

# Protecting the Antarctic environment

In the early days of Antarctic exploration little was known about the sensitivity of the region, and the approach to the environment was based on the norms of the day in countries far different from Antarctica. Rubbish was dumped into tips or the ocean or burnt in the open air, native animals were culled as a food source, there were no controls on the introduction of alien species, and little was done to control the potential effects of contamination and pollution. If these practices had continued, the resulting environmental changes may have been irreparable.

Through its role in delivering the Australian Government's Antarctic policy interests and goals, the AAD has a responsibility to protect the Antarctic environment. Since the 1950s the AAD has led or taken part in numerous initiatives to

change how humans interact with the local environment. One of the most recent of these was certification of its ISO 14001 Environmental Management System (EMS), which emphasises the continual improvement of environmental practices wherever the AAD operates. The AAD also conducts a programme of research into the effects of human activities on the Antarctic environment, while engineers are developing new designs and construction techniques for buildings, in order to reduce heating needs and fuel usage.

The following timeline highlights significant events in the protection of the Antarctic environment:



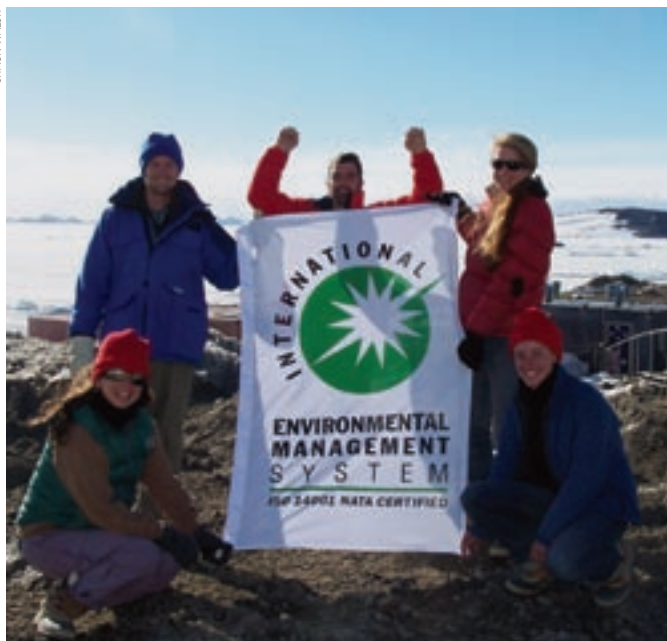
<b>1950s</b>	Australia is a key player in the development of the Antarctic Treaty and one of the 12 original signatories in 1959.
<b>1964</b>	Antarctic Treaty Parties adopt <i>Agreed Measures for the Conservation of Antarctic Fauna and Flora</i> .
<b>1966</b>	Australia proposes Antarctica's first Specially Protected Areas at Taylor Glacier and the Rookery Islands near Mawson, and Ardery and Odbert Islands near Casey.
<b>1970s</b>	Station personnel halt harvest of wildlife for food to supplement station rations. Australia actively supports the bans on whaling in the Southern and Antarctic oceans (1979). Station rebuilding programme includes waste management infrastructure such as waste water treatment plants and high temperature incinerators (1979–1994).
<b>1980</b>	Australia ceases the killing of seals for dog food. Introduction of the <i>Antarctic Treaty (Environment Protection) Act 1980</i> for Australia.
<b>1982</b>	The Convention on the Conservation of Antarctic Marine Living Resources comes into force, taking an ecosystem approach to ensuring the sustainability of exploitation (principally fishery). AAD Environment Committee formed and meets quarterly for the next 20 years.
<b>1985</b>	Commencement of formal environmental training for expeditioners (1985).
<b>–1988</b>	First incinerators installed at Davis (1985), Mawson (1986) and Casey (1988). All solid waste not incinerated is returned to Australia. Australia's first 'bunded' (secondary containment in case of leakage) bulk fuel storage commissioned at Casey.
<b>1990s</b>	Early quarantine controls including the inspection of fruit and vegetables and restrictions on the use of poultry products in the field, to prevent possible disease transmissions.
<b>1991</b>	Introduction of the Protocol on Environmental Protection to the Antarctic Treaty, inclusive of five Annexes: environmental impact assessment, conservation of Antarctic flora and fauna, waste disposal and management, prevention of marine pollution, and area protection and management. Soft drink dispensers provided to stations, reducing glass waste by 40%.
<b>1993</b>	Last huskies leave Mawson as required by Annex II of the Madrid Protocol.
<b>1994</b>	Formation of Environmental Management Section in the AAD. Development of the Waste Management Strategy, including waste minimisation measures and recycling.
<b>2000</b>	Formalised quarantine controls commenced for people and cargo destined for Antarctica, to prevent introduction of alien organisms – a perceived high risk.
<b>2002</b>	Implementation of an Environmental Management System (EMS) certified to the Australian/New Zealand Standard 14001. Australia is the first nation to gain EMS certification for its Antarctic programme. Commencement of clean up of disused Thala Valley tip at Casey. Commencement of the AAD State of the Environment Reporting System for Antarctica.
<b>2003</b>	Wind turbines commissioned at Mawson Station to greatly reduce fossil fuel use.
<b>2004</b>	External auditor visits and audits Casey, Davis and Mawson stations.

—NEIL SORENSEN, TOM MAGGS and SHAUN WALSH  
*Environmental Policy and Protection, AAD*



Since the development of the Waste Management Strategy in 1994, Australian Antarctic stations recycle much of their waste.

The Thala Valley site at Casey was once used for landfill. Since 2002, teams of expeditioners have been monitoring, treating or removing polluted water and soil.



## Australian Antarctic stations comply with strict environmental procedures

Australia's Antarctic stations at Davis and Mawson were audited by independent Environmental Management System (EMS) auditor Mr Phil Crosby, in January this year, as part of Australia's internationally certified (ISO 14001) environmental management accreditation. Mr Crosby was accompanied by Leslie Frost and Shaun Walsh of the AAD.

As well as testing compliance with established environmental procedures, the audit provided an opportunity for an independent assessor to make recommendations for improvement.

In the executive summary to his report Mr Crosby said '... this audit covered a wide range of processes and activities, most of which were carried out, not only to be in accordance with AAD policies and guidelines, but often as a personal standard of the leader, expeditioner, or scientist. It was especially noted and pleasing to see the pre-departure training and Environmental Code of Conduct, being seriously fulfilled and delivered by new and departing personnel'. He said the EMS is currently most effectively implemented within the AAD's Operations Branch, which is responsible for implementing most of the procedures and processes that impact on the Antarctic environment.

Mr Crosby identified a number of areas for improvement including:

- The need for some revision and expansion of procedures in the EMS Manual;
- The need for better document control to ensure that everyone uses the current authorised version of environmental procedures, and to ensure these procedures are available on the AAD's intranet;
- Improvements on stations relating to fuel storage, the labelling and re-use of 200 litre drums and storage of cement boxes; and
- Improvements to internal environmental audits to meet the ISO standard and to be effective tools for management.

The report also contains many observations to assist the AAD to improve environmental management. The AAD will prepare Action Plans to respond to the findings of the audit report. Our response will then be re-assessed in three months time and again at the re-certification audit in August this year.

—SHAUN WALSH and LESLIE FROST  
*Environment Advisor and EMS Coordinator, AAD*

(L-R) Expeditioners Clare Hynes, Angus Munro, Andrew Cunningham, Elanor Bell and Tania Ritchie celebrate the successful audit of Mawson Station's Environmental Management System.