

## Ecologically Sustainable Development and Environmental Performance

1. *How the activities of, and the administration (if any) of legislation by, the agency, during the period accorded with the principles of ecologically sustainable development (Section 516A(6)(a) of the Environment Protection and Biodiversity Conservation Act 1999).*

Activities which generally recognise and promote Ecologically Sustainable Development (ESD):

- As an information agency, the Bureau of Meteorology supports the ESD principles through the collection and delivery of information and knowledge in support of intergenerational equity, the precautionary approach and biodiversity conservation. Weather, climate and water information are fundamental elements of ecosystem and associated management.
- The Bureau works closely with the Department of Climate Change (formerly the Australian Greenhouse Office) and other groups in the Departments of the Environment, Water, Heritage and the Arts and Foreign Affairs and Trade to reach positions for Australia within international multilateral forums and organisations such as the Intergovernmental Panel on Climate Change.
- The Bureau has continued to make information on long-term climate variability and change available through the internet in collaboration with the Department of Climate Change, and in support of the Australian Climate Change Science Program and the National Climate Change Adaptation Programme.

Activities which integrate environmental, social, economic and equitable consideration:

- At the national level, the Bureau works closely with a wide range of Australian Government departments and agencies, as well as relevant State and Territory water and agricultural agencies, to provide meteorological and related information and knowledge in support of ecologically sustainable management policy decisions.
- Climate briefings continue to be provided to Ministerial Councils and their subsidiary bodies on current seasonal conditions and outlooks. Bureau officers also provide weather, climate and water technical expertise to the development of policy and guidance material through these mechanisms.
- The Bureau participated in national activities aimed at the protection and management of Australia's marine environment.
- The Bureau continues to expand the range of parameters being archived within the climate database, providing access to a greater variety of meteorological and related data for use in planning under ESD principles.
- The Bureau's National Climate Centre has continued to contribute to the work of the Bureau of Rural Sciences in providing routine inputs to drought monitoring through the National Agricultural Monitoring System, which has provided an information framework for decisions on the distribution of government funding for drought relief.

Activities which aim to promote conservation of the environment for the benefit of future generations:

- The Bureau continues to provide technical guidance to other departments and organisations to ensure resources such as marine, fresh water and land resources are sustained for the benefit of future generations.
- The Bureau's new water information role contributes to enhanced water planning and supports the sustainable development and management of Australia's water resources, consistent with national water reform under the National Water Initiative. The Regulations supporting the *Water Act 2007* came into effect at the end of 2007-08 and require some 250 water agencies and organisations around Australia to deliver certain water data to the Bureau on a specified schedule, as the basis for the Bureau's function of collating and publishing water data at a national level.
- The Bureau, in collaboration with New Zealand's National Institute of Water and Atmospheric Research and with the financial support of the Department of Climate Change and the Australian Agency for International Development (AusAID), continues to support Pacific Island Countries in the identification, preservation, storage and digitising of climate data.
- The Bureau contributed to the implementation of the Integrated Marine Observing System (IMOS) under the Commonwealth National Collaborative Research Infrastructure Strategy. IMOS enhances the ability of the nation to capture, maintain and provide essential oceanic environmental information in support of sustainable management practices.

Activities which ensure that biodiversity and ecological integrity are fundamental to decision making:

- The Bureau continues to provide quality information which enables informed consideration of biodiversity conservation in decision making.
- The Bureau participated in national activities aimed at the development of a national biodiversity strategy for consideration by Government.

Activities which aim to improve valuation, pricing and incentive mechanisms:

- The Bureau continues to promote the benefits of improved information and knowledge regarding the variability and extremes of Australia's climate and water resources in relation to sound economic, social and environmental management.
- The incorporation of more information about natural disasters into the climate database enhances knowledge and understanding of extreme events and disasters, which are essential to the planning of effective mitigation strategies.
- The Bureau has contributed, as appropriate, to the activities of the Environment Protection and Heritage Council and Standing Committee.
- The Bureau has begun the process of compiling National Water Accounts for Australia which will enable improved economic decision making with respect to the allocation and use of the nation's valuable water resources.

2. *How the outcomes (if any) specified for the agency in an Appropriations Act relating to the period contribute to Ecologically Sustainable Development (ESD).*

The role of the Bureau of Meteorology is to achieve the Outcome of 'Australia benefits from meteorological and related science and services'. An element of this Outcome is the satisfaction of present and future needs for continuous reliable data on Australian weather, climate and water. The information and knowledge provided in the Bureau's outputs contribute to ecologically sustainable development decision-making processes across the Australian community, covering diverse areas such as the marine, agriculture, water, climate and aviation sectors.

### *3. The effect of the agency's activities on the environment.*

The Bureau of Meteorology contributes positively to the protection and conservation of the environment through provision of high quality information to numerous decision makers needing to take account of environmental factors. Bureau activities in climate, marine issues, severe weather, water, agriculture and aviation contribute positively to the actions of other organisations.

In the course of its normal operations the Bureau contributes to a number of negative impacts on the environment through its use of non-sustainable resources such as fuel, electricity, water, paper and other materials consumed and its generation of waste products. Of particular note is the high level of electricity usage of some of the Bureau's essential infrastructure and equipment used for critical operations, communications and computing, such as the Central Computing Facility and Doppler radars.

### *4. Any measures the agency is taking to minimise the impact of activities by the agency on the environment.*

The Bureau of Meteorology monitors a range of its operational activities including energy management, transport (fleet management), waste management and purchasing. The Bureau minimises the impact of its operations on the environment by a process of continual improvement within these areas.

Achievements include:

- incorporation of energy-saving initiatives within new facilities designed to provide long-term savings in tenant light and power consumption;
- continued enhancements to the Bureau's Head Office waste recycling program, and the successful implementation of the program in all Bureau capital city Regional Offices;
- active consideration of ESD and Heritage principles in the siting and construction of field facilities;
- diverse use of sustainable resources such as geothermal technology for the provision of mechanical services, and wind power and solar energy for electricity generation at some operational sites;
- pursuit of innovative designs to the extent possible to achieve greater energy efficiency within operational and accommodation facilities;
- water saving initiatives such as:
  - provision of water storage tanks at new radar and meteorological field station facilities;
  - specifications for gardens and surrounds at new facilities that do not require water reticulation, mandate the use of native plants and grasses and include the provision of garden mulch;

- giving emphasis to features which assist in the reduction of water and energy usage when procuring new leased accommodation for staff and equipment; and
- use of ethanol-blend biofuel (E10) in some leased fleet vehicles.

*5. The mechanisms, if any, for reviewing and increasing the effectiveness of those measures.*

The Bureau's energy usage database provides a framework for measuring the effectiveness of actions taken to minimise negative environmental impacts and for considering and addressing environmental impacts within the context of continuous improvement.

The Bureau requires its contracted engineering and project management consultants to actively consider new and innovative means to reduce its ongoing impact on the environment and to promote ESD principles in the construction and redevelopment of new and existing facilities.

Furthermore, the Bureau of Meteorology has an agency-wide energy management plan that addresses the fundamentals of energy conservation as required under past guidelines. The Bureau, consistent with government policy, reviews its environmental and energy management in Bureau-occupied buildings, with a view to improving monitoring, reporting and utilisation of both energy and water. Improvements in data collection methods for water and energy usage aid the organisation in its endeavours to achieve ongoing reductions in its overall resource consumption.