



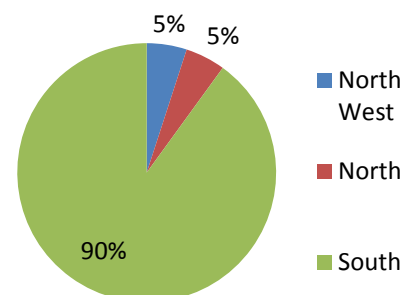
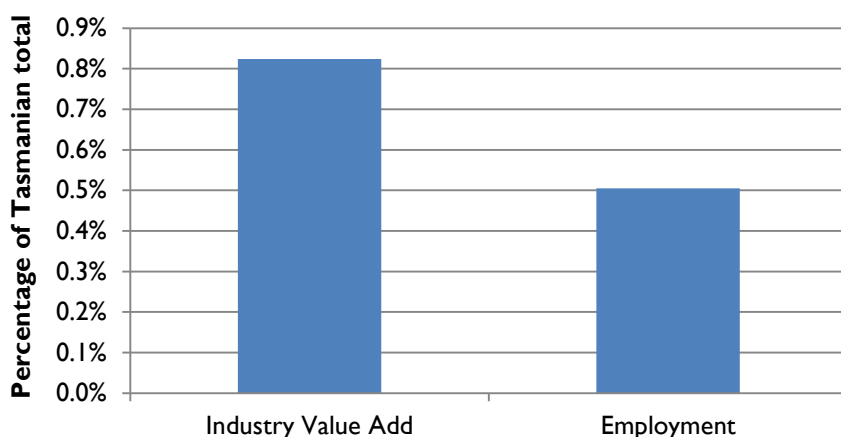
New Zealand Standard Industry Classification (ANZSIC) classes using a value-chain approach. This means that industry classes from ANZSIC have been grouped together to provide estimates of the size of the particular trade and investment sectors.

Coverage: Science and research activities associated with the Antarctic and Southern Ocean (ASO) and businesses that supply logistics and support services to ASO organisations. ASO research is a subsector of the Science Research sector and is also included in the Gross State Product (GSP) and employment indicators for that sector.

Key indicators

Regional employment

Antarctic and Southern Ocean



Key statistics at a glance

| Indicator | Units | Period | Data | Change from five years ago | Per cent of Tasmania | Per cent of Australia |
|---|-------|---------|---------|----------------------------|----------------------|-----------------------|
| Industry value add ^(a, b) | \$M | 2011-12 | \$187 | NA | 0.8% | NA |
| Employment ^(a) | No. | 2011-12 | 1 185 | NA | 0.5% | NA |
| Incomes (average weekly) ^(a) | \$ | 2011-12 | \$2 277 | NA | 186.2% | NA |

(a) Source: Blacklow Economic Consulting (2013), Australian Bureau of Statistics (ABS) (2013), AEC Group.

(b) Industry value add is a component of Gross State Product and measures the total value of goods and services produced by the sector, less the value of inputs.

Summary of sector

Hobart is Australia's gateway to the Antarctic. It is the home of Australia's ASO operations. The city also hosts French Antarctic gateway activities for the Polar Institute Paul Emile Victor. It is an internationally-recognised centre for ASO research, policy and industry support expertise. Under the international Antarctic Treaty System, Tasmanian-based organisations contribute significantly to Antarctic-related global policy and science.

A number of major Australian Sub-Antarctic and publicly-funded ASO research institutions are located in Tasmania. These include the Australian Government's Antarctic Division (AAD) and the University of Tasmania (UTAS), which hosts a number of specialised ASO research centres. These include the Institute of Marine and Antarctic Studies and the Antarctic Climate and Ecosystem Cooperative Research Centre. The CSIRO Centre for Marine and Atmospheric Research is also domiciled in Hobart.

Hobart is home to two international ASO-associated secretariats, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Agreement on the Conservation of Albatrosses and Petrels (ACAP).

The Tasmanian economy benefits significantly from ASO-related scientific meetings and conferences. CCAMLR meetings are held annually in Hobart, along with other meetings. In 2011-12 for example, as part of the Antarctic Centennial Year, Tasmania hosted the International Antarctic Tour Operators Conference and, for the first time, the prestigious Antarctic Treaty Consultative Meeting (ATCM).

While some Tasmanian-based ASO research institutions possess their own technical and logistics capabilities, various Tasmanian businesses also supply logistics and support services for international ASO research programs. These include shipping and air link support, provedoring, specialised engineering and manufacturing, and specialist consultancy services.

The ASO sector directly contributed \$187.4 million in expenditure to Tasmania's GSP in 2011-12. ASO organisations contributed \$142.5 million in 2011-12, with Antarctic businesses contributing \$44.9 million. The ASO sector contributed a total of \$237 million to the Australian Gross Domestic Product in 2011-12 and ASO research organisations paid \$63.3 million in wages to their Tasmanian employees. The flow on effects of ASO-sector employee spending led to a further contribution of \$256.9 million to the Tasmanian GSP and \$193.5 million to the GSP of the other Australian states.

The ASO sector employed 1 185 Tasmanians in 2011-12, with Antarctic organisations employing 756 people, and business another 429. A further 473 jobs were created in the rest of Australia. Wages in the sector are high. The average full-time employee in an Antarctic research organisation earned \$118 400 per annum, compared with the average Tasmanian full-time salary of \$63 590 per annum. The AAD is responsible for over half of the Tasmanian ASO sector's employment and spending.

Tasmanian businesses earn more than 60 per cent of their 'Antarctic' income from national Antarctic programs, using Hobart as a gateway to Antarctica. As ASO-related activities are often project-based and seasonal, they rarely constitute core business. Nonetheless, firms in the Tasmanian ASO sector are often highly innovative. They deliver many custom-designed specific products to suit ASO's harsh conditions.

Tasmanian industries supporting the ASO sector are well organised, with their collective interests being represented by the Tasmanian Polar Network.

Constraints and opportunities

Consultation with industry stakeholders has identified the following key constraints and opportunities:

Constraints/risks

- While fit for current usage, present infrastructure may constrain growth.
- Geographical distance from many international Antarctic program stations largely limits the sector's operations to Eastern Antarctica.
- Reliance on Australian Government funding for Australia's Antarctic infrastructure upgrades and research and policy activities.
- Limited interstate and international air connections.
- Supply chain gaps (such as waste remediation).
- Difficulties in attracting and retaining highly-skilled research scientists in priority-targeted areas.
- Lack of mid-priced accommodation for researchers and crew visiting at peak tourism periods.

Opportunities

- Continued maximisation of Antarctic Centennial Year leverage opportunities.
- Attracting new Antarctic operators to use Hobart as a base or supply point for ASO activities.
- Increasing Tasmanian businesses' share of expenditure by Antarctic programs.
- Identifying and securing new business opportunities to address gaps in existing supply chains.
- Expanding export markets for businesses supplying specialised high-latitude goods and services.
- Optimising collaborative arrangements for the East Antarctic logistics network.
- Benefiting from capital expenditure by Australian and other international Antarctic programs on Antarctic infrastructure, such as shipping and buildings.
- Optimising potential business and investment opportunities attached to Australia's ASO research and management responsibilities (such as fisheries, biological prospecting and increased surveillance requirements).
- Optimising potential wharf and rail yard redevelopments to provide opportunities to accommodate ASO activities and facilities.

Initiatives currently underway

Work currently being progressed by the Department of State Growth aims to:

- Promote and strengthen Hobart as an ASO gateway.
- Ensure that Hobart's port and air infrastructure meet ASO sector growth requirements.
- Provide support for effective collaboration between various ASO stakeholders.

To optimise and facilitate Tasmanian ASO sector growth, the department strives to ensure the following:

- CCAMLR and ACAP international secretariats remain based in Hobart.
- French Antarctic program continues to use Hobart as its Antarctic gateway.
- International Antarctic collaboration (ATCM and the Council of Manager of National Antarctic Program).
- Increased visits to Hobart Antarctic gateway by international Antarctic programs.
- Increased Antarctic gateway collaboration between Hobart and Christchurch.
- Increased collaboration between the Australian Antarctic Division and other international Antarctic programs.
- Increased number of jobs generated by Antarctic sector growth.
- Increased contribution by the ASO sector to the Tasmanian economy.
- Antarctic and Southern Ocean Asian Regional Partnership initiated.
- Memorandum of Understanding with the Chinese Antarctic program on Hobart Antarctic Gateway use and collaboration expanded to detail schedules and other international and potential users.
- Centre for Antarctic, Remote and Maritime Medicine established.
- Strengthened collaboration between Antarctic sector stakeholders.
- ASO science conferences supported.
- Antarctic stakeholders recognised for their contribution to the sector.
- New business opportunities created.