the 20th century			
Theme 4	P2-A18. Analysis of derived datasets linking ocean variability to basal melt processes	P2-M4d. (Included in mid-term and final report) Denman in Context: across systems and timescales: New insights into system-level patterns, processes, drivers, and predictions by integrating outputs from Themes 1–3 across disciplines and timescales, into the broader Antarctic and Southern Ocean context	Q2 2027 Q2 2028	P2-D7. New insights/peer-reviewed papers related to Theme 4 P2-D8. FAIR-compliant datasets archived with AADC and others (e.g. GEOTRACES IDP and Seamap Antarctica, AusPASS etc) for Theme 4
	P2-A19. Cross-theme synthesis datasets combining physical, chemical and biological outputs such as integrated onshore–offshore tectonic and basement/bathymetric reconstructions and ACCESS-OM/WOMBAT biogeochemical hindcasts linked to observations			

Phase 3 (P3): Closure

Centre Or Theme	Phase and Actions	Milestones	Milestones timeline	Deliverables
Centre	P3-A1. Independent Program Audit	P3-M1. Final report: Includes KPI reporting, stakeholder and communication management reporting and new insights and datasets for each of the research themes	Q2 2028	P3-D1. Audit report
	P3-A2. Final reporting, synthesis, and transition to post-project sustainability			P3-D2. Final report