

Australian Defence Leadership in Climate and Stratospheric Ozone Layer Protection

Dr Helen Tope

Energy International Australia

The Importance of Military Organizations in Protecting the Climate
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Overview

- Context for climate action
- Early climate leadership through stratospheric ozone layer protection
- Responsible energy management
- Green buildings
- Water and waste
- Building know-how, knowledge and awareness

Context for action

“Defence’s environmental vision is to be a leader in sustainable environmental management to support the Australian Defence Force’s capability to defend Australia and its national interests.”

Australian Government, Department of Defence,
Defence Environmental Strategic Plan 2006-2009



Context for action (2)



- Australian Defence Organisation (ADO) Greenhouse Strategy, 2003
- Australia ratifies Kyoto Protocol, 11 March 2008
- New national climate change goals announced:
 - Reduce GHG emissions by 60% by 2050
 - Implement emissions trading scheme by 2010
- ADO helping to shape Government responses and reviewing climate change policies

Early climate leadership through stratospheric ozone layer protection

- Early climate benefits from actions on emissions of ozone-depleting substances (ODS)
- Australian Government and industry visionaries developed ambitious national ozone protection strategy
- Widespread ODS use by ADO in critical applications
- ADO commitment to meet or exceed Australian Government policy standards when practical

Defence actions on ODS

Halon banking

- Aggressive Defence policy to decommission non-critical equipment, collect and store surplus halons
- Halon banking central to ADO response
- DASCEM Pty. Ltd. service provider to ADO, with National Halon Bank expertise
- PLASCON® plasma arc destroys surplus or unusable ODS and hydrofluorocarbons (HFCs)



PLASCON® plasma arc

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Defence partnerships For ozone and climate protection

- ADO, Dept. of Environment, DASCCEM partnered with US Dept. of Defense to store and manage halon in Australia

Defence actions on ODS

Search for alternatives

- ADO reliance on off-shore equipment supply and civilian systems
- Transformation to informed consumers
- Policy principles for ODS driving changes to procurement practices
- Policies being extended to give procurement priority to least damaging alternatives to ODS and synthetic greenhouse gases (SGG)
- New platforms or equipment purchased containing ODS or SGG must be part of national product stewardship programs



Understanding alternatives

Fire extinguisher performance trial

QuickTime™ and a
decompressor
are needed to see this picture.



Climate benefits from ODS actions

- Recent studies demonstrated climate benefits of global ODS actions
 - By 2010, the Montreal Protocol will have reduced the net GWP-weighted emissions from ODS by 5-6 times the reduction target of the 1st commitment period (2008-2012) of the Kyoto Protocol
- ADO emissions reduction strategies transferred to HFC management
- ADO actions yield direct climate benefits

Defence energy consumption

- ADO is Australian Government's largest energy consumer (~ 16,000,000 GJ in 2005-2006)
 - Non-operational ~ 3,500,000 GJ
 - Operational over 12,000,000 GJ

Defence leadership

Responsible energy management

- ADO developed internal Energy Strategy and range of programs to manage energy sustainably
- ADO commitment by 2012 to:
 - Report energy consumption by end-use categories
 - Achieve energy intensity target for facilities of 2.5 Petajoules/yr
- ADO installing sub-meters to better measure, monitor and report energy usage and identify efficiency opportunities

Defence leadership

Energy efficiency actions

- In 2000, ADO invested AU\$25 million in 3-year Defence Energy Efficiency Program
- Targeted top 43 energy consuming sites
- Implemented 210 energy saving measures
 - Lighting, heating, ventilation, AC, hot water, etc
 - Energy savings more than 559,000 GJ
 - Exceeded target by 2.6 per cent
- In 2001, signed a Greenhouse Challenge Agreement with the Australian Greenhouse Office

Defence leadership Renewable energy sources

- ADO opting for “green power” renewable energy sources
- Solar power generation in remote locations
- Trial to supplement energy during operational demand with marine wind power



Defence leadership

Green buildings

- ADO Green Building Policy for healthy building environments and reducing whole of life environmental impacts
- ADO goal to achieve 4.5 star building energy rating
- Founding member of industry-initiated Green Building Council of Australia

Defence leadership

Green buildings (2)

- Award-winning Victoria Barracks, renovated integrated modern office into colonial building
 - Low watt technology, natural ventilation and daylight

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Defence leadership

Water and waste



- Australia world's driest inhabited continent
 - Studies indicate some areas to receive less rainfall from climate changes
- Procuring, cleaning, pumping and delivering water use energy
- Sustainable water management strategy to tackle ADO's water consumption
- ADO avoiding and minimising waste generation, and reducing greenhouse gas emissions from landfill

Building know-how, knowledge and awareness

- New management structures, personnel and expertise to build and implement climate change policies and strategies
- Combat Climate Change initiative
 - Increase awareness
 - Easy ways individuals can reduce their carbon footprint at the office and at home
- ADO stays abreast of climate change impacts through partners, such as CSIRO
 - Plan long-term impacts of climate change on assets, facilities and training areas

Sustaining the effort

“Through sustainable environmental management Defence intends to leave a positive legacy for future generations, while preserving the capacity to undertake land, sea and air activities necessary to sustain ADF capability.”

Department of Defence,
Defence Environmental Policy



Further information

Speak to Dept. of Defence experts

- Dr Martin Lyons, Joint Logistics Command, Manager Safety and Environment (martin.lyons1@defence.gov.au)
- Mr Robert Lean, Director Climate Change and Sustainability (robert.lean@defence.gov.au)
- Mr Terry Weston, Assistant Secretary Estate, Policy and Environment (terry.weston@defence.gov.au)

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