# 2017/18 Annual review of the New Zealand Antarctic Institute

Report of the Foreign Affairs, Defence and Trade Committee

March 2019

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New Zealand Antarctic Institute

Recommendation
The Foreign Affairs, Defence and Trade Committee has conducted the annual review of the New Zealand Antarctic Institute for 2017/18, and recommends that the House take note of its report.

Introduction
Antarctica New Zealand is the trading name of the New Zealand Antarctic Institute, a Crown entity established under the New Zealand Antarctic Institute Act 1996. Its aim is to ensure that Antarctica and the Southern Ocean are valued, protected, and understood.

Antarctica New Zealand is responsible for carrying out New Zealand’s activities in Antarctica and the Southern Ocean. This includes managing Scott Base, which is New Zealand’s Antarctic research station. It is also responsible for enhancing the quality of New Zealand’s scientific research in Antarctica. The institute is based in Christchurch.

Sir Brian Roche is the chairperson of the board and Peter Smith is the acting chief executive.

Financial overview and audit results
Antarctica New Zealand receives 97 percent of its funding from Vote Foreign Affairs and Trade. In 2017/18 its total revenue was $21.73 million, slightly higher than its total revenue of $21.44 million in 2016/17. In 2017/18 Antarctica New Zealand’s total expenses were $22.03 million, $4.48 million more than in 2016/17. This resulted in a net deficit of $301,000 in 2017/18.

The Auditor-General assessed Antarctica New Zealand’s management control environment and financial information systems and controls as “very good.” Its performance information and associated systems and controls were assessed as “good.” The Auditor-General recommended that Antarctica New Zealand improve the “logic flow” between its outputs, impacts, and outcomes, and its performance measures for service quality. We note that these recommendations were also made in 2016/17.

We consider it important for all organisations to explain to the public the connection between what they do (their outputs) and what they actually seek to achieve (their outcomes). We therefore hope to see improvements in Antarctica New Zealand’s performance information by the time of our next review.

New Zealand Antarctic Research Institute
The New Zealand Antarctic Research Institute (NZARI) is a charitable trust which partners with research agencies to develop a global understanding of Antarctica’s importance and vulnerability in a changing environment.
In 2017/18 changes to the governance structure of NZARI resulted in board members of Antarctica New Zealand being appointed as trustees of NZARI. As a result, Antarctica New Zealand was deemed to have “control” of NZARI in an accounting sense. NZARI’s financial statements have been consolidated into Antarctica New Zealand’s financial statements from 1 April 2018. The performance measures for NZARI have been included in Antarctica New Zealand’s most recent Statement of Performance Expectations. We note from the Auditor-General that these measures will need to be reviewed regularly.

**Antarctic geological drilling (ANDRILL)**

Antarctica New Zealand has a 25 percent interest in ANDRILL, which is a jointly controlled Antarctic drilling project. The ANDRILL Operations Management Group resolved to stop the project and Antarctica New Zealand is facilitating the sale of assets and return of proceeds to the joint venture partners. The disestablishment period has been extended to December 2018.

The Auditor-General audited ANDRILL and concluded that Antarctica New Zealand accounted for its interest in the joint venture appropriately.

**Upgrades to Scott Base**

Scott Base has been in operation since 1957 and has been upgraded over the years but is nearing the end of its lifespan. Budget 2017 allocated $6.14 million to fund the preparation of a detailed business case to upgrade the Scott Base facilities. In 2017/18 Antarctica New Zealand received $2.4 million in funding for the business case and spent $2.95 million.

Work on the business case included appointing a design team, establishing a project delivery team, and completing the concept design phase. Antarctica New Zealand is expected to complete the business case, including fully costed viable options, in time for a high-quality bid for Budget 2019. We were told that work to prepare the business case is still under way. We are very interested to see the outcome of this work.

Antarctica New Zealand said that developing a business case has been challenging because construction has to be planned a number of years in advance. We were interested to hear that building can only occur during 20–24 weeks a year and that the length of construction (five or seven years) is still being decided.

**Balancing scientific research and construction**

We asked whether Antarctica New Zealand is concerned about building being disruptive to scientific work. It said it is not unduly worried. It said it is very aware that managing science and construction will be a fine balance. We heard that closing Scott Base during the construction phase is an option, but this is not something Antarctica New Zealand advocates.

**Support from the United States**

The United States is planning to upgrade its McMurdo Station from 2019 to 2028, which is the same time period as the Scott Base redevelopment. Antarctica New Zealand said both countries are likely to work together on logistics during the upgrades. It said this will be an efficient and economic approach.
McMurdo Station is located 3.5 kilometres away from Scott Base and has more than 1,000 beds. We asked whether there would be an opportunity for Antarctica New Zealand to use McMurdo Station’s facilities to house New Zealanders during the Scott Base upgrade. Antarctica New Zealand said using McMurdo Station is only a “reserve strategy” because the station is at capacity.

**Health and safety**

We asked what health and safety challenges would be involved in the base’s upgrade. It said the main challenges are managing sewage and water, and containing asbestos. Antarctica New Zealand said that although there is an argument for taking a maintenance-only approach, it is not economically viable to do so because of the risks to the environment and people. We heard that the core infrastructure at Scott Base will only last for five more years.

Antarctica New Zealand emphasised that it will not be expanding the base. It said the number of beds will remain the same, but the amenities will be improved. We heard that the purpose of the upgrade is to construct a base that will last another 60–70 years and ensure that the work of people and scientists at the base is not compromised by inadequate amenities.

**Scientific research**

**Antarctic Science Platform**

In November 2018 the Ministry of Business, Innovation and Employment made Antarctica New Zealand the host of the Antarctic Science Platform. It will receive $7 million a year for three years to operate the Platform, with the expectation of a further four years of funding beyond that.

The Antarctic Science Platform is a contestable fund which supports science in Antarctica and the Southern Ocean. Antarctica New Zealand said that the Platform will provide a stable funding source for research, while allowing for variability in the programmes it funds. Antarctica New Zealand said the purpose of the fund is to understand:

- the stability of the west Antarctic ice sheet
- the impact of change in the Antarctic atmosphere and the Southern Ocean
- threats to the ecosystem dynamics in the Ross Sea
- change in the terrestrial and nearshore Antarctic environment.

Antarctica New Zealand’s role is to administer the fund and provide advice and secretariat support to the governance group. Antarctica New Zealand’s existing operations are likely to expand significantly as a result of its role in administering the fund. It will need additional staff and new systems and processes to facilitate this. We hope to see Antarctica New Zealand act on the Auditor-General’s recommendation to consider the impact of hosting the Antarctic Science Platform on its performance framework and accountability documents.
Recent research

In 2017/18 science in Antarctica was focused on informing global climate models by better understanding how Antarctica has functioned in the past and what might happen in the future. Antarctica New Zealand said the logistics for this research are challenging because it is difficult to get to the remote parts of the continent where climate change is having the most significant effects.

We heard that significant research projects include:

- the Ross Ice Shelf programme
- research into Adélie penguin population ecology
- risk assessment of Dry Valley ecosystems
- resilience in freshwater and terrestrial ecosystems

Support from the New Zealand Defence Force

During a season, around 220 New Zealand Defence Force (NZDF) staff support Antarctica New Zealand’s work, with 10 of these staff located at Scott Base. We heard that there would be no Antarctic programme without the assistance of the NZDF.

We asked what work the NZDF staff do to support the Antarctic programme. Antarctica New Zealand said staff based in Christchurch do all the loading and unloading of aircraft travelling to Antarctica. It said staff at Scott Base do a variety of jobs including flying aircraft, captaining the cargo ship, mechanics, engineering, and providing other specialised services.

International relationships

The Antarctic Treaty System, comprising the Antarctic Treaty and related agreements, ensures that all countries in Antarctica work together in the interest of science. We heard that usual issues of diplomacy do not exist in Antarctica. Antarctica New Zealand emphasised that it is a very impressive model.

We asked who New Zealand works closely with in Antarctica and about the nature of these relationships. We heard that it has close relationships, particularly with the American, German, Italian, and Korean stations. They work together on research projects, logistics and environmental protection. We continue to develop our relationships with other nations such as Russia and China.

We asked Antarctica New Zealand to elaborate on what logistics it shares with the United States. It said the most public example of its relationship is the American planes stored at Christchurch airport. It also works with the Americans on a daily basis to organise sending people and supplies to Antarctica. Antarctica New Zealand said this approach has stood the test of time and it is confident it will continue to succeed.

We asked whether the upgrade of Scott Base would affect the two countries’ joint logistics. We heard that both countries will need to think creatively about how they share aircraft and ships during the construction period. Antarctica New Zealand is aware that neither group wants to get blocked out by logistics.
Air New Zealand safety video

In 2018 Air New Zealand released a safety video in partnership with Antarctica New Zealand. Antarctica New Zealand was very happy with the response. It said the video raised awareness and provided some understanding of Antarctica.

We asked whether the video had created any issues by increasing the number of people wanting to visit Antarctica. Antarctica New Zealand said that the video was intended to raise awareness in the knowledge that most people will not be able to visit Antarctica. It said tourism is managed through the Antarctic Treaty System. We heard that tourism is very tightly controlled and tends to come from South America because it is closer to Antarctica.
Appendix

Committee procedure
We met on 14 February and 7 March 2019 to consider the annual review of the New Zealand Antarctic Institute. We heard evidence from the New Zealand Antarctic Institute and received advice from the Office of the Auditor-General.

Committee members
Simon O’Connor (Chairperson)
Golriz Ghahraman
Todd McClay
Tim Macindoe
Chris Penk
Priyanca Radhakrishnan
Jamie Strange
Louisa Wall

Jan Tinetti replaced Priyanca Radhakrishnan for some of this review.

Advice and evidence received
We received the following documents as advice and evidence for this annual review. They are available on the Parliament website, www.parliament.nz.


Antarctica New Zealand, Responses to 2017/18 written questions and appendix, dated 14 February 2019.

Antarctica New Zealand, Responses to 2017/18 post-hearing questions, dated 7 March 2019.