

Tasmania's Antarctic, Sub-Antarctic  
and Southern Ocean Policy



July 2004



## Message from the Minister



The Tasmanian Government recognises the value of the state's Antarctic sector in making significant economic, social and cultural contributions to Tasmania. Taking into account the importance of the Antarctic sector, Tasmania has established a long and respected tradition of supporting key Antarctic nations and operators to achieve their endeavours.

Through the 2004 *Antarctic, sub-Antarctic and Southern Ocean Policy*, the Tasmanian Government is articulating its vision for participating in the growth of the state's Antarctic sector over the next three years. The government will achieve this by leading, partnering and supporting cooperative efforts to advance, and raise community awareness about, the Antarctic sector in Tasmania.

The Tasmanian Government has a vision for Hobart and the state to be recognised globally as the world's pre-eminent international gateway to the Antarctic, sub-Antarctic and Southern Ocean. Tasmania aims to be known worldwide as an international centre of excellence for science activities in the Antarctic and the Southern Ocean, and to play host to a thriving community of artists, scientists, engineers, companies and administrators whose focus is beyond 40 degrees south.

This policy focuses on the areas in which the Tasmanian Government can play an active role. The government will strive to:

- increase the size, diversity and economic contribution of Tasmania's Antarctic community to the state,
- raise the profile of, and celebrate, Hobart's contemporary and historic links to the Antarctic, sub-Antarctic and Southern Ocean with Tasmanians and visitors to the state,
- support endeavours to increase understanding and improve management of the Antarctic, sub-Antarctic and Southern Ocean ecosystems.

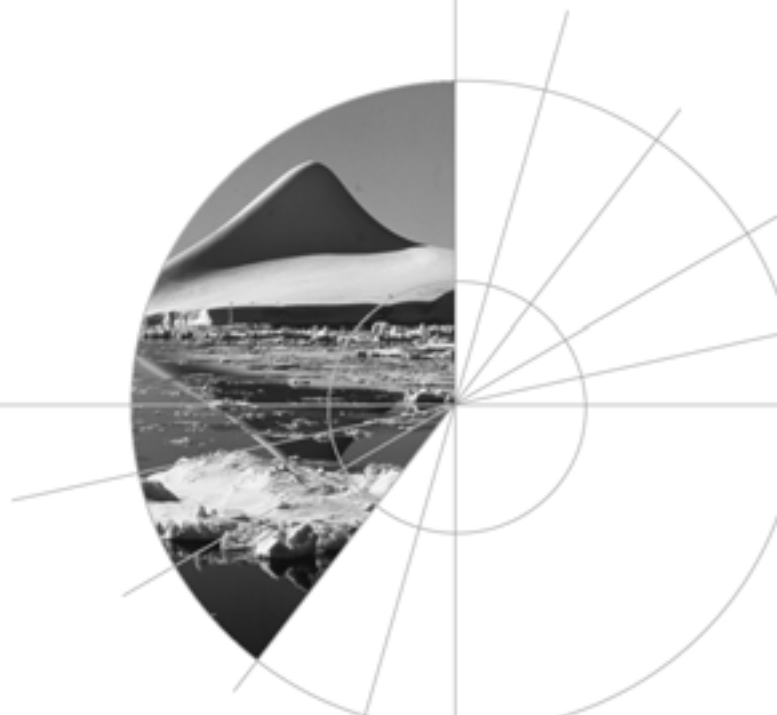
The Tasmanian Government emphasises that cooperation and a coordinated approach is needed to achieve the vision, aims and objectives of this policy. The value of the policy will be determined by how successfully its strategies support Tasmania's involvement in the Antarctic sector and maximise the benefits for the state.

Hon Lara Giddings MHA  
**Minister for Economic Development**

*"The Tasmanian Government has a vision for Hobart and the state to be recognised globally as the world's pre-eminent international gateway to the Antarctic, sub-Antarctic and Southern Ocean."*

# Table of Contents

<b>Introduction</b>	<b>4</b>
<b>Contemporary Significance of Hobart and Tasmania</b>	<b>5</b>
Geographic Proximity	5
International Standing	6
Operational Gateway	6
International Centre for Temperate Marine Science and Education	7
Economic Importance	8
Opportunities	10
<b>Building the Gateway</b>	<b>11</b>
Vision	11
Objectives	11
Leading, Partnering and Supporting	11
Strategies	12
<b>Our Plan of Action</b>	<b>13</b>
Information Sharing and Partnerships	13
Logistics and Provisioning	14
Commercialisation of Products and Services	15
Conservation and Environmental Management	16
Education and Training	17
Cultural Heritage and Tourism	18
<b>Policy Monitoring and Review</b>	<b>20</b>
<b>Acronyms</b>	<b>21</b>
<b>Appendix A - Policy Framework Analysis</b>	<b>22</b>



# Introduction

The State Government released Tasmania's first *Antarctic, sub-Antarctic and Southern Ocean Policy Framework* in 2001. Since then, there have been significant developments in the Antarctic sector in Tasmania and this new policy builds upon the government's achievements. Some recent developments include:

- The establishment of the new Antarctic Climate and Ecosystem Cooperative Research Centre (ACE CRC) based at the University of Tasmania.
- The selection of Hobart as the preferred departure point for the Australian Antarctic Airlink (known as the airlink), with the first intercontinental flights planned for the 2005-06 season.
  - A successful bid by Tasmania to host the Council of Managers of National Antarctic Programs (COMNAP) Secretariat until 2009.
  - The establishment of the Antarctic Midwinter Festival as a premier midwinter event, which hosted over 35,000 participants in 2003.

Through this policy, the Tasmanian Government is articulating its vision for participating in the growth of the state's Antarctic community over the next three years. At the same time, the government acknowledges the significant work that is already being initiated and completed by the private sector, research organisations and the community.

This policy also supports key Tasmania *Together* goals, including:

- Goal 16:** Increase job and meaningful work opportunities in Tasmania.
- Goal 18:** Ensure education and training provides our workforce with the skills to support our business and industry.
- Goal 19:** Have an internationally focussed business culture that creates business investment and growth and encourages enterprise, innovation and excellence.
- Goal 20:** Promote our island advantages including our 'clean-natural' image, natural resources, location and people.
- Goal 21:** Value, protect and conserve our natural and cultural heritage.
- Goal 23:** Ensure there is a balance between environmental protection and economic and social development.

This policy is consistent with the Tasmanian Government's 2003 *Industry Development Plan*, which identifies the Antarctic and Southern Ocean as a key industry sector.

Finally, the 2004 *Antarctic, sub-Antarctic and Southern Ocean Policy* is consistent with the government's 2001 *Science and Technology Policy*, which has been developed to ensure that Tasmania is recognised nationally and internationally for its innovation and pursuit of excellence through the creation and application of advances in science and technology.

# Contemporary Significance of Hobart and Tasmania

Tasmania has been a major staging post for Antarctic expeditions for more than 200 years. Hobart is also an important international Antarctic gateway for those accessing the Antarctic, sub-Antarctic and Southern Ocean. Today, Tasmania provides the hub of Australia's Antarctic Program and it is a centre of excellence for internationally recognised Antarctic and temperate marine science activities and other innovations from industry.

## Geographic Proximity

Tasmania is one of five international gateways to the Antarctic, along with the countries of South Africa, Chile, Argentina and New Zealand. The map of Antarctica and the Southern Ocean shows the position of each country in relation to the Antarctic continent and Tasmania's relative proximity to the Southern Ocean, Ross Sea and the vast region of East Antarctica (Figure 1).



Figure 1: Antarctica and the Southern Ocean.

While four other nations provide departure points to the Southern Ocean region, Hobart is unique in its ability to offer a combination of:

- access to world-class expertise in Antarctic and temperate marine research, logistics, support services and education
- a modern capital city in Hobart that is safe, sophisticated and politically stable, making it an ideal location for businesses to service the Antarctic sector's specialist needs
- the ability to experience Antarctica's history, science and beauty vicariously, and to meet people who live and work on the continent.

Tasmania is also the home of a sub-Antarctic jewel in Macquarie Island, a World Heritage Area (WHA) and biosphere reserve. The island's surrounding waters are also a marine protected area. Together, Macquarie Island and the surrounding marine protected area are treasures in Tasmania's reserve system. The national and international recognition of Macquarie Island is due to its significance as a keystone breeding ground for Antarctic and Southern Ocean fauna. Its location north of the Antarctic convergence ensures alternative food availability for abundant wildlife in a vast tract of ocean devoid of alternative breeding grounds. As such, the island and its surrounds are a focus for historic interpretation, tourism and major scientific endeavours.

## International Standing

The Tasmanian Government actively contributes to Australia's international standing in Antarctic, sub-Antarctic and Southern Ocean affairs. The Antarctic, sub-Antarctic and Southern Ocean regions support unique and important ecosystems and are increasingly recognised as critical to global climate, ocean circulation and greenhouse processes. The state is proud to host a community that is devoted to understanding these ecosystems and their implications for Australia and the world.

Tasmania's commitment to Antarctic science and management of the ecosystem is evident in the state's long and respected tradition of supporting other key Antarctic nations in housing their secretariats and organisations in Hobart. For example, Tasmania has hosted the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) since 1982 and will support COMNAP until at least 2009. Hobart is also a home port for the French Antarctic vessel, *L'Astrolabe*, and forward base for the Institut Polaire Français Paul Emile Victor.

The Tasmanian Government recognises the importance of partnerships to support activities in these regions and promote Tasmania to other nations in an effort to attract more international organisations to base their secretariats or operations out of Hobart. This will reinforce Australia's position as a major player in Antarctic affairs.

## Operational Gateway

Hobart is a conveniently located, well-serviced, cost-effective and strategically important base for Antarctic, sub-Antarctic and Southern Ocean programs. These attributes make Hobart, and Tasmania, an ideal choice for Antarctic, sub-Antarctic and Southern Ocean management, research and logistic endeavours.

Tasmania is the only Australian state to offer a dedicated office of Antarctic affairs (Antarctic Tasmania), which is guided by a formal government policy on the region. Antarctic Tasmania works actively to support Antarctic institutions through collaborative programs and initiatives, ranging from disseminating Antarctic-related information and providing a conference incentive program, to running an Antarctic festival – the Antarctic Midwinter Festival.

Tasmania's significance as an operational gateway is evident in the fact that the Australian Antarctic Division's (AAD) headquarters is based at Kingston, near Hobart. From its headquarters, the AAD manages Australia's Antarctic Program and activities in Antarctica as well as the external Territory of Heard and McDonald Islands (HIMI). In undertaking this role, the AAD maintains four, year-round Australian stations, conducts internationally recognised science activities in the Antarctic and Southern Ocean, and provides transport and logistical support to the bases and research programs.

Businesses serving the Antarctic, sub-Antarctic and Southern Ocean community are a key industry sector for Tasmania. This sector has grown principally because Hobart, as an important international Antarctic gateway, provides the hub of Australia's Antarctic Program.

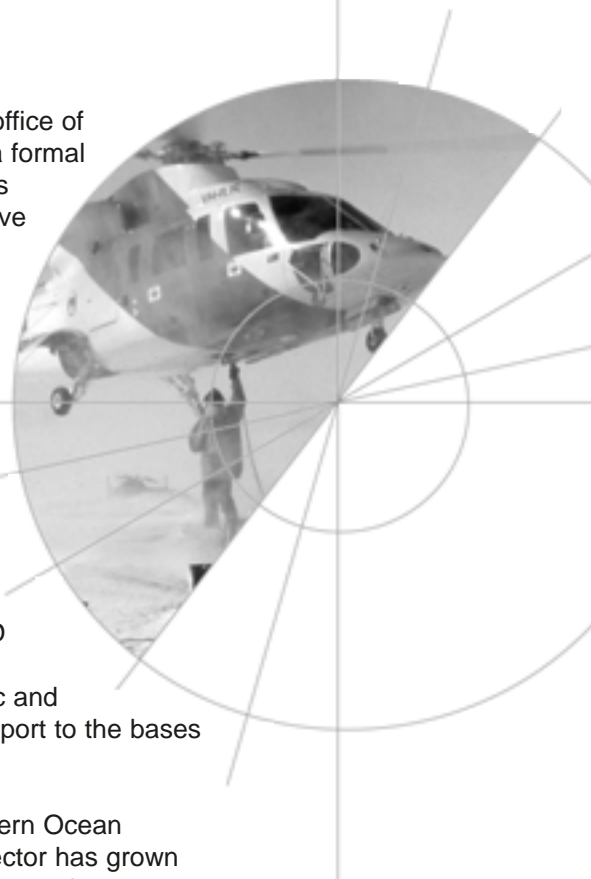
Hobart is home to many Antarctic cultural resources and attractions, including the Tasmanian Museum and Art Gallery (TMAG), the sub-Antarctic Plant House at the Royal Tasmanian Botanical Gardens (RTBG), historical and photographic records held at the State Library of Tasmania and National Archives Office, the Antarctic Polar Pathways walk and the Antarctic visitor display at the AAD.

The Tasmanian Government actively supports these activities to ensure they attain their full potential in generating political, economic, scientific, cultural and social benefits.

## International Centre for Temperate Marine Science and Education

Hobart, and Tasmania, is an international centre of excellence for Antarctic and temperate marine science. For example, Tasmania hosts 65 per cent of Australia's Antarctic scientists in organisations including the AAD, Commonwealth Scientific and Industrial Research Organisation (CSIRO) Division of Marine Research, ACE CRC, University of Tasmania (UTAS), Bureau of Meteorology (BoM) and the Australian Maritime College (AMC). This synergy of expertise has more recently contributed to the National Oceans Office (NOO) basing its activities in Hobart.

A thorough understanding of the interaction between Antarctica and the Southern Ocean, and the global processes that take place in these regions, is necessary for projections of future climate change, sea level rise and greenhouse effects. Such projections are vital to Australia's capacity to anticipate the risks and threats from changing global and regional climate processes and to devise strategies to ameliorate the impact of those changes.



Unfortunately, scientific knowledge relating to the ocean and climate dynamics of the region is limited. To increase our scientific knowledge, the internationally recognised ACE CRC, CSIRO Division of Marine Research and UTAS are making extremely important international research contributions on the region's role in ocean dynamics, sea level rise and global climate change.



**Knowledge:** Internationally recognised research institutions continue to make important discoveries in the Antarctic region.

From a Tasmanian Government perspective, the state's Antarctic and temperate marine science research makes a significant contribution to the state's economy and the Tasmanian Antarctic business case. From a national and international perspective, the state's research contributions also represent an ongoing investment in climate change science – research that will be critical to ensure that Australia's decisions on climate change and greenhouse are progressive and well informed.

### Economic Importance

Expenditure by Antarctic-related organisations and groups in Tasmania was analysed to identify trends in total spending and estimate the amount spent on goods and services sourced in Tasmania. Expenditure by Antarctic-related groups from 1994-95 to 2000-01 is detailed in Table 1.

**Table 1:** Expenditure by Antarctic-related groups in Tasmania, 1994-95 to 2000-01(\$ million per annum).

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Expenditure on goods and services sourced in Tasmania	35.57	36.48	38.65	43.89	41.62	44.12	45.3
Expenditure on goods and services sourced outside Tasmania	46.91	46.26	42.98	47.68	46.23	47.65	50.38
Total expenditure by Antarctic-related groups in Tasmania	82.48	82.74	81.64	91.57	87.85	91.77	95.68

\*refer to the *Antarctic, sub-Antarctic and Southern Ocean Policy Background Paper*

The total expenditure on Antarctic-related activities by groups in Tasmania is estimated to have increased from \$82 million in 1994-95 to \$96 million in 2000-01. The Antarctic sector has experienced incremental growth over this period. Looking forward, expansion in the Antarctic sector is anticipated due to new developments such as the planned airlink.

## Value of Antarctic and Southern Ocean ships using Hobart

The regional port of Hobart services bulk commodities and general and container cargo, and supports scientific, tourist, recreation and maintenance facilities. It is also an important port for international and regional ships accessing the Antarctic, sub-Antarctic and Southern Ocean waters. Vessel operators and crew members berthing in Hobart contribute to Tasmania's economy by accessing fuelling, provisioning, stevedoring, maintenance, accommodation and recreational services.

The French Antarctic vessel, *L'Astrolabe*, uses Hobart as its home port and a gateway to the Antarctic when conducting marine science research and resupply activities to the French Antarctic station, Dumont D'Urville.

The typical expenditure by the French Antarctic Program as a consequence of, *L'Astrolabe*, using the Port of Hobart to resupply Dumont D'Urville station is estimated at \$535,000 per ship visit.

International fishing vessels, such as the South African vessel, *Isla Graciosa*, and Spanish vessel, *Galaecia*, also make a significant economic contribution to the Tasmanian economy when they use Hobart as a gateway port to access the Antarctic. In 2003, these vessels conducted exploratory fishing and research activities in the Ross Sea in accordance with CCAMLR conservation measures. For each ship visiting Hobart, the approximate expenditure is estimated to have been in excess of \$170,000 per visit. Expenditure included fuelling, provisioning, ship maintenance and crew accommodation services.

**Table 2:** Expenditure by the crew of the French vessel, *L'Astrolabe*.

	L'Astrolabe (\$)	Station resupply (\$)
Fuel	150,000	150,000
Provisioning	50,000	40,000
Stevedoring	25,000	N/A
Gas	N/A	120,000



In Port: French Antarctic vessel, *L'Astrolabe*.

Employment generated by the state's Antarctic sector provides significant economic and social benefits for Tasmania. For example, Hobart's local Antarctic community consists of almost 800 people directly employed in Antarctic-related activities, research and technology. When part-time and casual appointments are included, there are approximately 500 full-time positions.

The AAD was the largest monetary contributor to the local Antarctic economy, representing more than 65 per cent of the total amount spent on goods and services sourced in Tasmania in 2000-01. The ACE CRC was the second largest contributor representing more than 15 per cent of the total amount spent on goods and services sourced in Tasmania for the same period.

One of the future challenges beyond 2002-03 that may have an impact on Antarctic-related spending in Tasmania is the establishment and full implementation of the proposed airlink between Hobart and Casey Station in East Antarctica. The Tasmanian Government believes that the planned introduction of the airlink by the AAD is likely to provide a powerful incentive for other National Antarctic Programs to consider using Hobart as the preferred Antarctic gateway to the East Antarctic region. Tangible political, economic and social benefits are expected to flow from 2005-06, and increase until at least 2010.

## Opportunities

This policy and strategic direction for Antarctic-related activities has been developed following consideration of the capabilities and activities of other Antarctic gateways, consultation with key stakeholders in the state and an assessment of how to maximise Tasmania's capacity to contribute to the Antarctic sector.

The six priority areas identified in this policy provide a direction for Tasmanians to exert their influence in advancing the Antarctic sector in this state, nationally and internationally. The priority areas are:

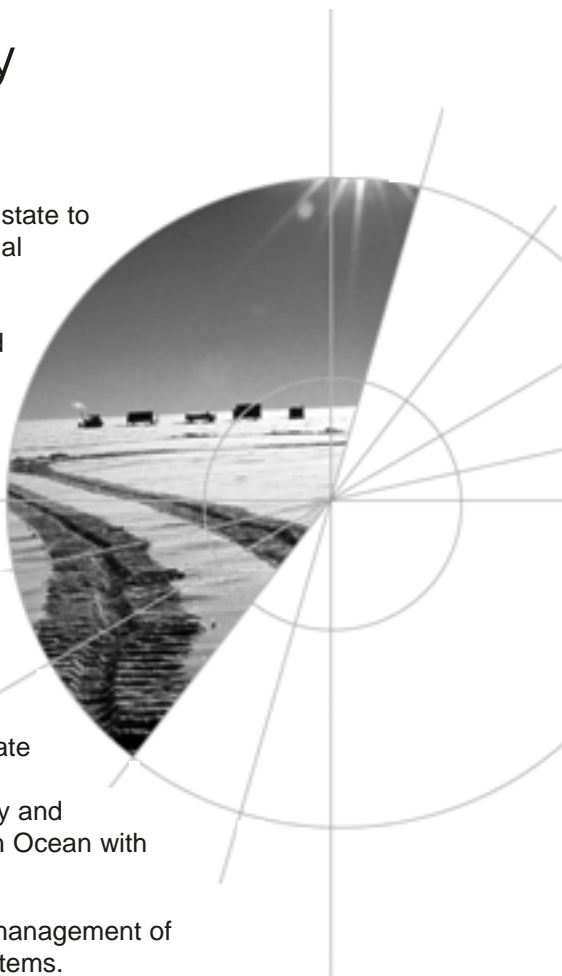
- information sharing and partnerships
- logistics and provisioning
- commercialisation of products and services
- conservation and environmental management
- education and training
- cultural heritage and tourism.

A number of strategies will underpin Tasmania's efforts to give effect to the priorities areas and actions that are detailed below. Together, the strategies, priorities areas and actions provide a framework to realise social, cultural and commercial opportunities for Tasmania that include research, educational and logistical endeavours (refer Appendix A). They also build on the significant role the state already plays in the provision of support for Antarctic expeditions and infrastructure.

# Building the Gateway

## Vision

The Tasmanian Government has a vision for Hobart and the state to be recognised globally as the world's pre-eminent international gateway to the Antarctic, sub-Antarctic and Southern Ocean. Tasmania aims to be known worldwide as an international centre of excellence for science activities in the Antarctic and the Southern Ocean, and to play host to a thriving community of artists, scientists, engineers, companies and administrators whose focus is beyond 40 degrees south.



## Objectives

Over the next three years, the Tasmanian Government will strive to:

- increase the size, diversity and economic contribution of Tasmania's Antarctic community to the state
- raise the profile of, and celebrate, Hobart's contemporary and historic links to the Antarctic, sub-Antarctic and Southern Ocean with Tasmanians and visitors to the state
- support endeavours to improve the understanding and management of the Antarctic, sub-Antarctic and Southern Ocean ecosystems.

## Leading, Partnering and Supporting

This policy is based on a detailed understanding of the various jurisdictions and responsibilities of the international and Commonwealth organisations that are based in Tasmania with Antarctic responsibilities. Within this context, the Tasmanian Government will achieve its three key objectives by adopting the principles of:

- **leading** the development of the Antarctic sector in Tasmania
- **partnering** other governments and organisations to develop areas of mutual interest
- **supporting** Tasmania's Antarctic sector agencies and businesses in their Antarctic endeavours.

## Strategies

This policy identifies seven strategies to enable the Tasmanian Government to achieve its key Antarctic objectives:

- 1 Lead and coordinate efforts to promote and brand Hobart and Tasmania as an internationally recognised Antarctic gateway and centre for Antarctic, sub-Antarctic and Southern Ocean climate and marine research, education, environmental management, tourism and logistics.
- 2 Continue to support Tasmania's existing Antarctic, sub-Antarctic and Southern Ocean institutions, and lead efforts to increase the number of these institutions that use Hobart as a base for some or all of their operations.
- 3 Promote best practice environmental management in the Antarctic, sub-Antarctic and Southern Ocean, and work in partnership with the Australian and international community to provide expertise in sustainable environmental management.
- 4 Lead efforts to increase the number of Tasmanian companies participating in the Tasmanian Antarctic sector and their capacity to supply specialist Antarctic and temperate marine products and services to state-based Antarctic institutions and organisations based overseas.
- 5 Facilitate the development of infrastructure and support services to maximise the benefits to Tasmania from the implementation of the airlink from Hobart to Antarctica.
- 6 Establish educational pathways and raise community awareness of Antarctic, sub-Antarctic and Southern Ocean themes, and lead efforts to promote Hobart and Tasmania's key cultural and heritage assets under the themes of:
  - humanity
  - heritage
  - living resources
  - contemporary significance
  - Hobart as a pre-eminent gateway to the Antarctic.
- 7 Monitor advances and developments in Antarctic, sub-Antarctic and Southern Ocean logistics that have the potential for expanding sustainable tourism opportunities and allowing tourism operators to use Hobart as a gateway to the Antarctic.

Each of the priority areas and actions that follow will contribute to Tasmania's achievement of these strategies.

# Our Plan of Action

Actions in the state's six key priority areas will directly benefit Tasmania and consolidate and strengthen the state's position as a pre-eminent international gateway to the Antarctic, sub-Antarctic and Southern Ocean. This will be achieved by advancing Tasmania's already excellent national and international reputation in environmental management, and developing and improving the provision of world-class support for national and international expeditions and programs. The actions identified below are analysed against the priority areas and strategies in the Policy Framework Analysis detailed in Appendix A.

## Information Sharing and Partnerships

The Tasmanian Government acknowledges the important and significant past and present partnerships on Antarctic matters that exist between the Australian Government, Tasmanian state and local governments, international governments and organisations, business, research organisations, academic institutions, and the general community. Strengthening these partnerships, and realising future opportunities, requires open and coordinated support and information sharing between the stakeholders.

## Actions

The Tasmanian Government will:

- Action 1:** Ensure Antarctic Tasmania acts as a leader for cooperative efforts to brand Hobart and Tasmania as a pre-eminent Antarctic gateway and an internationally recognised centre for cold climate and temperate marine research, education, environmental management, tourism and logistics.
- Action 2:** Ensure Antarctic Tasmania acts as the central point of communication and referral for all of Tasmania's Antarctic resources and information.
- Action 3:** Support Antarctic Tasmania in its central role in facilitating the development of the state's Antarctic sector by funding three permanent positions in the unit, an increase of one permanent position since 2001.
- Action 4:** Host a biennial Antarctic Forum for key members of the Antarctic sector to seek views and a commitment to advance Tasmania's Antarctic community, encouraging broad national and international involvement wherever possible.
- Action 5:** Provide ongoing support to the CCAMLR and COMNAP Secretariats.
- Action 6:** Seek to attract new secretariats to base their offices in Hobart.

- Action 7:** Establish and maintain an Antarctic internet portal that provides a single point of online access to the wealth of information available on the state's Antarctic sector.
- Action 8:** Renew and establish working collaborations with local governments, such as the Hobart City Council, and the Clarence and Kingborough councils, on Antarctic matters and formalise these arrangements through partnership agreements.
- Action 9:** Provide supporting documentation to assist with the implementation of this policy, including economic information about the Tasmanian Antarctic sector.

## Logistics and Provisioning

Tasmania is known both nationally and internationally for the quality of its produce, cold climate technology, Antarctic, sub-Antarctic and Southern Ocean research and the delivery of Antarctic-related education. Tasmanian enterprises already supply a substantial amount of provisioning support to Antarctic expeditions and tour operators in the Southern Ocean.

The Tasmanian Government recognises the value that the Tasmanian Polar Network provides to Tasmania and the state's Antarctic community. The government also recognises the value of developing businesses, infrastructure and facilities that support Antarctic, sub-Antarctic and Southern Ocean research operations.

The government supports the provision of additional Australian Government funding to fully implement the proposed airlink. The airlink's capacity to draw members of other nations' Antarctic institutions to Hobart, and to expose these members to all that Tasmania has to offer both professionally and personally to the Antarctic community, is one of the most exciting developments on the Antarctic horizon.

### Actions

The Tasmanian Government will:

- Action 10:** Encourage the Australian Government to provide adequate funding to fully implement the airlink to advance science activities in the Antarctic.
- Action 11:** Facilitate the successful establishment of Hobart-based infrastructure that supports the airlink.
- Action 12:** Work in partnership with the AAD to attract international Antarctic operators to use the airlink by promoting Hobart's Antarctic offer.
- Action 13:** Provide an annual performance-based grant of \$20,000 to the Tasmanian Polar Network.
- Action 14:** Coordinate promotional efforts to showcase Tasmania's research, educational and logistical capabilities to delegates attending the Scientific Committee for Antarctic Research (SCAR) COMNAP meeting in 2006 in Hobart.

- Action 15:** Promote Hobart, and Tasmania's, involvement in appropriate international activities associated with the International Polar Year in 2007.
- Action 16:** Maintain support for the Antarctic Ambassadors Conference Incentive Program.
- Action 17:** Participate in international Antarctic-related trade missions and forums.

## Commercialisation of Products and Services

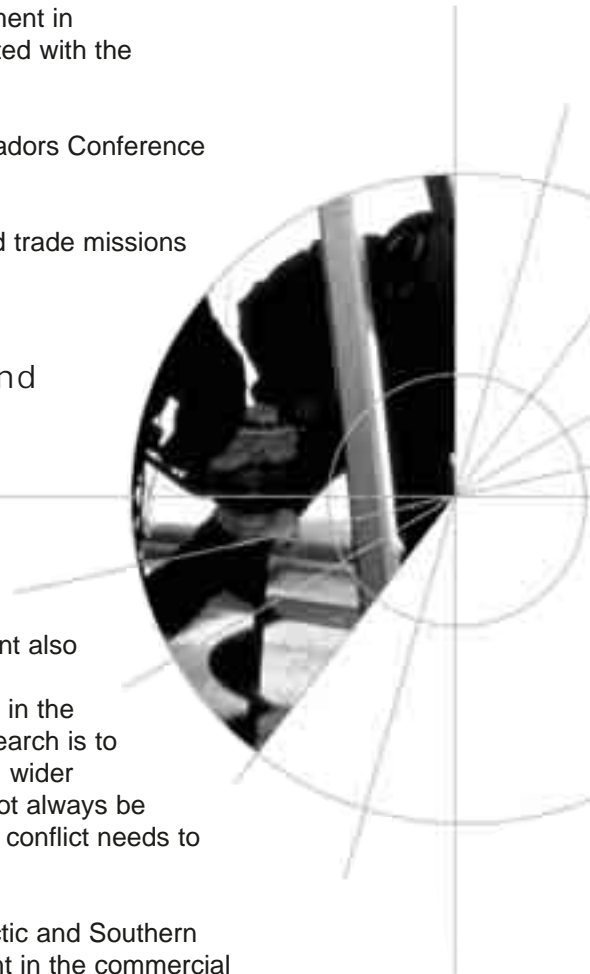
The Tasmanian Government recognises the increasing importance, both economically and culturally, of commercialising the outcomes of research. The government also recognises that a significant component of Antarctic, sub-Antarctic and Southern Ocean research is undertaken in the public good. In most cases, the core objective of such research is to disseminate information for the benefit of the scientific and wider community. Given that research for the public good may not always be consistent with commercialisation objectives, this potential conflict needs to be managed carefully.

Any valuable technology arising from Antarctic, sub-Antarctic and Southern Ocean research that is at an early stage of its development in the commercial cycle, requires careful management, specific technical expertise, resources and time to develop to an investor-ready or market-ready stage.

### Actions

The Tasmanian Government will:


- Action 18:** Provide a full-time commercialisation manager to the Antarctic Climate and Ecosystem Cooperative Research Centre initially for three years, who will regularly brief the state's Antarctic sector on commercialisation opportunities.
- Action 19:** Take a lead role in supporting commercialisation of Antarctic-related products and services by conducting an audit of opportunities, and providing in-kind support to help access commercialisation programs available both locally and nationally.
- Action 20:** Coordinate, on behalf of the Tasmanian Polar Network, an annual forum to examine commercialisation and procurement opportunities in Tasmania.
- Action 21:** Encourage the Tasmanian Polar Network to maintain regular interactions with the science community in order for industry to understand current and future support requirements.



**Action 22:** Utilise the Tasmanian Technopark in Hobart to provide support to high-tech start-up companies specialising in developing specialist Antarctic products and services.

## Conservation and Environmental Management

Tasmania has developed considerable expertise in the conservation and environmental management of a broad range of ecosystems, especially in the Antarctic and Southern Ocean. Continued development of this skill set will help to inform policy and regulation for these regions to ensure such crucial ecosystems and their components are adequately conserved and protected.



The Tasmanian Government acknowledges that the AAD is re-assessing its operations on Macquarie Island in order to fund other research priorities. Any reduction of logistic support has major implications for the ongoing management and protection of Macquarie Island. The government aims to work in collaboration with the AAD to develop a plan for the long-term future of operations on the island.

Hobart's infrastructure offers the potential to assist with protection of the environment, particularly with regard to waste management and the clean up of Australian Antarctic bases. As a primary staging post for Antarctic operations, some waste and obsolete station material passes through Hobart for disposal, either in Tasmania or elsewhere. High-quality, well-managed processing and disposal of such waste is also an important economic opportunity with the further development of appropriate infrastructure.

## Actions

The Tasmanian Government will:

- Action 23:** Engage with the AAD to develop a long-term strategic plan for the use of Macquarie Island as a base for scientific research into the sub-Antarctic environment.
- Action 24:** Continue to develop Tasmania as a centre of expertise on feral fauna eradication.
- Action 25:** Strengthen partnerships between all stakeholders with regard to waste management from Antarctic operations to ensure high-quality processing and disposal of waste material.
- Action 26:** Encourage the Australian Government to permanently base an ice-strengthened customs patrol vessel in Hobart from which to patrol Australia's Antarctic, sub-Antarctic and Southern Ocean external territories to combat illegal, unreported and unregulated fishing in these regions.

## Education and Training

The Tasmanian Government acknowledges that Antarctic, sub-Antarctic and Southern Ocean studies are important to Tasmanian school students because they provide opportunities to engage these learners. Given that Antarctic, sub-Antarctic and Southern Ocean inquiries are informed by artistic, technological, scientific and personal thinking, school programs need to embrace concepts of place, ecosystems, diversity and change.

The Tasmanian Government also supports the efforts of the University of Tasmania (UTAS) in developing an Australian focus for an undergraduate degree related to the Antarctic, sub-Antarctic and Southern Ocean in partnership with the CSIRO Division of Marine Research, AAD and ACE CRC. The successful development of an Antarctic-focused undergraduate degree would significantly enhance the profiles of UTAS, Hobart and Tasmania. Increased enrolments in such a degree from elsewhere in Australia and internationally is likely to result in benefits to Tasmania.

The Australian Maritime College (AMC) and Technical and Further Education (TAFE) Tasmania both have a role in developing and promoting technical training, competency-based courses and professional management education that is focused on the Antarctic, sub-Antarctic and Southern Ocean regions. The Tasmanian Government considers that, in collaboration with UTAS, AMC and TAFE Tasmania have an opportunity to provide courses that specifically address areas of concern identified by the Australian Government and other international governments that cooperatively manage and protect the Antarctic Treaty Area and Southern Ocean. In addition, Adult Education provides opportunities to improve adult learning about how issues of influence in the Antarctic, sub-Antarctic and Southern Ocean regions relate to emerging circumstances, needs and interests.

### Actions

The Tasmanian Government will:

- Action 27:** Provide professional learning opportunities for teachers to increase their knowledge about Antarctic, Sub-Antarctic and Southern Ocean issues.
- Action 28:** Encourage the development of a pre-tertiary education outreach program to provide educational material about Antarctica, the sub-Antarctic and the Southern Ocean to primary and secondary schools within Tasmania, Australia and internationally.
- Action 29:** Incorporate the Antarctic and Southern Ocean units of work into the Department of Education's new curriculum and as part of the *Learning Teaching and Assessment Guide*.
- Action 30:** Support the establishment of special interest Adult Education courses in Antarctic, sub-Antarctic and Southern Ocean topics.

- Action 31:** Support the AMC to develop and further promote its technical training and competency-based courses, and professional management education in technical courses that focus on cold-climate environments.
- Action 32:** Support TAFE Tasmania to investigate the feasibility of delivering targeted and industry focused technical courses that centre on cold-climate environments.
- Action 33:** Support the UTAS and the Institute of Antarctic and Southern Ocean Studies (IASOS) in their effort to establish and promote certificate and undergraduate degrees, and expand post-graduate programs in Antarctic and Southern Ocean studies such that Tasmania becomes known as the preferred destination for these studies.
- Action 34:** Support the efforts of UTAS to establish the international University of the Antarctic.
- Action 35:** Facilitate access to Macquarie Island for use by UTAS to deliver remote field components of its undergraduate and postgraduate courses.
- Action 36:** Fund scholarships in Antarctic, sub-Antarctic and Southern Ocean studies at UTAS that benefit Tasmania's Antarctic sector.

## Cultural Heritage and Tourism

Hobart already has significant Antarctic resident expertise, is a pre-eminent Antarctic gateway and is the centre for Tasmania's Antarctic, sub-Antarctic and Southern Ocean heritage and tourism experiences. These attributes enable Hobart to offer significant vicarious Antarctic and Southern Ocean experiences. Quality, city-based experiences can be offered to visitors and provide them with access to these vulnerable and/or otherwise inaccessible places that are scattered and difficult to appreciate in their component parts.

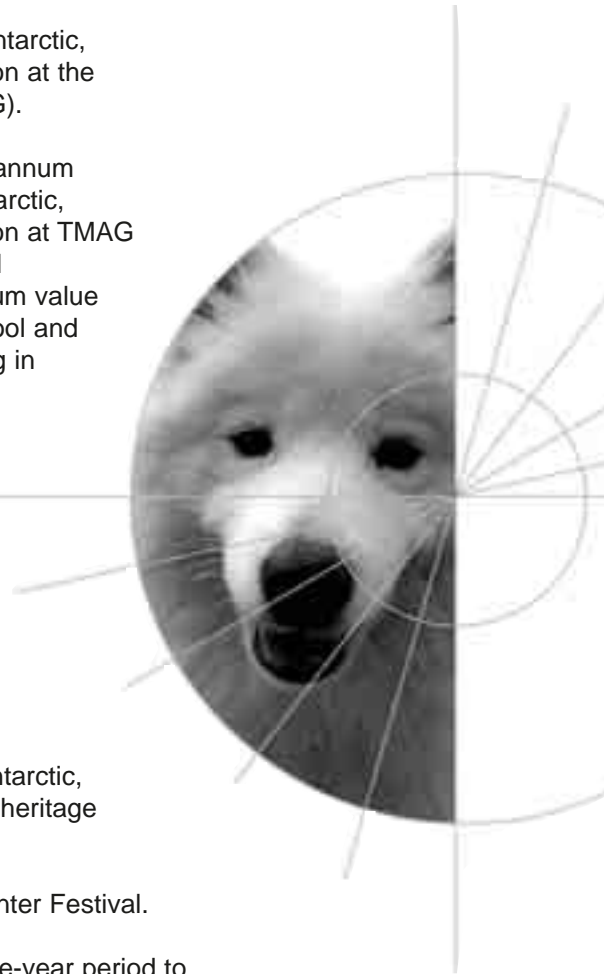
At the same time, the Tasmanian Government acknowledges that all future tourism opportunities must adopt a sustainable approach, taking into account Tasmania's existing environmental record and the acknowledged fragility of the Antarctic region.

The Tasmanian Government understands that the distance between Tasmania, the traditional sources of tourists to the Antarctic (North America and Europe), and the Antarctic continent will always act as a comparative barrier to seaborne Antarctic tourism growth. In addition, it recognises that the world market is relatively small and that South America has a cost advantage in this area. Nonetheless, the government considers that if there are substantial improvements in access to Antarctica, these developments may potentially lead to increased interest by tourists and operators in using Hobart as an Antarctic gateway. In addition, the government believes that Antarctic tourism has unique niche appeal, and using Tasmania as a departure or arrival point should be encouraged. Therefore, the government will continue to do those things necessary and feasible to assist growth of the Antarctic tourism sector.

## Actions

The Tasmanian Government will:

- Action 37:** Provide \$600,000 to create a permanent Antarctic, sub-Antarctic and Southern Ocean exhibition at the Tasmanian Museum and Art Gallery (TMAG).
- Action 38:** Provide recurrent funding of \$150,000 per annum to create three positions to support the Antarctic, sub-Antarctic and Southern Ocean exhibition at TMAG that includes an Education Coordinator and Interpretation Officer to ensure that maximum value is delivered from the exhibition to both school and museum visitors; and a Curator specialising in Antarctic and Southern Ocean matters.
- 
- Action 39:** Promote TMAG as the state's repository for Antarctic, sub-Antarctic and Southern Ocean objects and cultural heritage items and establish international collaboration with other international polar museums.
- Action 40:** Coordinate promotion of Tasmania's key Antarctic, sub-Antarctic and Southern Ocean cultural heritage attractions.
- Action 41:** Provide support to host the Antarctic Midwinter Festival.
- Action 42:** Appoint an Antarctic Ambassador for a three-year period to promote Tasmania as a key Antarctic gateway and foster cooperation between Antarctic stakeholders.
- Action 43:** Lead cooperative efforts to develop and promote key interpretive themes, infrastructure and attractions with the overall vision of providing visitors with a sense of place as it relates to the Antarctic and Southern Ocean regions.
- Action 44:** Monitor developments in Antarctic-related logistics and infrastructure that may facilitate tourism opportunities and lead efforts to attract tourist operators to use Hobart as their departure and embarkation point to access the sub-Antarctic islands and Antarctica.
- Action 45:** Promote appropriate tourism opportunities to Macquarie Island in accordance with the *Macquarie Island Management Plan*.
- Action 46:** Collaborate with the Hobart City Council to explore the feasibility of constructing an Antarctic-themed playground and further enhance the Polar Pathway around the Hobart waterfront precinct.
- Action 47:** Ensure that Tourism Tasmania and Brand Tasmania integrate the Antarctic, sub-Antarctic and Southern Ocean themes into the state's branding and promotion.





# Policy Monitoring and Review

The 2004 *Antarctic, sub-Antarctic and Southern Ocean Policy* focuses on areas in which the Tasmanian Government can play an active role. At the same time, the government also recognises that a complex range of environmental, political, economic, academic and social objectives needs to be considered to achieve the vision and objectives of this policy.

The Tasmanian Government emphasises that cooperation and a coordinated approach are needed to achieve the vision, aims and objectives of this policy. The value of the policy will be determined by how successfully its strategies support Tasmania's involvement in the Antarctic sector and maximise benefits for the state.

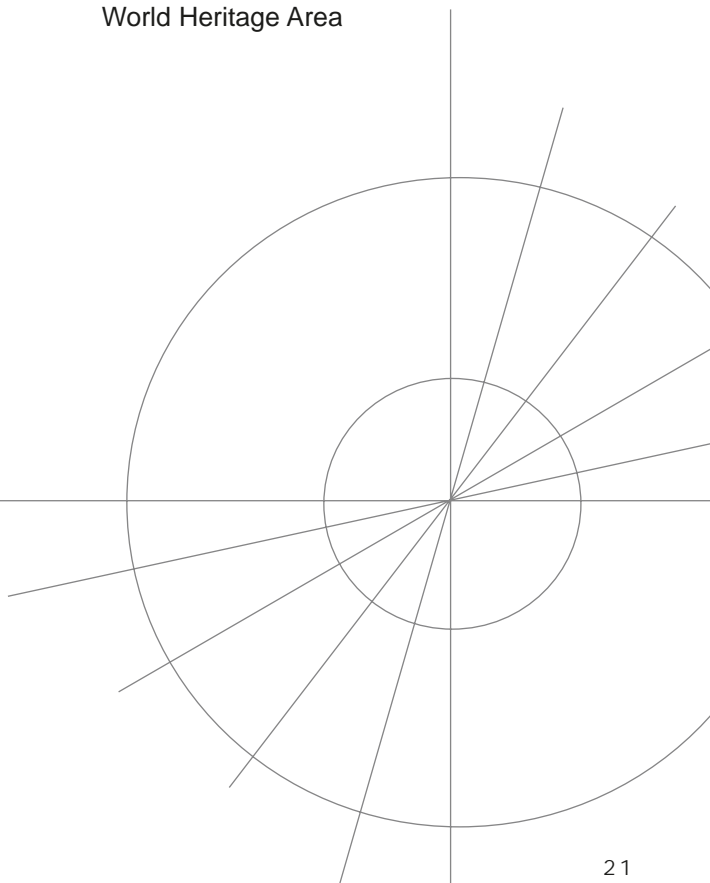
A *Policy Action Plan* will be developed that identifies specific actions, associated timeframes and the relevant action agency or organisation against each of the six priority areas and 47 actions specified in this policy.

Implementation requires a coordinated system to guide, monitor and assist activities. As a central point of communication, Antarctic Tasmania will play this role in relation to the *Policy Action Plan*.

An *Antarctic Policy Reporting Committee* will be established to provide advice and progress reports to the Minister for Economic Development. The committee will meet and report on a six-monthly basis. A final report on this policy will be produced and submitted in March 2007.

# Acronyms & Abbreviations

AAD	Australian Antarctic Division
ACE CRC	Antarctic Climate and Ecosystem Cooperative Research Centre
Airlink	Australian Antarctic Airlink
AMC	Australian Maritime College
BoM	Bureau of Meteorology (Tasmania and Antarctic Region)
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
COMNAP	Council of Managers of National Antarctic Programs
CSIRO	Commonwealth Scientific and Industrial Research Organisation
IASOS	Institute of Antarctic and Southern Ocean Studies
NOO	National Oceans Office
RTBG	Royal Tasmanian Botanical Gardens
SCAR	Scientific Committee for Antarctic Research
TAFE	Technical and Further Education
TMAG	Tasmanian Museum and Art Gallery
TPN	Tasmanian Polar Network
UTAS	University of Tasmania
WHA	World Heritage Area



# Appendix A - Policy Framework Analysis

Strategies	Priority Areas						
	Information sharing & partnerships	Logistics & provisioning	Commercialisation of products & services	Conservation & environmental management	Education & training	Cultural heritage & tourism	
Lead and coordinate efforts to promote and brand Hobart and Tasmania as an internationally recognised Antarctic Gateway and centre for Antarctic, sub-Antarctic and Southern Ocean climate and marine research, education, environmental management, tourism and logistics.	<b>Actions:</b> 1, 2, 3, 4, 5, 6, 7, 8, 9	<b>Actions:</b> 12, 13, 14, 15, 16, 17	<b>Actions:</b> 18, 19, 22	<b>Actions:</b> 23, 25	<b>Actions:</b> 31, 32, 33, 34, 35, 36	<b>Actions:</b> 37, 38, 39, 40, 41, 42, 43, 44, 47	
Continue to support Tasmania's existing Antarctic, sub-Antarctic and Southern Ocean institutions, and lead efforts to increase the number of these institutions that use Hobart as a base for some or all of their operations.	<b>Actions:</b> 1, 2, 5, 6, 7, 8	<b>Actions:</b> 10, 11, 12, 13, 14, 16	<b>Actions:</b> 18, 19, 20, 21	<b>Actions:</b> 23, 25	<b>Actions:</b> 31, 32, 33, 34, 35, 36	<b>Actions:</b> 41	
Promote best practice environmental management in the Antarctic, sub-Antarctic and Southern Ocean, and work in partnership with the Australian and international community to provide expertise in sustainable environmental management.	<b>Actions:</b> 5	<b>Actions:</b> 14	<b>Actions:</b> 21	<b>Actions:</b> 23, 24, 25, 26	<b>Actions:</b> 31, 32, 33, 34, 35, 36	<b>Actions:</b> 41, 45	
Lead efforts to increase the number of Tasmanian companies participating in the Tasmanian Antarctic sector and their capacity to supply specialist Antarctic and temperate marine products and services to state-based Antarctic institutions.	<b>Actions:</b> 3, 4	<b>Actions:</b> 13, 14	<b>Actions:</b> 18, 19, 20, 21, 22	<b>Actions:</b> 24, 25, 26	<b>Actions:</b>	<b>Actions:</b> 42	
Facilitate the development of infrastructure and support services to maximise the benefits to Tasmania from the implementation of the Arlink from Hobart to Antarctica.	<b>Actions:</b> 8	<b>Actions:</b> 10, 11, 13	<b>Actions:</b> 21	<b>Actions:</b>	<b>Actions:</b>	<b>Actions:</b>	
Establish educational pathways and raise community awareness of Antarctic, sub-Antarctic and Southern Ocean themes, and lead efforts to promote Hobart and Tasmanian key cultural and heritage assets under the themes of (1) humanity, (2) heritage, (3) living resources, (4) contemporary significance, and (5) Hobart as a pre-eminent gateway to the Antarctic.	<b>Actions:</b> 2, 3, 4, 7, 8	<b>Actions:</b>	<b>Actions:</b>	<b>Actions:</b> 23, 24	<b>Actions:</b> 27, 28, 29, 30, 31, 32, 33, 34, 35, 36	<b>Actions:</b> 37, 38, 39, 40, 41, 42, 43, 46	
Monitor advances and developments in Antarctic, sub-Antarctic and Southern Ocean logistics that have the potential for expanding sustainable tourism opportunities and for tourism operators to use Hobart as a gateway to the Antarctic.	<b>Actions:</b> 1, 4	<b>Actions:</b> 13, 17	<b>Actions:</b> 19, 20	<b>Actions:</b>	<b>Actions:</b> 32, 33, 35	<b>Actions:</b> 43, 44, 45	



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