

# State of the Environment Report: Tasmania 2009



FULL REPORT: [www.planning.tas.gov.au/soe](http://www.planning.tas.gov.au/soe)

# State of the Environment Report:

## OTHER INFORMATION

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### Contributing organisations

The following organisations have contributed information and advice to help compile this SoE Report. Their time, the use of their data and assistance is gratefully acknowledged. While care has been taken in consulting with information providers, contributions do not imply any endorsement on the part of these organisations of the interpretation contained in this SoE Report. This is entirely the responsibility of the Tasmanian Planning Commission. Readers are also referred to the general disclaimer and copyright notice.

*Tasmanian Government and corporations:* Department of Primary Industries, Parks, Water and Environment; Environment Protection Authority; Heritage Tasmania; Tasmanian Aquaculture and Fisheries Institute; Tasmanian Institute of Agricultural Research; Forest Practices Authority; Forestry Tasmania; Hydro Tasmania; Natural Resource Management bodies.

*Australian Government and national organisations:* Bureau of Meteorology; CSIRO Marine and Atmospheric Research; Australian Antarctic Division.

### Disclaimer

The Tasmanian Planning Commission has compiled the *State of the Environment Report: Tasmania 2009* in good faith, exercising all due care and attention. No representation is made as to the accuracy, completeness or suitability for any particular purpose of the source included in this SoE Report.

### Design concept

Julie Hawkins

This *State of the Environment Report: Tasmania 2009* presents information for the reporting period from 2003 to 2008 and reflects a new and evolving context for resource management and land use planning.

Future state of the environment (SoE) reporting will review baseline environmental data that have been analysed by data custodians within an agreed sustainability reporting framework. It will provide a high-level summary of key findings, trend identification, and scientifically observed environmental risks and threats. Key environmental indicators will identify trends that inform strategic priorities and the direction of environmental management for government and the community. It will also effectively inform land use and infrastructure planning strategies and improve our knowledge base to address sustainability issues, especially those arising from climate change.

There are significant data in Tasmania from an extensive range of sources, and often these are not comparable, not consistent nor necessarily up-to-date (often as a result of resourcing constraints). Key datasets need to be identified and agreed upon by the data custodians and Tasmanian Planning Commission to ensure they meet environmental management needs.

In recognition of the Tasmanian Planning Commission's roles and responsibilities as the State's land use planning body, the

### Glossary

GBE	Government Business Enterprise
RMPS	Resource Management and Planning System
SoE	State of the Environment
TPC	Tasmanian Planning Commission

Right: Calcareous coccolithophorid (*Emiliana huxleyi*) is an organism that is vulnerable to increasing ocean acidification  
Gustaaf Hallegraeff

Commission has identified a number of strategic actions that it will take to assist in delivering improved environmental outcomes for the State. Key among these is building from the SoE reporting base and moving to a regular reporting process of core physical environment and heritage indicators that will reflect and inform Tasmania's environmental status.

There is no suggestion that a shift to sustainability reporting will be easy: a changing environment requires the ability to adapt and respond to change. An adaptive reporting approach is, and will continue to be, a challenge to all resource and environmental managers. Accessibility to data in a manner that reflects contemporary issues and emerging themes needs to be continually revised.



Greg Alomes  
**EXECUTIVE COMMISSIONER**

October 2009



## CONTENTS

### TOWARDS SUSTAINABILITY

4

- Role of the Tasmanian Planning Commission (Commission) in furthering the sustainability objectives, Tasmania's fundamental environmental pressures, and the Commission's priorities

### FUTURE ACTIONS

6

- Recommendations for future action to be taken by the Tasmanian Government and the Commission

### TASMANIA'S ENVIRONMENT

10

- Summary of trends on the condition, trends and changes to Tasmania's physical environment for the reporting period from 2003 and 2008, which is drawn from the full *State of the Environment Report: Tasmania 2009* web-based version at [www.planning.tas.gov.au/soe](http://www.planning.tas.gov.au/soe)

# Towards Sustainability

As the State's land use planning body, the Tasmanian Planning Commission (Commission) has an integral role in furthering the objectives of Tasmania's Resource Management and Planning System (RMPS).

In very simple terms, the concept of sustainable development means that the wellbeing of our society and economy is dependent on a healthy environment. Society and its economy exist within the parameters of the natural environment.

Supporting the overarching RMPS objectives are objectives specific to the land use planning process that essentially seek to:

- require sound strategic planning and coordinated action by Local and State governments;
- establish a system of planning instruments to be the principal way of setting objectives, policies and controls for the use, development and protection of land;
- ensure that the effects on the environment are considered and provide for explicit consideration of social and economic effects when decisions are made about the use and development of land; and
- ensure that land use and development planning and policy is easily integrated with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels.

While it is recognised that the RMPS objectives are essentially aspirational there is scope for these concepts to be translated from high-level statements of intent into tangible resource management and planning strategies, policies and actions.



## Objectives

The overall statutory objectives of the Resource Management and Planning System are:

- to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and
- to provide for the fair, orderly and sustainable use and development of air, land and water; and
- to encourage public involvement in resource management and planning; and
- to facilitate economic development in accordance with the objectives set out in the above paragraphs; and
- to promote the sharing of responsibility for resource management and planning between the different spheres of government, the community and industry in the State.

Fundamental to the objectives is the concept of 'sustainable development'. The RMPS objectives define sustainable development as:

- managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while:
  - (a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and
  - (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
  - (c) avoiding, remedying or mitigating any adverse effects of activities on the environment.

State of the environment (SoE) reporting has the potential to play a pivotal role in guiding policy development and management strategies, and furthering the RMPS objectives. It will review baseline environmental data that have been analysed by data custodians within an agreed sustainability reporting framework. Reporting will also provide a high-level summary of key findings, trend identification and scientifically observed environmental risks and threats, to better inform policy and decision-makers.

For example, two fundamental and observable pressures on the Tasmanian environment feature in each chapter of the 2009 SoE Report, namely:

- climate change; and
- land and water use activities.

Climate change is a difficult pressure to report on because of its potential for far reaching effects on all aspects of the environment and because the majority of changes are projected to occur in the future: it is a problem characterised by uncertainty, complexity, and urgency. Additionally, although a range of measures have been identified to assess the physical effects of climate change, indicators are still being developed to monitor and report on the costs and benefits of management actions in a consistent and comparable manner.

Responses to climate change are generally classed as either mitigation (reducing emissions of greenhouse gases) or adaptation (responding to the unavoidable consequences of climate change). While there are no immediate comprehensive solutions in place for either mitigation or adaptation, there are many available options and strategies that can assist in reducing risk and promoting the resilience of natural and human systems. While governments around the world work toward ways to slow climate change, this will only occur over a long period. For resource management it is critical to gain an understanding of the nature and magnitude of climate change and aspects of the environment that are likely to be impacted (both positively and negatively). Climate change will require a rethink on how and where people live and use natural resources. There is a need to respond quickly to the environmental changes through policy and adaptive management practices.

Land use planning is one mechanism that can ensure sustainable allocation and use of natural resources. The regional land use planning initiative is a major step toward updating planning schemes, but to do this effectively baseline environmental data are required. There is an urgent need for accurate, comparable, consistent, reliable and up-to-date data to help implement responses to both of these pressures.

Achievement of resource management objectives continues to be difficult to determine in the absence of audits and evaluations of relevant legislation, policies, strategies and programs. Sustainability reporting by Government agencies and bodies responsible for natural resource management is required.

## Priorities

Over the next five years the Tasmanian Planning Commission's top priority is to improve the standard of land use planning and to ensure that Tasmania's sustainable development objectives are furthered as far as possible. This SoE Report is a first step to facilitate that change without losing our baseline environmental performance data and reporting framework. This will be achieved through a number of mechanisms including:

- performing its statutory roles and functions effectively and efficiently in accordance with section 29 of the *State Policies and Projects Act 1993* and the *Tasmanian Planning Commission Act 1997*;
- improving and developing a range of planning instruments that can give practical effect to furthering the RMPS objectives;
- identifying the need for and developing resource management and planning policies;
- facilitating the preparation and implementation of regional land use strategies and state of the region reporting that meet the needs of Local and State governments; and
- participating in the management of electronic planning information and data.

# Future Actions

Managing our environment is a responsibility shared by all Tasmanians and the Government of the day, which sets policy and prioritises expenditure through the budget process.

Previous SoE reports have contained a large number of specific and detailed recommendations, many of which have been taken up and implemented or dealt with through other mechanisms before the reports have been published.

For this SoE Report the Commission has focussed on high-level strategic recommendations that further the RMPS objectives, and lay the foundations for more efficient and cost effective data collection and analysis that is made publicly available for multiple use. The recommendations are aimed at enabling all levels of government and government business enterprises (GBEs) to achieve the following outcomes:

## **1 improved coordination of data collection and analysis; and**

## **2 improved alignment of policy development, implementation and management across Government, with the RMPS objectives.**

The recommendations are presented within a sustainability framework that highlights the structural connections and potential synergies and partnerships between the Tasmanian Government, GBEs, the Commission and other non-government environmental managers.

The Commission is not necessarily advocating an increase in the total quantity of data collected. Rather, there is a need to ensure that data collection and analysis is strategic, complementary and reflects policy priorities and that datasets and analytic outputs are publicly available.

These recommendations are submitted for consideration and response by the Tasmanian Government.



Trousers Point Cove, Flinders Island  
Tourism Tasmania and Steve Lovegrove



Colebrookdale at Colebrook is part of Tasmania's historic heritage  
Heritage Tasmania



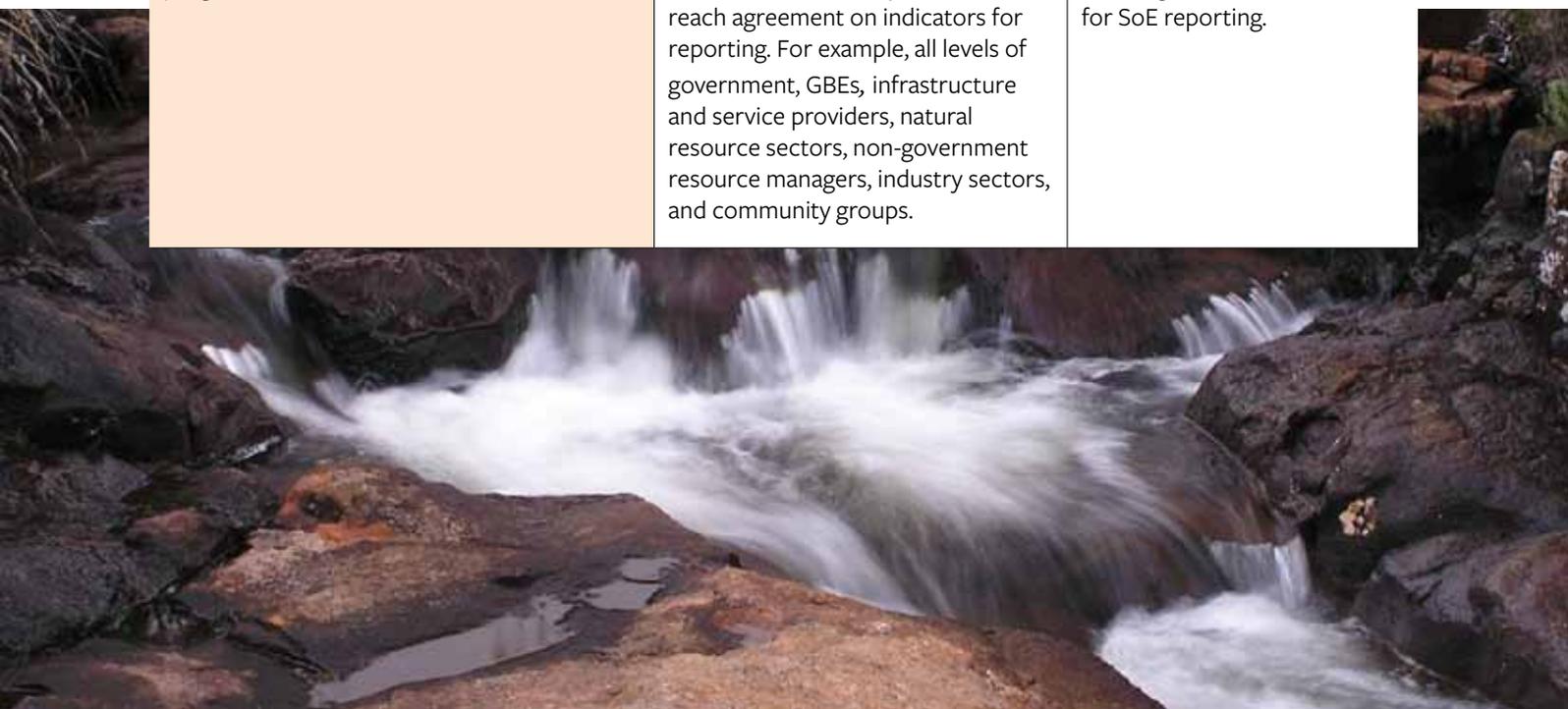
Drowned sea-cave at Cape Pillar, Tasman Peninsula  
Rolan Eberhard

Opposite:  
Arve River, Hartz Mountains  
Sean McPhail

# 1 ACTION NO. 1

## Improved coordination of data collection and analysis

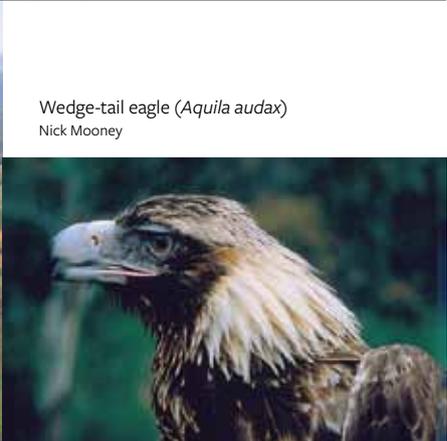
Issue	Government's role	Commission's role
<p>Quality data is not accessible for planning, management and reporting. Data collection and analysis is often not:</p> <ul style="list-style-type: none"> <li>• consistent;</li> <li>• coordinated;</li> <li>• comparable; or</li> <li>• reliable;</li> </ul> <p>And can be:</p> <ul style="list-style-type: none"> <li>• fragmented; or</li> <li>• out-of-date.</li> </ul> <p>SoE reporting provides an example of a planning process that has been constrained by deficiencies in access to consistent, reliable and comparable data since it commenced in 1996.</p> <p>Governments, GBEs, infrastructure and service providers, natural resource sectors and industry sectors do not have a process or system that facilitates a strategic and cost effective approach to data collection whilst meeting the needs of multiple users.</p> <p>This needs to be resolved to maximise the knowledge base, with benefits for SoE reporting.</p>	<p><b>Governance structure</b></p> <p>Review current governance structures for coordination and management of key datasets to facilitate spatial analysis and the development of indicators for sustainability reporting.</p> <p>Extend a strategic approach to indicator development, monitoring and data collection and maintenance to meet the information needs of all resource managers. For example, all levels of government, GBEs, infrastructure and service providers, natural resource sectors, and non-government resource managers.</p>	<p>Participate in the governance review on the management and use of key datasets and the development of indicators for SoE reporting.</p>
<p>Deficiencies in communication and the sharing of information by data collectors.</p> <p>Lack of awareness of other data collection programs that are the same or similar.</p>	<p><b>Engage with stakeholders</b></p> <p>Engage with stakeholders that have, or could use, key datasets and reach agreement on indicators for reporting. For example, all levels of government, GBEs, infrastructure and service providers, natural resource sectors, non-government resource managers, industry sectors, and community groups.</p>	<p>Liaise with stakeholders to reach agreement on indicators for SoE reporting.</p>



# 1 ACTION NO. 1

## Improved coordination of data collection and analysis (continued)

<p>Lack of metadata (structured record of who, when, why and where data were collected) can make data unusable.</p> <p>Monitoring programs are often conducted using different methodologies and data management tools making comparison difficult.</p> <p>Data can get 'lost' or become inaccessible when organisational change occurs within a Government agency.</p>	<p><b>Policies and management systems</b></p>	
	<p>Apply nationally accepted metadata standards to the collection of all datasets.</p> <p>Review and implement data collection policies and management systems to ensure that data are collected, managed and interpreted to acceptable standards of efficiency and effectiveness.</p> <p>Enable access to key datasets and analysis.</p>	<p>Review metadata requirements for planning purposes.</p> <p>Establish and/or, facilitate an information technology system to manage and maintain planning schemes and other related information.</p> <p>Use key data to inform SoE reporting, and strategy development and evaluation, and to meet sustainability objectives.</p>
<p>Often the quality and reliability of data cannot be verified.</p>	<p><b>Policies and management systems</b></p>	
	<p><b>Audit and review</b></p> <p>Regularly audit and review the collection, management and accessibility of key datasets and indicators and adjust policies and conduct performance reviews as required.</p>	<p>Evaluate on a regular basis the performance of the collection, management and accessibility of key datasets and indicators and adjust policies as required.</p>



Wedge-tail eagle (*Aquila audax*)  
Nick Mooney



Fertile soils near Mt Roland  
Tourism Tasmania and Dennis Harding

Smoke in the hills from a bushfire west of Cornwall on the east coast, December 2006  
The Mercury

## **2 ACTION NO. 2** **Improved alignment of policy development, implementation and management across Government with RMPS objectives**

<b>Issues</b>	<b>Government's role</b>	<b>Commission's role</b>
<p>Lack of broad 'whole of government' direction to the development of environmental policies by Government agencies. A 'whole of government' approach will assist the delivery of RMPS objectives.</p>	<b>Governance structure</b>	
	<p>Develop an environmental policy framework to provide direction and improve coordination of Government agency outputs. This will ensure a consistent and comprehensive approach to policy development and implementation of resource management and planning regulatory mechanisms, policies, strategies and management systems.</p> <p>A risk assessment for each of the key environmental issues identified in this SoE Report would enable the development of a long-term strategic environmental management plan to ensure the efficient and effective allocation of resources for future environmental management.</p>	<p>Consistently apply resource management and planning policies through the decision-making process.</p>
<p>Confusion and misunderstandings about environmental management policies that arise within and across all levels of government, GBEs, infrastructure and service providers, natural resource sectors, non-government resource managers, industry sectors, and community groups.</p>	<b>Engage with stakeholders</b>	
	<p>Continue to work with all levels of government, GBEs, infrastructure and service providers, natural resource sectors, non-government resource managers, industry sectors, and community groups.</p>	<p>Provide information and feedback to Government on planning and environmental and resource management issues.</p>
	<b>Policies and management systems</b>	
<p>Develop policies and management systems that ensure integration and coordination between Government agencies responsible for different, but interrelated, aspects of resource and environmental management.</p>	<p>Apply SoE reporting framework to report on key resource sectors and include assessment in the next SoE Report.</p>	
<p>Lack of clear lines of responsibility / accountability, particularly for the management of environmental threats.</p>	<b>Audit and review</b>	
	<p>Expand and enhance sustainability reporting, and conduct audit and performance reviews as required, for the governing body, with information to be provided by Government Agencies with environmental management responsibilities. This will provide a mechanism to evaluate environmental outcomes and provide greater accountability and responsibility for the achievement of those outcomes.</p>	<p>Apply SoE reporting framework to report on key resource sectors and include assessment in the next SoE Report.</p>



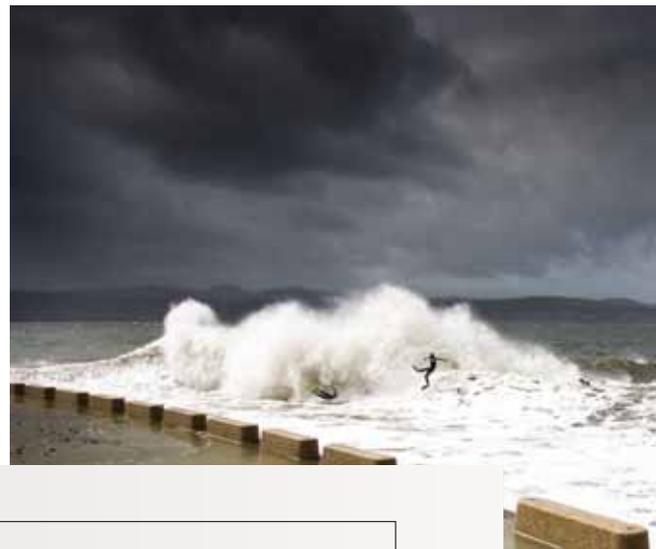
# Tasmania's Environment

The 2009 SoE Report contains four major environmental themes: *Air, Water, Natural Values, People and Places*. Each of these chapters is made up of condition and pressure Issue Reports. These Issue Reports present information for the reporting period from 2003 to 2008 and are supported by environmental indicators that have been compiled using data from a variety of sources. Longer-term datum is included where it provides context to more recent trends and changes. The reports draw on a number of different indicators to provide analysis of conditions, trends and changes.

A recurring constraint while preparing this SoE Report has been the lack of knowledge about a number of environmental themes or issues and the lack of consistent data collection. This constraint has seriously limited the ability to fully report on trends and changes in an informed way. Notwithstanding this limitation the report provides an overall snapshot of the condition of Tasmania's environment and a number of emerging trends and changes.

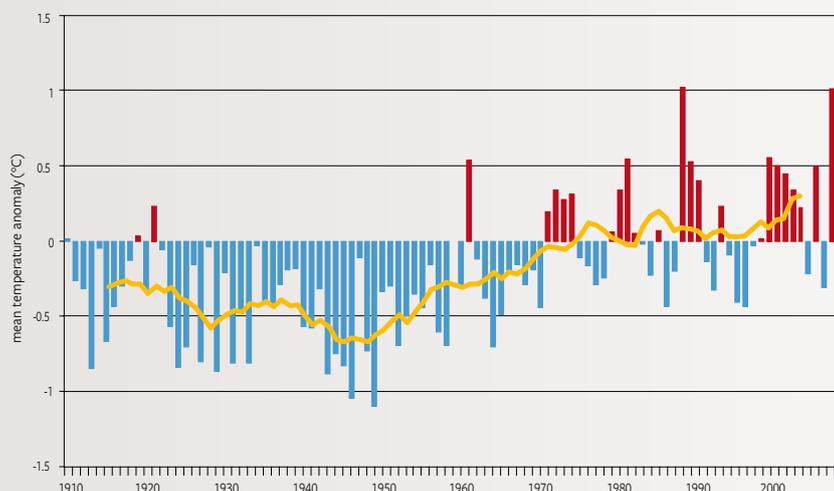
Tasmania's environment is diverse and has a wide range of terrestrial, freshwater and marine plants and animals. Trends and changes to these species and their ecosystems have occurred due to interrelated pressures including:

- climate change;
- land and water use practices;
- pests and diseases; and
- consumption.



Storm waves breaking over the sea-wall at Nutgrove Beach, 27 September 2009  
Sam Shelley Photography

**Long-term changes in  
Tasmanian annual temperature,  
1910 to 2008**  
Bureau of Meteorology



## CLIMATE CHANGE

The long-term temperature, rainfall and streamflow records demonstrate that Tasmania's climate is naturally variable. This variability is evidenced over the last five years in drying as well as recent periods of record high rainfall in 2009. Many components of the environment have remained resilient to this variability. For example, many rivers, lakes and wetlands retain healthy aquatic systems and are among the best preserved in southeast Australia. In addition, little overall change has been observed in marine rocky reef communities and at times, the State experiences some of the best ambient air quality in Australia. However, it is becoming evident that longer-term climate change is leading to the redistribution of some species and altered ecosystem dynamics. Observable effects of climate change include the inundation and erosion of vulnerable coastal shorelines from more severe storm surges and sea-level rise, and an increase in sea temperature resulting from the warm Eastern Australian Current advancing down the east coast.

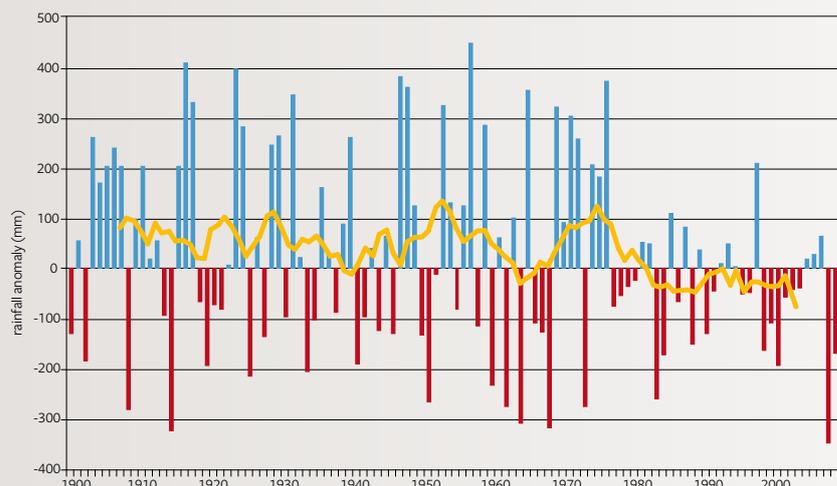
Responding to this pressure, the Tasmanian Government has partnered with local government, GBEs, research institutions, industry and the general community to learn more about the implications of climate change and develop strategies aimed at adaptation including:

- Establishment of the Tasmanian Climate Change Office in 2008.
- Establishment of a target reduction in carbon dioxide (CO<sub>2</sub>) of 60% by 2050 through the *Climate Change (State Action) Act 2008*.
- Collaborative projects such as *Tasmania Sustainable Yields* and *Climate Futures for Tasmania* aim to provide the science to help underpin the planning and sustainable management of the State's water resources and interpret climate projections at a local scale.
- The *Building Resilience into Natural Systems: Adaptation to Climate Change* project aims to develop and implement adaptation responses to reduce the vulnerability of natural values to climate change.
- Coastal geomorphic mapping has been extended and the *Climate Change and Coastal Risk Management Project* has been established to improve the information on extreme sea-levels in Tasmania.
- Some local councils are conducting climate change related risk assessments e.g. Clarence City Council's study on coastal inundation for Clarence coastal areas.

Dry eucalypt forest,  
Northern Midlands  
Stephen Waight



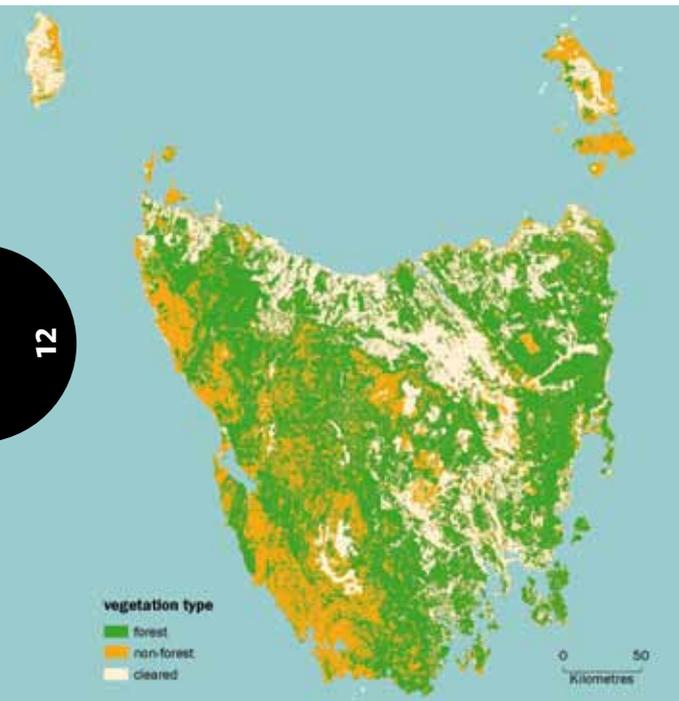
**Long-term changes  
in Tasmanian annual  
rainfall, 1900 to 2008**  
Bureau of Meteorology



## LAND AND WATER USE PRACTICES

Primary production and urban development has led to increasing pressures on natural values. One example is the clearance and modification of native vegetation and landforms for agriculture, forestry and settlements. Efforts to manage and conserve the environment include:

- Major policy reforms phased out broadscale vegetation clearing. Revision of the *Policy on Maintenance of a Permanent Native Forest Estate* in 2005 raised the retention levels set for the maintenance of the permanent native forest estate from 80% to 95% of the 1996 native forest area.
- Listing threatened native vegetation communities under the *Nature Conservation Act 2002* and other relevant legislation has provided protection for threatened native vegetation from clearance and conversion.
- Expansion of the *Natural Values Atlas* to provide electronic data on natural values including plants, animals and threatened species.
- Establishment of the *Statewide Baseline Water Quality Monitoring Program* has significantly improved the coverage and availability of data on water quantity and quality. Other initiatives include the development of the *Tasmanian Index of River Condition* and the *Wetlands Strategy for Tasmania*.
- The *Conservation of Freshwater Ecosystems Values* project has been a key action to ensure that high priority freshwater values are considered in the management of Tasmania's natural resources.
  - The *Derwent Estuary Program*—a partnership between State and local governments, industry and the general community—has implemented a range of water quality and biodiversity monitoring programs.
  - Establishment of a *Natural Resource Management Framework* and the development of strategies for the long-term management of natural resources by the three Natural Resource Management bodies.
  - The *Soil Condition Evaluation and Monitoring* project commenced in 2004 in response to the need for more comprehensive soil research, the *Tasmanian Salinity Strategy* was released in 2007 and a *Salinity Hazard and Critical Assets Assessment* is being conducted in municipalities that are highly susceptible to salinity.
  - *Private Land Conservation Program* commenced in 2006 to facilitate the sustainable management of natural diversity on private land.
  - Seabed mapping has been undertaken as part of the Tasmanian Aquaculture and Fisheries Institute *Seamap Project* to provide high quality information on marine habitat types to 1.5 km of the Tasmanian shore.



The extent of native forest and non-forest vegetation, 2007  
Department of Primary Industries, Parks, Water and Environment and Landscape Logic

Tasmanian devil  
(*Sarcophilus harrisi*)  
Department of Primary  
Industries, Parks, Water  
and Environment



Tasmanian tree frog  
(*Litoria burrowsae*)  
Matthew Pauza



## PESTS AND DISEASES

The number of introduced plant and animal pests, such as the introduction of the European fox and long-spined sea urchin is increasing in Tasmania. Native plant and animal diseases, such as the Devil Facial Tumour Disease that is severely impacting Tasmanian devils and the disease phytophthora that is affecting native vegetation, continue to be significant threats to vulnerable native species. Key management responses include:

- Release of the *Tasmanian Biosecurity Policy* and the *Tasmanian Biosecurity Strategy* in 2007 to mitigate land- and marine-based weeds, pests, diseases and other invasive species.
- Revision of the Tasmanian weed management strategy—*WeedPlan*—to reflect the policy goals and principles of the *National Weeds Strategy*.
- Many weed-related strategies, plans, processes and procedures have been developed by the Natural Resource Management bodies, working with government, GBEs, industry, non-government organisations and community members to control the spread of weeds and diseases.
- The *Phytophthora Cinnamomi Strategic Regional Plan* was developed in 2003 to conserve plant species and communities threatened by this root rot fungus.
- The 2008 *Review of Wildlife Monitoring Priorities* and *Wildlife Monitoring Strategy* set monitoring priorities for introduced animals; and priorities for species that are listed as threatened, species subject to a potential threat, and species that are harvested or culled.
- The most specific species conservation initiative in the last five years has been to save the Tasmanian devil from extinction. In 2005, the *Devil Facial Tumour Disease Management Strategy* was established to improve disease management and risk minimisation, and a five-year plan has been developed to guide the *Save the Tasmanian Devil Program* until 2013.
- Expansion of the fox eradication effort in 2006, established the *Fox Eradication Program* with combined Commonwealth and State funding for a ten-year *Fox Eradication Strategy*.
- The *Carp Management Program* has eradicated the majority of European carp from Lake Crescent and Lake Sorell, and the *Plan for the Eradication of Rabbits and Rodents on Subantarctic Macquarie Island* was implemented in 2007.
- Initiatives to control animal diseases include the *Wildlife Disease Strategy* for the Tasmanian Wilderness World Heritage Area, the *Chytrid Research and Management* project to conserve frog populations, and the *Platypus Conservation Program* to conserve platypuses.
- Collaborative efforts between marine scientists and the Tasmanian rock lobster fishing industry have trialled methods to control the spread of the long-spined sea urchin by releasing mature rock lobsters into waters along the east coast to prey upon the marine pest.

The Northern Pacific seastar (*Asterias amurensis*) is an invasive marine pest that has invaded shallower waters along the east coast and the southern estuaries  
CSIRO



Marram grass (*Ammophila arenaria*) is an invasive weed found on coastal dunes around the State  
Tim Rudman



The European wasp (*Vespa germanica*) is an invertebrate pest that is now widespread and common  
Robert Luttrell



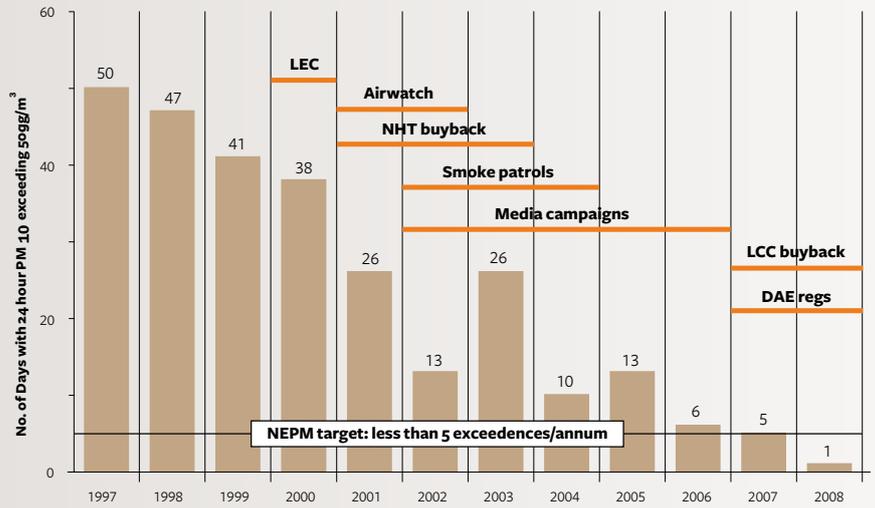
The long-spined sea urchin (*Centrostephanus rodgersii*) is an invasive marine pest that has progressively moved down the east coast  
Scott Ling





Cloud formations at Sleepy Bay, Freycinet National Park  
Tourism Tasmania and Paul Sinclair

**Exceedences of the National Environment Protection Measure for Ambient Air Quality (the Air NEPM)** for particles smaller than 10 µm in diameter at Ti Tree Bend, Launceston  
Environment Protection Authority



## CONSUMPTION

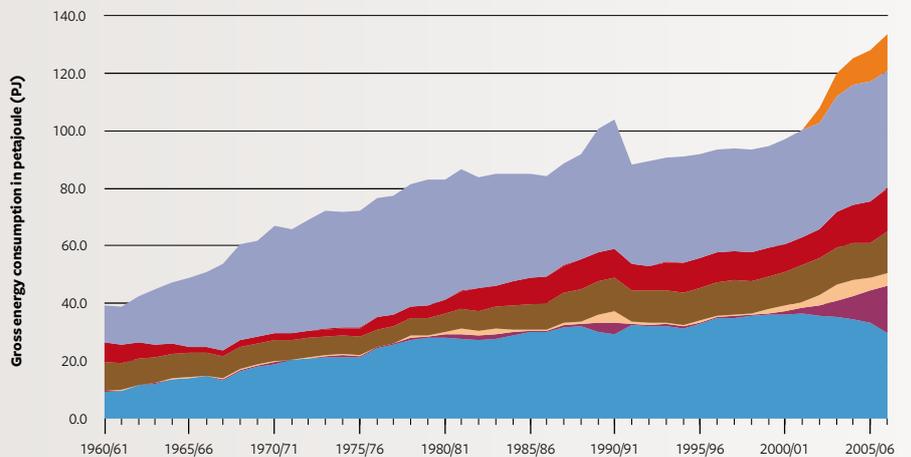
Human activities including the construction of buildings and infrastructure, industrial manufacturing and processing, energy use, the sourcing of household and other goods, and recreation contribute to pollution, the generation of waste, and pressures on natural resources and Aboriginal and European heritage.

- The *Regional Planning Initiative* was announced in 2007 as the first step towards achieving consistent and contemporary planning schemes across the State based on a regional land use strategy.
- The *Tasmanian Air Quality Strategy* and *Tasmanian Environment Protection Policy (Air Quality)* were finalised in 2005 to reduce, and report, the discharge of air pollutants. New baseline air quality monitoring stations are operating and regional air quality is being monitored.
- Substantial improvements have been made to air quality in the Launceston airshed, a region that has experienced elevated levels of particle pollution particularly over winter. A range of measures including the Launceston wood heater replacement program (LCC buyback) has resulted in a 30% decline in wood heater use and a corresponding reduction in particle pollution.
- Tasmania was connected to the national piped gas supply in 2003 as part of the *Tasmanian Natural Gas Project*. In 2006, Basslink joined the State to the national electricity grid.

**Key energy consumption in Tasmania by fuel, 1960 to 2007**  
(solar energy and town gas comprise only a small proportion of energy use)

Australian Bureau of Agricultural and Resource Economics

- Hydro electricity
- Electricity – other
- Thermal electricity
- Wood, woodwaste
- Black coal
- Petroleum products
- Natural gas



## KEY FINDINGS

Key findings distilled from the Issue Reports are set out in the table below.

- TREND represents the likely trend direction since the 2003 SoE Report.
- CONDITION trends provide an indication about how healthy the environment has been over the past five years.
- PRESSURE trends indicate if stressors are potentially affecting the condition of the environment.

### Legend:

Likely trend direction since 2003	Trend
CONDITION of the environment likely to have	 improved  deteriorated
PRESSURES on the environment likely to have	 decreased  increased
Trend steady	
Trend is not clear, uncertainty	
Condition not applicable	N/A

Issue Report	Trends or changes		Comments
	Condition	Pressure	

## Air

Climate variability and change			Changes have occurred in the regional patterns of climate variability.
Stratospheric ozone			The 2006 ozone hole was a record for the amount of ozone destroyed.
Ambient air quality			Air quality for the Launceston airshed has improved with a significant reduction in particulates correlating with a reduction in the use of wood heaters. The impact from bushfires and regeneration burns on air quality is not well understood.
Indoor air quality			Indoor air quality is an emerging issue and our knowledge is limited.



Deciduous beech (*Nothofagus gunnii*) and pandani (*Richea pandanifolia*)  
Corbett Collection



Tree decline and wind erosion, Southern Midlands  
Marcus Hardie



Small tarn near Lake St Clair  
Sean McPhail

Issue Report	Trends or changes		Comments
	Condition	Pressure	

## Water

Water quality	~	~	Water quality in some rivers has been affected by climate variability, decreasing streamflows during the recent drought, and catchment land use activities.
Water quantity and use	?	▲	While there is significant inter-annual variability, water quantity has declined with decreasing streamflows during the recent drought.
Aquatic health	~	~	Aquatic health varies across the State but has generally remained stable.
Groundwater	?	▲	Monitoring of groundwater is not sufficient to establish groundwater condition in relation to quantity or quality.
Estuarine water quality	?	▲	Estuarine conditions range from pristine (Port Davey–Bathurst Harbour) to modified to degraded (Derwent and Tamar estuaries).
Riparian vegetation	~	~	Riparian vegetation varies across the State, however, its condition has generally remained stable.
Wetlands	?	▲	Long-term changes in rainfall and natural inflows are affecting some wetlands.
Catchment land use	N/A	▲	One third of the State’s river network is subject to catchment disturbance. The remaining river network is comparatively free from catchment disturbance.
Water extraction and storage	N/A	▲	Tasmania has the highest proportion of its agricultural land under irrigation of any Australian state. Prolonged low rainfall reduced storage levels for hydro-electricity generation during the period between 1996–2006.
Climate change and water	N/A	▲	There have generally been less wet years and less autumn rainfall since the 1980s.



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## Natural values

Native vegetation			There is significantly more native forest than non-forest vegetation such as grassland. The reduction in the native forest estate between 1997–98 and 2007–08 was approximately 132,120 ha.
Native animals			There is uncertainty about the condition of many native animal populations.
Geodiversity			The condition of karst systems of porous limestone and dolomites caves and streams appears stable to improving, whereas the condition of fluvial and coastal systems appears to be declining.
Soil diversity			Soil structure decline is one of the most serious forms of land degradation.
Threatened species and communities			In total, 608 species of plant and animal are listed as threatened.
Estuarine, coastal and marine			It is not possible to report on the state or trends in the condition of estuarine, coastal and marine environments because they have been incompletely described and inconsistently monitored.
Plant pests (weeds) and native plant diseases	N/A		Seven of the 20 Weeds of National Significance species are in Tasmania. Between 2001–07 the number of declared weeds increased from 86 to 102. The introduced soil-borne root rot disease, <i>Phytophthora</i> , is the most significant biotic fungal threat to native vegetation.
Animal pests and native animal diseases	N/A		Effects of animal pests and native animal diseases on Tasmania's native plants, animals and ecosystems are increasing.
Estuarine and marine pests and diseases	N/A		The distribution and impacts of introduced marine species and diseases remains largely unknown and unstudied. The effects of marine pests are increasing.
Salinity (soil and water)	N/A		Salinity distribution and pressure on affected areas is relatively stable.
Climate change and natural values	N/A		Changes in climate are affecting natural values in all environments.



Woolnorth Studland Bay Wind Farm  
Roaring Forties  
Tasmania



Damage to middens by 4WD vehicles at Ordnance Point, west coast  
Colin Hughes



Built in 1938, the old Hydro-Electric Commission building is now occupied by the Hobart City Council  
Heritage Tasmania



Issue Report	Trends or changes		Comments
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## People and places

Population and settlement patterns	?	▲	Tasmania's population reached 500,300 in 2008. For the reporting period, the population increased by 24,100.
Energy use	N/A	▲	Energy use increased by approximately 14% during the reporting period.
Waste	N/A	▲	Consumption of goods and services and the subsequent quantities of waste that are produced have increased. Improved management actions have kept the overall volume of waste stable.
Aboriginal heritage	?	▲	Long-standing pressures continue to affect Aboriginal cultural heritage. Over 65,000 ha have been returned to the Aboriginal community since 1995.
Historic heritage	?	▲	The capacity to assess trends in the condition of historic places is limited. Heritage Tasmania has 5,450 listings on the Tasmanian Heritage Register.

Right: Egg Beach (boulder beach), Flinders Island  
Ian Houshold



Left: The Lake Margaret Woodstave Pipeline on the west coast is part of Tasmania's historic heritage  
Heritage Tasmania

Below: Giant kelp (*Macrocystis pyrifera*), Bicheno  
Graham Edgar



Left: Hobart and the Derwent Estuary from Mt Wellington  
Tourism Tasmania and Garry Moore

Below: Tasmanian native bee (*Megachile maculariformis*)  
Robert Luttrell



Right: New River Lagoon is a pristine estuary found within the Tasmanian Wilderness World Heritage Area  
Grant Dixon

Left: The Ballroom in Exit Cave, Ida Bay  
Ian Houshold



Below: Tamar Estuary wetlands provide important habitat for wildlife  
Tourism Tasmania and Geoffrey Lea



Above: Russell Falls, Mt Field National Park  
Stephen Waight

# State of the Environment Report: Tasmania 2009



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FULL REPORT: [www.planning.tas.gov.au/soe](http://www.planning.tas.gov.au/soe)