

Meeting Paper

AGENDA ITEM:	4.5
MEETING No:	2018-04
PREPARED BY:	GREG ALOMES

Subject: 2018 Update Review of the State of the Environment (SoE) Reporting 2013

Summary: To consider a draft updated review report on SoE Reporting and commit to prepare the next SoE Report.

Resolution: The Commission resolves to

- a) Note the draft 2018 review report and Recommendation 1 'that the Tasmanian SoE reporting program continues from within the Tasmanian Planning Commission;
- b) Commit to producing the next SoE Report as soon as practicable; and
- c) Prepare a draft SOE work program, including resourcing and management arrangements, for consideration by Commissioners.

Background

The 2009 SoE Report identified significant and longstanding complexities and constraints with the methodology and data necessary to produce a comprehensive SoE Report and meet statutory obligations under the *State Policies and Projects Act 1993 (Act)*.

In 2009/10, the Tasmanian Planning Commission was formed by the merger of the Resource Planning and Development Commission and Land Use Planning Branch and assigned significant additional statutory planning and policy responsibilities, especially in relation to the Government's interim planning scheme reforms.

In 2011, the Commission determined that there would be insufficient resources to fulfil the Government's reform program and produce the next 5-year SoE Report due in 2014. The Commission initiated a review of SoE reporting, including approaches adopted in other jurisdictions, to ensure that future SoE reporting provided a relevant and cost effective tool for the Government and the community.

2013 Review Report

The January 2013 review report ('Review of the State of the Environment Reporting') identified opportunities to improve the SoE process and recommended that the Government allocate additional resources to establish a dedicated SoE Unit to develop and implement a new reporting approach. The review report also noted that should this not be practicable, production of the 2014 SoE Report be deferred until after completion of the planning reform program.

The review report was submitted to the Secretary of the Department of Justice, but not forwarded onto the Minister for Planning and Local Government and no additional funding was provided. Production of the 2014 SoE Report was deferred.

2018 Review Update

As five years has elapsed since the 2013 review report and the interim planning scheme reform has been implemented, a draft update has been prepared highlighting more recent developments in SoE reporting in other jurisdictions. The draft 2018 review report is attached. Please note that some jurisdictions have yet to provide responses for inclusion in the report.

The 2018 review's first and principal recommendation is that 'the Tasmanian SoE reporting program continues from within the Tasmanian Planning Commission'.

This recommendation recognises the Commission's statutory obligation to produce the next SoE Report. It also recognises the reality that the option of seeking legislative amendments to transfer this responsibility to an SOE Unit (or other entity such as the EPA) is no longer realistic.

It is proposed that the Commission note the first recommendation and commit to producing the next SoE Report as soon as practicable.

Next Steps

Subject to the endorsement of this recommendation, a comprehensive work program will need to be prepared to confirm the scope, structure, resourcing and timing of the project.

The immediate action will be to allocate funding in the Commission's 2018/19 budget. While Recommendation 6 states 'that government commitment is sought for adequate funding for the Commission to undertake the SoE program', recent discussions with the Minister have confirmed that no additional funding will be provided in 2018/19.

However, delays with the Local Provisions Schedule process has created some potential to re-assign existing resources to an SoE program. Similarly, there may be potential to negotiate professional and technical support from other areas of government.

Clarifying potential resources available will form part of the Commission's 2018/19 budget preparation process and related discussions with the Department of Justice and other entities. A further report on a draft SOE work program, including resourcing and management arrangements, will be prepared and submitted to a future Commission meeting.

Attachment

1. 2018 Update Review of the State of the Environment Reporting 2013



TASMANIAN PLANNING COMMISSION

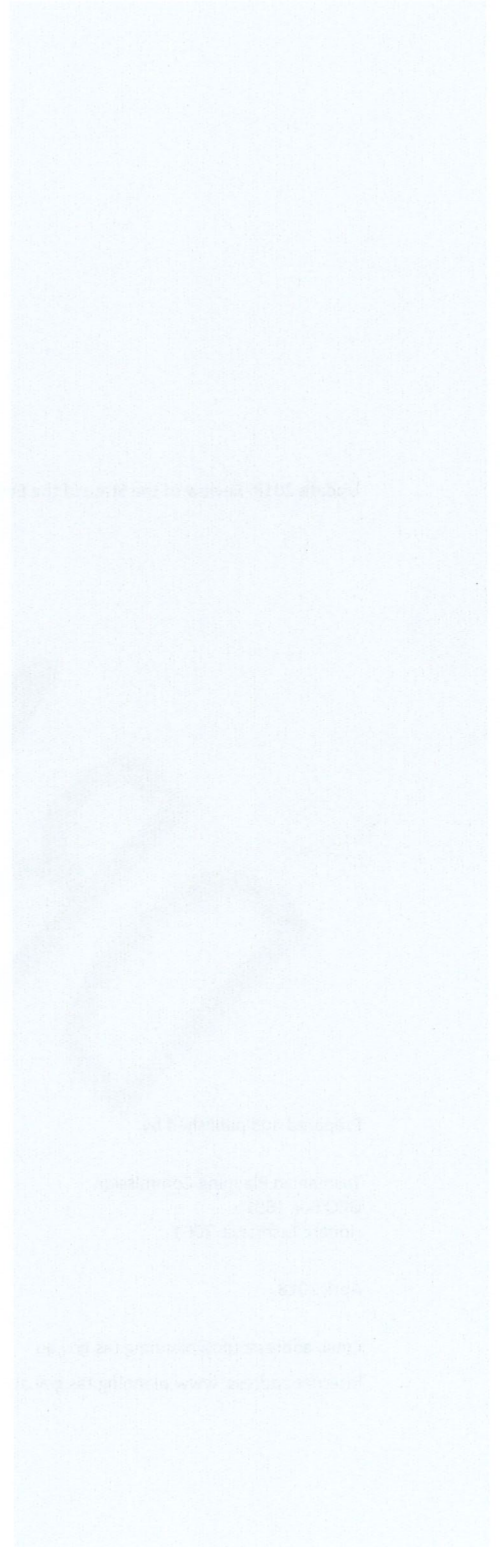


Update 2018:

**Review of the State of the Environment Reporting
25 January 2013**

April 2018

DRAFT



Update 2018: Review of the State of the Environment Reporting 25 January 2013

DRAFT

Prepared and published by:

Tasmanian Planning Commission
GPO Box 1691
Hobart Tasmania 7001

April 2018

Email address: tpc@planning.tas.gov.au

Internet address: www.planning.tas.gov.au

Table of Contents

Summary	i
Glossary.....	iii
1.0 Introduction	4
1.1 Purpose of the 2018 Review.....	4
1.2 <i>Structure of the 2018 Review</i>	4
1.2.1 Background for the Review.....	4
1.2.2 Scope of the Review	4
1.2.3 Background to the Tasmanian State of the Environment Reporting	5
2.0 State of the Environment Reporting in Tasmania	7
2.1 State of the Environment Tasmania 1997.....	7
2.2 State of the Environment Tasmania 2003.....	8
2.3 State of the Environment Tasmania 2009.....	9
3.0 Other jurisdictions.....	10
3.1 Development of State of the Environment Reporting	10
3.2 Australia.....	12
3.2.1 National.....	14
3.2.2 Victoria.....	15
3.2.3 New South Wales.....	16
3.2.4 Queensland.....	16
3.2.5 Western Australia	17
3.2.6 South Australia.....	18
3.2.7 Australian Capital Territory.....	18
3.2.8 Northern Territory	20
3.3 Organisation for Economic Cooperation and Development	20
3.4 New Zealand.....	20
3.5 Other State of the environment reporting.....	22
4.0 Other Tasmanian environmental reporting	23
4.1 Department of Primary Industries, Parks, Water and Environment.....	23
4.1.1 Environment Protection Authority	23
4.1.2 Natural Resource Management.....	23
4.1.3 LISTdata.....	24
4.2 Sustainable Timber Tasmania.....	24
4.3 Forest Practices Authority	24
4.4 Sense-T	25

Update 2018: Review of the State of the Environment Reporting 25 January 2013

4.5	CSIRO Data Access Portal	25
4.6	Australian Government	25
5.0	Discussion and recommendations	26
6.0	Conclusions	30
7.0	Consolidated recommendations	31
	Appendix: Review of the State of the Environment Reporting 25 January 2013	32

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Summary

In April 2012, the Tasmanian Planning Commission prepared a: 'Review of the State of the Environment Reporting'.

Five years have passed since that 2013 review, and the review report is being updated, including providing options and recommendations for the future of Tasmanian SoE reporting.

A focus of the 2013 Review was to summarise SoE reports from other jurisdictions. However, the 2018 Review focusses on the legislative requirements of other jurisdictions and the modes used to publish their reports.

Stakeholders were not engaged in the development of this review.

SoE reporting in Australia varies from jurisdictions without an SoE program, through those that have let it lapse, to the majority remainder that undertake full reporting.

Some local governments across Australia also provide a state of the environment report for their municipality.

In addition to SoE reporting, various Tasmanian agencies and GBEs produce reports on specific indicators, which have some overlap (but not strict duplication) with the SoE reporting.

The Tasmanian Government is developing a 'Stats Matter Strategy' to undertake collection, management, analysis and reporting of high quality open data. The Sense-T program in Tasmania provides the capacity for an integrated, real-time statewide monitoring network for environmental and other data.

The best option for Tasmania would be to resume its SoE reporting program, in keeping with most Australian jurisdictions. The National SoE draws from national and State and Territory reports, and a resumption of the Tasmanian SoE would also assist this process.

Rejuvenating the Tasmanian SoE could involve other agencies' in technical matters. This would be more cost-effective than a 'stand alone' reporting unit.

Seven recommendations have been made:

Recommendation 1:

That the Tasmanian SoE reporting program continues from within the Tasmanian Planning Commission.

Recommendation 2:

That consideration is given to amending the *State Policies and Projects Act 1993* to reflect future production of the SoE report on a fully digital platform.

Recommendation 3:

That the current timeline of five years for publishing SoE reports remains, pending evaluation of future interactive web-based reports.

Recommendation 4:

That a full digital interactive web-based reporting system is investigated and implemented for the next SoE report.

Recommendation 5:

That formal, wide ranging evaluation of past SoE reports, particularly the most recent, is undertaken before embarking on future reports. Such evaluation should consider content and technical production matters.

Recommendation 6:

That government commitment is sought for adequate funding for the Tasmanian Planning Commission to undertake the program.

Recommendation 7:

That government commitment is sought for formal inter-agency support to assist the SoE program.

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Glossary

2013 Review	<i>Review of the State of the Environment Reporting 25 January 2013</i> Tasmanian Planning Commission
Act	<i>State Policies and Projects Act 1993</i>
AG	Australian Government
CES	Commissioner for Environmental Sustainability (Victoria)
Commission	Tasmanian Planning Commission
Compendium	OECD Environmental Data Compendium
CPR	Condition-Pressure-Response
DELM	Department of Environment and Land Management
DPIPWE	Department of Primary Industries, Parks, Water and Environment
DPSIR	Driving Forces-Pressure-State-Impact-Response
EPA	Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Australian Government)
FPA	Forest Practices Authority
MEM	Meeting of Environmental Ministers
NRM	Natural Resource Management
OECD	Organisation for Economic Cooperation and Development
RPDC	Resource Planning and Development Commission
PSR	Pressure-State-Response
SDAC	Sustainable Development Advisory Council
SoE	State of the Environment

1.0 Introduction

1.1 Purpose of the 2018 Review

In April 2012, the Tasmanian Planning Commission (the Commission) prepared a report: 'Review of the State of the Environment Reporting' (the 2013 Review), with regard to State of the Environment (SoE) Reporting in other States, nationally and New Zealand. This report was submitted to the Secretary of the Department of Justice, but not forwarded onto the Minister for Planning and Local Government at the time.

The Commission did not meet its statutory obligation to prepare and publish an SoE Report in 2014 because of other Governmental priority tasks and resource constraints.

Five years have passed since that 2013 review, and an update to the 2013 Review report has been produced, including providing options and recommendations for the future of Tasmanian SoE reporting.

1.2 Structure of the 2018 Review

1.2.1 Background for the Review

The 2013 Review reported on an 'issues paper' that was distributed to previous contributors to the SoE reporting and other interested stakeholders. Comment was also sought from other jurisdictions. The 2013 Review noted that stakeholder responses indicated that there were a wide variety of views on what should be the purpose and focus of the SoE. The 2013 Review concluded that the Tasmanian SoE Report often duplicates data made available elsewhere, and that whilst the SoE process identified gaps in current data and triggered other organisations to review their data and analyses, there did not appear to be a significant added value overall of SoE.

This 2018 Review updates and, for ease of readability and continuity, sometimes duplicates parts of the 2013 Review that are still current.

1.2.2 Scope of the Review

A focus of the 2013 Review was to summarise SoE reports from other jurisdictions. However, the 2018 Review focusses more on the legislative requirements of other jurisdictions and the modes used to publish their reports. That is, background requirements and mechanisms for their reporting, together with any post-reporting evaluation. It is considered that the detailed *content* of those reports can be readily scrutinised in the future, if required.

Information was sought from all other Australian jurisdictions and New Zealand regarding any evaluation of their SoE reporting. To date, five responses have been received, with at least two others agreeing to provide comments. If there is agreement for a rejuvenated Tasmanian SoE reporting program, it would be useful to follow up these outstanding matters in due course.

Stakeholders were not engaged in the development of this review, primarily because of time constraints. However, it is considered that if the same stakeholders consulted in the 2013 Review were contacted for this 2018 Review, it is likely that their views would largely be the same as in 2013, particularly as there has been no subsequent movement on Tasmanian SoE reporting since then. Therefore, this Review does not reiterate the section on 'Stakeholder engagement'. However, any future Tasmanian SoE program should seek to update stakeholder engagement to ensure relevancy of the SoE reporting.

1.2.3 Background to the Tasmanian State of the Environment Reporting

The SoE Report was a key part of the proposed *State Policies and Projects Bill 1993* (and subsequent *State Policies and Projects Act 1993* - the Act) and had trilateral Parliamentary support, although the provision of ongoing adequate funding to effectively undertake the task was raised at the time.

Parliament noted that the SoE was established to:

- provide an assessment of environmental condition;
- provide a means by which the effectiveness of actions taken to protect the environment could be evaluated;
- report environmental progress on a State, regional or catchment basis;
- identify environmental issues that would require policy, planning, management or resource allocation decisions;
- provide an active management tool by which resources could be prioritised and allocated, or can be redirected to minimise adverse environmental effects; and
- supplement any national report which may be produced.

Reports were to be prepared by the then Sustainable Development Advisory Council every five years. It was hoped that the Reports would 'come to be regarded as the environmental equivalent of the Auditor-General's Report'¹.

Three reports have been prepared:

1997 – by the Sustainable Development Advisory Council

2003 – by the Resource Planning and Development Commission, and

2009 – by the Tasmanian Planning Commission.

¹ Hansard Tuesday 4 May 1993 - Part 1, pages 1-54 Second Reading Speech - *State Policies and Projects Bill 1993*

Legislative Requirements

The legislative requirements relating to the Tasmanian SoE Report are set out under Part 4 of the Act:

- (1) The Commission must, as soon as reasonably practicable after the commencement of this Act and after that commencement at intervals of 5 years, produce a consolidated State of the Environment Report relating to –
 - (a) the condition of the environment; and
 - (b) trends and changes in the environment; and
 - (c) the achievement of resource management objectives; and
 - (d) recommendations for future action to be taken in relation to the management of the environment.
- (2) The Commission must–
 - (a) submit a State of the Environment Report produced by it to the Minister; and
 - (b) cause notice to be given, as prescribed, that the State of the Environment Report will be available to the public for inspection and purchase.
- (3) The Minister must cause a State of the Environment Report to be laid on the table of each House of Parliament within the first 15 sitting days of the House after the Report is received by the Minister.

The legislation requires that a hard copy be tabled in Parliament. However, whilst the scope of the Report is specified, there is flexibility in terms of how the report is developed and the content managed or presented.

2.0 State of the Environment Reporting in Tasmania

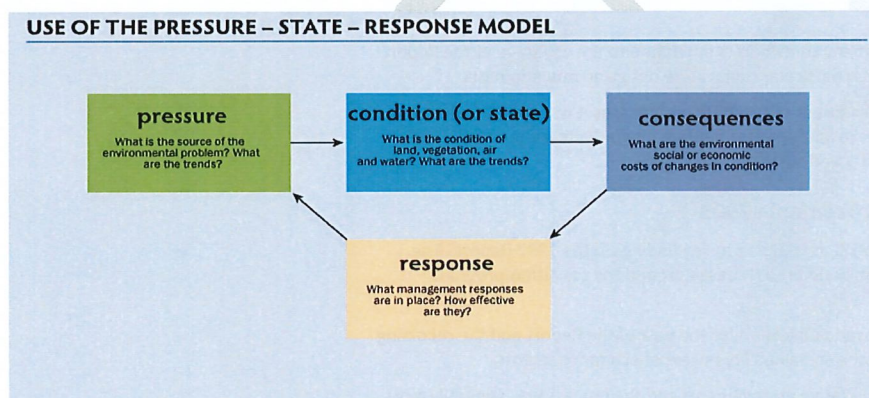
2.1 State of the Environment Tasmania 1997

The SoE Report 1997 (Volume 1) examined seven environmental themes: atmosphere; land; inland waters and wetlands; biodiversity; human settlements; cultural heritage; and coastal, estuarine and marine. Part 2 of Volume 1 reviewed key economic sectors in terms of resource management and environment.

Hard copy publications of the Report (Volumes 1 and 2) were prepared by the then Sustainable Development Advisory Council (SDAC). Subsequent electronic versions were released by its second-generation successor, the Resource Planning and Development Commission (RPDC).

The 1997 report was broadly based around the accepted international Condition-Pressure-Response (CPR) or Pressure-State-Response (PSR) model adapted to meet the legislative requirements for the report (see Figure 1).

Figure 1: Pressure – State – Response (PSR) Model



The SoE PSR model was developed by the Organisation for Economic Co-operation and Development (OECD) in the early 1990s. The PSR model indicates the pressures of human activities on the environment, the current state (or condition) of the environment and natural resources, and the responses by government, business, organisations and the community.

The structure and framework for SoE Report 1997 was detailed, complex and multi layered. Preparation of SoE Report 1997 was resource intensive, over several years. The research, data gathering and writing role for the Volume 1 was largely undertaken through a SoE Unit established within the Information and Land Services Division of the then Department of Environment and Land Management (DELM). Volume 2 was largely prepared by SDAC, supported by the SoE Unit.

Partnerships were established between government, industry, the University of Tasmania and the community. These partnerships supported information exchange and provided informed commentary on the range of topics covered.

Reference groups and a management group were established to oversee the content of the Report. Significant funding for consultancies was required to assist data compilation and syntheses. Consultation also included a series of workshops around Tasmania

The process resulted in the following outputs:

- State of the Environment Tasmania Volume 1 hard copy;
- State of the Environment Tasmania Volume 2;
- Draft for Consultation and Final State of the Environment Tasmania;
- CD ROM containing Volumes 1 and 2;
- Teachers Guide to the State of the Environment Report Review; and
- Future Directions for State of the Environment Reporting, 1998

Issues relating to the production of SoE Report 1997

The framework and administrative arrangements were complex and unwieldy. Considerable funding was required for external consultancies. The hard copy report was expensive to produce and only achievable because of in-house capacity within the Information and Land Services Division of DELM.

It was difficult to satisfy the needs of so many contributors in relation to the coverage of the Report with many specialists dissatisfied that their particular topics were not given due emphasis.

Doubts were expressed about the role and intent of recommendations, as it was unclear whether they were intended as recommendations to State government about government processes and policy, or did they have a wider community and sustainability focus.

2.2 State of the Environment Tasmania 2003

The SoE Report 2003, produced by the RPDC, responded to key findings in the 1997 Report. The framework for SoE Report 2003 again remained broadly based around the condition-pressure-response approach.

A major change was the move to web-based publication for the bulk of the Report and the reporting framework simplified by the omission of the sustainability review of economic sectors.

An effort was made to reduce the administrative arrangements and the process was generally more efficient, being managed by the RPDC, including editing and review.

Several consultancies were used to prepare SoE Report 2003. The development of a content management system was a significant additional cost in developing that Report.

In contrast to SoE Report 1997, the process and consultation was largely internal within State Government agencies, including liaison with agencies for access to data and consultation in relation to prospective draft recommendations for action.

The process resulted in the following outputs:

- State of the Environment Tasmania web-based report;
- State of the Environment Tasmania: Summary and Recommendations; and
- State of the Environment Tasmania: CD ROM.

Issues relating to the production of the SoE Report 2003

Significant administrative effort was required to generate the environmental indicators for this Report.

The content management system allowed several new functions and features to be included. However, the process of coding and data entry for web publication was complex and resource intensive and it became clear after the report was produced that further rationalisation of the process would be required.

The reality was that there were often limited long-term datasets that described trends and changes in environmental condition and even fewer reliable sources of information on the effectiveness of management responses.

2.3 State of the Environment Tasmania 2009

The SoE Report 2009 was prepared principally within the RPDC but published by its successor the Tasmanian Planning Commission. The content of the report was considerably less than previous reports. The report is web-based, but non-interactive. No PDFs (apart from the Summary) are available to download, nor are there 'printer friendly' versions of the text available.

The PSR model was again adopted and content was reviewed by experts prior to publishing to ensure the quality of information presented.

The report also discussed some of the complexities and constraints in framing such a report, where:

- SoE Reporting has been constrained by poor access to consistent, reliable and comparable data since it commenced in 1994;
- governments, GBEs, infrastructure and service providers, natural resource sectors and industry sectors do not have processes to facilitate a strategic and cost-effective approach to data collection, whilst meeting the needs of multiple users;
- quality data are not available for planning, management and reporting. Data collection and analysis are often not consistent, coordinated, comparable or reliable, and can be fragmented or out-of-date.
- deficiencies were noted in communication and the sharing of information by data collectors and there was a lack of awareness of other data similar collection programs; and
- the lack of knowledge about many environmental themes or issues seriously limited the ability to fully report on trends and changes.

As with earlier SoE Reports, considerable work was required by those contributing data, including: the 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; and Australian Antarctic Division.

Whilst the Act requires that the report refers to 'recommendations for future action to be taken in relation to the management of the environment', the 2009 SoE Report did not include specific recommendations, just sections on current 'management responses'.

Issues relating to the production of the SoE Report 2009

As with earlier reports, significant administrative effort, by a dedicated unit within the Commission, was required to generate environmental indicators.

Considerable resources were required over several years, in planning, analysing, writing and publishing the Report. Aside from the direct costs associated with producing the Report, considerable costs were incurred by the many agencies which contributed content (data and detailed analysis).



3.0 Other jurisdictions

3.1 Development of State of the Environment Reporting

In 1999, the European Environment Agency expanded the PSR model by developing the Driving Forces-Pressure-State-Impact-Response (DPSIR) SoE model (Figure 2). Like PSR, DPSIR provides a framework for indicators on environmental quality and the resulting impact of the political choices made, or to be made in the future.

The content of SoE reports varies depending on the key environmental issues within a jurisdiction, the purpose and audience of the report, and the frameworks or guidelines used to prepare the report. Most SoE reporting in Australia is undertaken using the PSR framework or its variants, such as the DPSIR framework, developed by the Organisation for Economic Cooperation and Development (OECD). The Tasmanian SoE reporting format evolved from the initial PSR model. However, the PSR framework has been criticised for, amongst other things, oversimplifying causal relationships and downplaying 'social diversity and local responses'.

The DPSIR model² extends the PSR framework by considering the driving forces or significant causes of change, as well as the impacts on environmental, social and economic systems (see Fig 2). The DPSIR model is increasingly being used for SoE reporting in place of the original PSR model.

The DPSIR framework details a causal relationship beginning with 'driving forces' (human activity – industry, agriculture, energy, transport, households) (Kristensen 2004). These human activities exert 'pressures' on the environment from production/ consumption processes (excessive use of resources, changes in landscape, emissions, discharge of waste water).

Because of these pressures, the 'state' of the environment is affected, including the quality of the various environmental elements (air, water, soil).

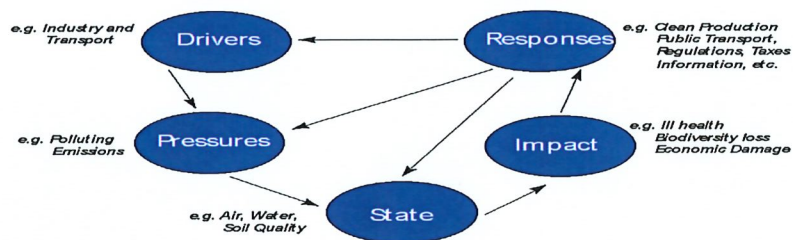
The 'state of the environment' is the combination of physical, chemical and biological conditions:

- air quality (regional, local, urban);
- water quality (rivers, lakes, seas, coastal zones, groundwater);
- soil quality (local, natural areas, agricultural areas);
- ecosystems (biodiversity, vegetation, soil and water organisms);
- humans (health); and
- land use.

Changes in the state of the environment (in physical, chemical or biological conditions) may result in environmental or economic effects on the functioning of ecosystems and ultimately on human health and economic performance. Effects on ecosystems, human health and activities, may lead to political responses (priority action, target setting – e.g. watershed protection).

² Kristensen, P. *The DPSIR Framework*, Paper presented at the 27-29 September 2004 workshop on a comprehensive / detailed assessment of the vulnerability of water resources to environmental change in Africa using river basin approach. UNEP Headquarters, Nairobi, Kenya 2004.

Figure 2: DPSIR Framework



Source: European Environment Agency web site

Internationally, and in Australia, more recent approaches to SoE reporting include providing more timely and integrated information using multiple presentation formats to meet a variety of user needs.

Increasingly, aggregated indicators (such as the ecological footprint or carbon footprint) have been used to illustrate broader sustainability trends and performance.

There are a range of challenges with SoE reporting which are experienced by all jurisdictions. These include (but are not limited to):

- integrating SoE reporting into land use planning and management in a meaningful way (i.e. producing information in a format which is useful for strategic land use planning);
- integrating SoE reporting into the continuous cycle of planning, management and decision making;
- identifying and selecting an appropriate framework, themes, issues and indicators;
- establishing efficient data collection processes and ensuring quality data;
- providing for independent report preparation or review;
- aligning SoE reporting across different levels of government;
- providing for timely reporting of information and results, and
- promoting the results of SoE reporting to key stakeholders to achieve change.

In Australia, SoE reporting has been undertaken at national, State and local levels for several decades. The first national SoE Report was published in 1996. Considerable resources have been directed to the production of SoE reports in other jurisdictions.

Jurisdictions are consistent in structuring their reports based on themes/major issues (e.g. climate, water, air) and use available environmental indicators.

Reporting agencies have refined their themes to suit local requirements and indicators are identified to suit their local needs and purpose.

3.2 Australia

The following table summarises each jurisdiction's SoE current reporting details. New Zealand is included for comparison.:

Jurisdiction	Agency	Legislation	Reporting timeframe (years)	Publishing format	Current version (year)	Recs. incl.?	Eval. of reporting?	Other
Tasmania	Tasmanian Planning Commission (Independent statutory authority)	<i>State Policies and Projects Act 1993</i> (s.29)	5	Web-based, non-interactive. PDFs and 'printer friendly' versions not available.	2009	No (but required under the Act)	No	
Australian Government	Department of Environment & Energy	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (s.516B)	5	Web-based, interactive. PDFs available.	2016	No	Yes	
Victoria	Commissioner for Environmental Sustainability (Independent statutory authority)	<i>Commissioner for Environmental Sustainability Act 2003</i> (s.17)	5	Web-based, non-interactive (but moving towards a digital format for 2018 version). PDFs available.	2013	Yes	No	Production of formal Framework to guide the next SoE report. If recommendations are made, the Minister must table a response to those in Parliament.
New South Wales	Environment Protection Authority	<i>Protection of the Environment Administration Act 1991</i> (s.10)	3	Web-based, non-interactive. PDFs and hard copies available.	2015	No	No	

Jurisdiction	Agency	Legislation	Reporting timeframe (years)	Publishing format	Current version (year)	Recs. incl.?	Eval. of reporting?	Other
Queensland	Department of Environment & Science	<i>Environmental Protection Act 1994</i> (s.4)	4, now 2	Web-based, interactive. PDFs available for all years other than current.	2015	No	Yes	
Western Australia	Environmental Protection Agency	<i>Environmental Protection Act 1986</i> (although not specifically provided for under any Act)	Not specified	Web-based, non-interactive summaries. PDFs available.	2007	No	No	SoE program has now ceased
South Australia	Environment Protection Authority	<i>Environment Protection Act 1993</i> (s.112)	5	Web-based, non-interactive. PDFs available.	2013	No	Yes	
Australian Capital Territory	Commissioner for Sustainability & the Environment (independent statutory authority)	<i>Commissioner for Sustainability and the Environment Act 1993</i> (s.19)	4	Web-based, non-interactive. PDFs available.	2015	Yes	No	Legislation requires ACT Government to respond to report within 6 months.
Northern Territory	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NT has not yet committed to an SoE program
New Zealand	Ministry for the Environment	<i>Environmental Reporting Act 2015</i>	3 (whole report) 6 months (separate domain)	Web-based, interactive. No PDFs available.	2018	No	No	

3.2.1 National

National SoE³ is provided for under section 516B of the Australian Government *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Reports have been released in 2001, 2006, 2011 and 2016. That Act requires a report to be produced every five years in accordance with any *Environment Protection and Biodiversity Conservation Regulations 2000*. However, as there are no Regulations that currently apply to the SoE report, no detail is prescribed. A hard copy of the report is to be tabled in Parliament when complete.

This is now primarily a major, comprehensive web-based report, but PDF copies of the report, data (used in maps and graphs) and supplementary material are downloadable, by themes, for the current and past reports.

Producing the report clearly required a large budget and dedicated resourcing. A large team of independent experts (outside the Australian Government Department of the Environment and Energy) led the coordination and drafting of each thematic report and were supported in their work by the Department of the Environment and Energy.

All draft reports were reviewed by key stakeholders from the Australian Government, State and territory governments, academia and industry before undergoing independent peer review by subject-matter experts.

SoE 2016 focused on providing updates to the information in SoE 2011. It also claimed to improve the relevance and usefulness of SoE reporting for evidence-based policy and decision-making. SoE 2016 continued the thematic 'report card' assessments of pressures, condition and trends presented in SoE 2011. They examined tools, mechanisms and resources that are starting to be used to address the drivers, pressures and risks affecting the environment, and mechanisms to improve management and governance arrangements to more effectively support sustainable development. The report included a section on 'outlook' considering a variety of future scenarios such as 'business as usual' and 'improved future', although did not include recommendations.

SoE 2016 introduced a new interactive digital platform to enable decision-makers, researchers and members of the public explore and discover information of interest to them in a variety of ways. The digital platform was built around the thematic structure and DPSIR framework used in the 2011 and 2016 SoE reports and allows the comparison of information over time (in this case, between 2011 and 2016).

In addition, the datasets used have been acquired under a 'creative commons license' which means the data can be used, reused, distributed and built upon provided it is appropriately referenced. SoE 2016 has graphs and interactive maps and with underlying data sets available for download.

Outcomes and evaluation⁴

Following the release of the 2016 report, the Meeting of Environment Ministers⁵ (MEM) agreed to work together to identify opportunities for cross-government collaboration to address concerns

³ Australian Government SoE 2016

⁴ R. Morrison, Department of the Environment and Energy (AG), pers. comm. *March 2018*

⁵ The Meeting of Environment Ministers comprises the Commonwealth Minister for the Environment and Energy, and the Environment Minister from each Australian State and Territory, and since 2013 replaces the COAG Standing Council on Environment and Water.

raised in the report. SoE 2016 is considered a useful resource for developing options in MEM's future work plan.

In addition, there is the expectation that the SoE 2016 will be useful for other Australian Government portfolios, State and Territory jurisdictions, the scientific and research communities, Non-Government Organisations, secondary and tertiary education as well as the general public.

Internet viewing analytics showed that their website recorded over 80 000 unique visitors (by January 2018) with the top three interest groups being general public, tertiary institutions and Australian Government. The top three interest areas were Biodiversity, Land and the Overview report.

3.2.2 Victoria

SoE reporting was introduced in Victoria in 1986 and the latest SoE report is the State of the Environment report 2013⁶. This report was produced by the Commissioner for Environmental Sustainability (CES), an independent statutory body under the *Commissioner for Environmental Sustainability Act 2003*. The production of a the SoE report is a primary function of the Commissioner.

Under section 17 of that Act, the CES must prepare a SoE report at least every five years and the 'Report on the State of the Environment of Victoria must be prepared in accordance with a framework for environmental reporting developed by the Commissioner and approved by the Minister.' The legislation does not prescribe the format or detail of the report, although the Commissioner must meet four objectives (section 7 of the Act):

1. Report on matters relating to the condition of the natural environment of Victoria;
2. Encourage decision making that facilitates ecologically sustainable development;
3. Enhance knowledge and understanding of issues relating to ecologically sustainable development and the environment; and
4. Encourage sound environmental practices and procedures to be adopted by the Government of Victoria and local government as a basis for ecologically sustainable development.

Legislation also requires a hard copy to be tabled in Parliament. The Act also requires that, if any recommendations are made in the report, the Minister must subsequently table a response of the Government with respect to those recommendations.

The SoE 2013 contains two main parts and an epilogue: Part A discusses Trends and Analysis, whilst Part B contains Goals and Recommendations. The recommendations include organisational, regulatory and policy changes.

The SoE 2013 concludes with an Epilogue, which considers how to 'better measure well-being, to ... capture the environmental, economic and social constituents of an equitable and prosperous society and build community resilience.'

In developing the 2018 SoE report, Victoria produced a *Framework for the Victorian 2018 State of the Environment Report: State and Benefit*⁷ in 2015 [under section 17(2) of that Act] to provide a policy guide to the production of the next SoE report. The objective of State and Benefit is to continue improve SoE reporting by making it more accessible to the community, more useful for policy makers and aim for consistency between the many environmental reports prepared by the

⁶ [Victorian SoE 2013](#)

⁷ [State and Benefit Framework](#)

Victorian Government. The framework seeks to change reporting on the SoE and embed it in government decision making processes. The framework signals a move to a digital reporting format to 'improve access to immediate and accurate data and help create reports that are more practical, useful and relevant.' In addition, the framework sets out a process to facilitate a more streamlined, consistent approach to the way data are collected and reported across the State.

Outcomes and evaluation

* information not yet provided*

3.2.3 New South Wales

The SoE reports from New South Wales are produced triennially by the Environment Protection Authority (NSW), with the latest (ninth) report in 2015⁸. The reports are produced under section 10 of the *Protection of the Environment Administration Act 1991* (NSW). Section 10(3) of the Act requires that the report includes:

- (a) an assessment of the status and conditions of the major environmental resources of New South Wales,
- (b) an examination of environmental trends, including the implications for the environment and human health,
- (c) a review of the programs and activities of public authorities and of the private sector related to environment protection,
- (d) an examination of trends in economic analysis and of the costs and benefits (including economic evaluation) of environment protection,
- (e) any general recommendations for future legislative or other action which the Authority considers appropriate to discharge its responsibilities with respect to environment protection.

The format and details are not prescribed, but a hard copy is to be tabled in Parliament.

A thematic approach was taken and the report relied on extensive contributions and review from many NSW Government departments and agencies, and independent advice. The report is in two parts: Environmental Drivers (influences on the environment) and Environmental Resources (condition of the environment). Recommendations are not included in the report.

The report is a non-interactive web-based platform, with downloadable PDFs in full, or sections available. Provision was made for a hard copy version to be ordered over the web.

Outcomes and evaluation

* information not yet provided*

3.2.4 Queensland

The Queensland SoE is provided for under section 4 of the *Environmental Protection Act 1994* (Qld)⁹ and is produced by the Department of Environment and Science. Content, detail and reporting (other than being publicly available) are not prescribed. The SoE is designed to be part of a cyclical 'integrated management program that is consistent with ecologically sustainable development'.

Like other jurisdictions, Queensland adopts the PSR approach to State of the environment reporting. Whilst previous reports had operated on the DPSIR model, the 2015 report reverted to the PSR

⁸ [NSW State of the Environment Report 2015](#)

⁹ [s4 Environmental Protection Act 1994](#)

model, partly because the reporting period was too short to demonstrate any significant changes in some indicators. The report does not include recommendations.

The SoE report 2015 is the latest of six reports and is the first produced in an interactive web-based format to allow users to interrogate *current* (i.e. continually updated) spatial data and maps with regionally-specific interpretive text, tables, graphs and charts. The Queensland SoE role is to interpret and summarise current information, therefore the report links to existing Queensland "State of..." reports via the Queensland Government open data portal. The data are from a range of thematic sources, and compiled, interpreted and published through the data portal. As the SoE report 2015 is an interactive website that directly links in real time to the open data portal, it cannot be downloaded as a whole report (in PDF or any other form).

Before the 2015 report, a report was produced every four years, although this is not stipulated under the Act. However, the new web-based format has allowed the Department of Environment to move to a more frequent biennial updating of the SoE, which was considered the optimum reporting period for the available datasets. The SoE report 2017 is expected to be published later in 2018. Once this is complete, it will replace the SoE report 2015 website and that 2015 report will become available in whole as a PDF.

A PDF (detailed) summary of the SoE report 2015 is currently available, together with whole-report PDFs of the five previous reports.

Outcomes and evaluation¹⁰

The Department conducted workshops following the release of the 2015 report to assess its usage and success. In addition, an online survey and questionnaires were also developed. It was particularly interested in the evaluation and uptake of its new website, including the web design. Generally, the interactive website format was well received, although some stakeholders considered there was inadequate detail for their purposes (too 'high level'), and others wished for more definitive Government responses to improve the state of the environment.

The Department noted that awareness of the SoE report is relatively high amongst stakeholders, but low across the general population. However, even amongst stakeholders, the usage of the SoE is relatively infrequent as the report is considered as one of many sources of information.

Stakeholders and the general public considered that the website format was a more useful approach than the paper-based version, although there were some that preferred having a single, printable 'tangible document'.

3.2.5 Western Australia

As set out in the previous Tasmanian Review, the latest SoE report in Western Australia is still that produced in 2007 by the Environmental Protection Agency (WA). It is not clear if any State legislation *specifically* provides for the SoE report; although 'the SoE Report ... closely links to its duties in the *Environmental Protection Act 1986*¹¹ (WA).

The report follows a similar thematic issues model to the other States. It sets out 'suggested responses' as recommendations.

The report is available on the web as PDFs for each section. Given the age of the last report, there is no interactive web-based capability for that report.

¹⁰ Ken Horrigan, Manager SoE (Qld) pers. comm.

¹¹ Foreword (Introduction) *State of the Environment Report 2007 (WA)*

Outcomes and evaluation

Given the length of time since the 2007 report, there are no statistics or evaluation of the report. Western Australia has no intention of producing another SoE report, but the EPA considers 'issues regionally' and will continue with that format.¹²

3.2.6 South Australia

The South Australian (SA) SoE report 2013¹³ was produced by the Environment Protection Authority (SA), as part of a five-yearly production cycle under section 112 of the *Environment Protection Act 1993 (SA)*. This is the sixth report produced, since the first in 1988. Although the format and detail of the report are not prescribed, Section 112(3) of that Act requires that the report must:

- (a) include an assessment of the condition of the major environmental resources of South Australia; and
- (ab) include a specific assessment of the state of the River Murray, especially taking into account the *Objectives for a Healthy River Murray* under the *River Murray Act 2003*; and
- (b) identify significant trends in environmental quality based on an analysis of indicators of environmental quality; and
- (c) review significant programmes, activities and achievements of public authorities relating to the protection, restoration or enhancement of the environment; and
- (d) review the progress made towards achieving the objects of this Act; and
- (e) identify any significant issues and make any recommendations that, in the opinion of the Authority, should be drawn to the attention of the Minister.

A hard copy of the report must be tabled in Parliament.

As with most other jurisdictions, the SoE was based on a thematic DPSIR model. The report was overseen by an inter-agency reference group and independently peer reviewed where relevant. The report is available as a non-interactive web-based platform, with downloadable PDFs for the entire report or for each section.

Outcomes and evaluation

The South Australian EPA has not completed any formal evaluation of the use of the SoE 2013, but provided several specific examples of its use, such as at the 2014 Natural Resource Management (NRM) Conference; in submissions to the South Australian Parliamentary Inquiry into Biodiversity; and by agencies in regulatory assessment of new policy. Website visits recorded over 21,000 unique page views up to February 2018.¹⁴

3.2.7 Australian Capital Territory

Every four years, the ACT Commissioner for Sustainability and the Environment prepares a State of the Environment Report for the ACT Minister for the Environment. The current SoE report 2015¹⁵ is the seventh report since the Commissioner for Sustainability was established under the

¹² Danielle Griffiths, Department of Water & Environmental Regulation pers. comm. April 2018

¹³ [South Australian SoE Report 2013](#)

¹⁴ T. Hills, Environment Protection Authority (SA) pers. comm. March 2018

¹⁵ [ACT SoE Report 2015](#)

Commissioner for Sustainability and the Environment Act 1993 (ACT). Section 19 of that Act provides for the SoE report, and is prescriptive in the detail to be provided:

- (2) A state of the environment report must include—
- (a) an assessment of the condition of the environment, including an assessment of any of the following matters that the commissioner considers necessary:
 - (i) the components of the earth, including soil, the atmosphere and water;
 - (ii) any organic or inorganic matter and any living organism;
 - (iii) human made or modified structures and areas;
 - (iv) ecosystems and their constituent parts, including people and communities;
 - (v) the qualities and characteristics of places and areas that contribute to their biological diversity and ecological integrity, scientific value and amenity;
 - (vi) the interactions and interdependencies within and between the things mentioned in subparagraphs (i) to (v);
 - (vii) the social, aesthetic, cultural and economic conditions that affect, or are affected by, the things mentioned in subparagraphs (i) to (v);
 - (b) an evaluation of the adequacy and effectiveness of environmental management, including an assessment about the degree of compliance with national environment protection measures made by the National Environment Protection Council; and
 - (c) an assessment of pressures and sustainability trends; and
 - (d) an evaluation of the effectiveness of sustainability plans; and
 - (e) any other matters, whether or not occurring within the triennium to which the report relates, that—
 - (i) the Minister states in written notice given to the commissioner; or
 - (ii) the commissioner considers relevant.

Although the Act does not specifically provide for the report to be tabled in Parliament, it does require that, within six months of receiving the SoE report, the Minister responsible must present to the ACT Legislative Assembly a statement that sets out the response of the government to the report¹⁶. That statement is drafted specifically with respect to the recommendations. The Commissioner for Sustainability then has 12 months to recommend to the Minister details of the reporting period for the following SoE report, and the Minister is to determine that reporting period accordingly.

The 2015 ACT SoE is a web-based thematic report with downloadable PDFs for the entire report or each chapter. The website also includes ACT Government and community case studies for each chapter and various resources such as a major external peer review report for the draft SoE report. The peer review contains specific recommendations to amend the draft SoE report before publication. Other resources include fact sheets (summaries) available as PDFs or Word for each of the themes.

¹⁶ [ACT Government Response to the State of the Environment Report 2015](#)

The report contains an extensive Recommendations chapter, detailing:

- recommendations from the 2011 SoE Report and the Government's success in implementing them;
- *justification* for the 2015 recommendations;
- the 2015 recommendations consolidated from the chapters in the report; and
- key longer-term challenges that the Office of the Commissioner for Sustainability and the Environment considers as priorities.

Outcomes and evaluation

* information not yet provided*

3.2.8 Northern Territory

As set out in the previous Tasmanian Review, the Northern Territory has not yet committed to establishing a SoE reporting process. No response was received regarding information sought about any SoE reporting.

3.3 Organisation for Economic Cooperation and Development

The 2013 Review discussed the OECD Environmental Data Compendium¹⁷ (the Compendium), which is 'revised regularly', to present data linking pollution and natural resources with activity in such economic sectors as energy, transport, industry and agriculture. It shows the state of air, inland waters, wildlife, etc. for OECD countries and describes selected responses by government and enterprises.

The Compendium is currently being updated, and reports on the State of the Environment from 2004 to 2008. Reporting is largely along the same thematic lines and trends as SoE reports in Australia. (Whilst listed, these reports do not appear to be currently available through the website.) The entire 2004 Compendium is available for purchase online, or in a hard copy.

The website also includes up to date interactive data portals to enable comparison between OECD countries on over 200 indicators, including environmental data.

3.4 New Zealand

New Zealand produced two national-level state of New Zealand's environment reports, with the last being the 'Environment New Zealand 2007'¹⁸, after its first 1997 report. It is available online or as a PDF. Hard copies are not available. These have now been replaced by the current New Zealand's environmental reporting series.

The NZ *Environmental Reporting Act 2015*¹⁹ requires the New Zealand Ministry for the Environment to publish one 'domain report' (air, atmosphere & climate, freshwater, land and marine domains) every six months and a synthesis report on New Zealand's state of the environment as a whole every three years²⁰. Each domain must be reported on at least every three years. As with Australian SoE reporting, these domain reports operate on the pressure, state and impacts model. The current

¹⁷ [OECD Environmental Data Compendium](#)

¹⁸ [Environment New Zealand 2007](#)

¹⁹ [NZ Environmental Reporting Act 2015](#)

²⁰ [NZ Environmental reporting series](#)

whole report 'Our Land 2018'²¹ has just been released. Whilst the reports contain sections on 'implications' of the findings, they stop short of making actual recommendations.

The content of each domain report, under section 11 of that Act is to contain:

<p>11 Content of domain reports</p> <p>(1) Each domain report must describe, in relation to the topics prescribed in regulations made under section 19, all of the following matters:</p> <ul style="list-style-type: none">(a) the state of the domain the report relates to, including biodiversity and ecosystems dependent on that domain; and(b) the pressures that may be causing, or have the potential to cause, changes to the state of the domain; and(c) the impacts that the state of the environment and changes to the state of the environment may be having on each of the following impact categories:<ul style="list-style-type: none">(i) ecological integrity; and(ii) public health; and(iii) the economy; and(iv) te ao Māori; and(v) culture and recreation. <p>(2) In addition to the matters set out in subsection (1), each domain report must describe—</p> <ul style="list-style-type: none">(a) changes to the state of the domain over time, including, if information in the report is able to be compared with that in a previous domain report, changes to the state of the domain since that previous report was published;(b) how the state of the domain measures against national or international standards. <p>(3) The Secretary and the Government Statistician are not required to include in domain reports information that cannot be obtained by using reasonable efforts.</p>
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Synthesis reports follow similar prescriptions (sections 7 - 9).

The website provides downloadable PDFs for each domain report; and interactive datasets over a range of reporting periods for many single indicators within those domains.

Outcomes and evaluation²²

As with other jurisdictions, New Zealand has also found difficulty targeting audiences. The high-level focus of these reports has been at decision makers, manager and the general public. Unpublished discussion of targeted audiences, as part of the scoping brief for the report's development, categorised the audiences into five different groups, each with combinations of the targets of 'recognition', 'smarter land use' and/or 'partnerships'.

Recently key stakeholders have suggested that they are increasingly anticipating the report, and that the reports are being used for messaging and decision making within the private and the public sectors. This has been aided by good communication with stakeholders in the leadup to

²¹ [NZ Our Land 2018](#)

²² Jason Mackiewicz, Manager, Environmental Reporting Production, Stats NZ pers. comm. April 2018

publication. In addition, the Ministry for Environment has supported and assisted media releases and extensive media coverage of key information. The Minister and Stakeholder groups have also put out media releases.

Statistics on the top four indicators (atmosphere & climate - 2 indicators; livestock numbers and water quality), show about 57,000 visitors to the web-site over 12 months.

3.5 Other State of the environment reporting

Some local governments across Australia also provide a state of the environment report for their municipality. However, New South Wales is the only jurisdiction that mandates SoE reporting at a local government level.

New South Wales

With the introduction of the Integrated Planning and Reporting framework in NSW, the requirements for SoE reporting changed to make it part of the corporate planning and reporting process when the *Local Government Act 1993* was amended in 2009.

Section 428A²³ sets out the details for local government SoE reports. These follow similar thematic formats as in other jurisdictions. An End of Term report is due immediately before an ordinary election (every 4 years), reporting on the objectives established by the Community Strategic Plan. The report is to evaluate progress in achieving those objectives during the term of the council, and then the information is then used to inform the development of the next Community Strategic Plan and the incoming councils' Delivery Programs. These SoE reports are primarily for the community, with a copy made available to the Minister for Local Government.

Victoria

The Victorian CES produced a report *Choices, choices environmental and sustainability reporting in local government in Victoria*²⁴ in 2011 to investigate the adoption by Victorian councils of voluntary SoE reporting, in response to several councils expressing interest to the CES about this topic. The report found that of the 52 councils surveyed, only four conducted any reporting. The report also found that councils that conduct SoE reporting typically report annually. However, some councils expressed concern that this level of reporting was inappropriate because within that short timeframe, rarely do new data become available, or environmental conditions change. The survey indicated that there is no common or shared understanding amongst councils about the primary purpose of, or audience for, SoE reports. The report made no recommendations for mandatory reporting, as occurs in NSW.

²³ [S.428A Local Government Act 1993 \(NSW\)](#)

²⁴ [Choices, choices Environmental and sustainability reporting in local government in Victoria](#)

4.0 Other Tasmanian environmental reporting

Various Tasmanian agencies and GBEs produce reports on specific indicators, which have some overlap (but not strict duplication) with the SoE reporting.

In the 2013 Review, Tasmania *Together*, which reported on several environmental indicators, was in operation. This program has now ceased.

Through the Office of eGovernment (Department of Premier and Cabinet), the Tasmanian Government is developing a 'Stats Matter Strategy'²⁵ to ensure processes are in place across government to support the ongoing collection, management, analysis and reporting of high quality data. This aims to improve the way quality data are used, interpreted, analysed and shared. It is envisaged that the open data will be available across the community, business and governmental agencies.

4.1 Department of Primary Industries, Parks, Water and Environment

The Department of Primary Industries, Parks, Water and Environment (DPIPWE) produces reports on specific indicators, some of which are relevant to the SoE program, such as:

- invasive species;
- native mammal surveys;
- threatened species;
- threatened vegetation communities;
- Tasmanian reserve estate;
- Tasmanian Wilderness World Heritage Area monitoring (various parameters);
- Land Capability Classification system;
- Agricultural statistics;
- Conservation of Freshwater Ecosystem Values;
- Water Information System of Tasmania.

However, many of these appear to be generated on a somewhat *ad hoc* basis, as a product of current individual program funding, rather than as part of an overall strategic plan. Many of the 'latest' reports are dated, with some well over 10 years old. In addition, they may not be in a format that is easily transferrable to SoE reporting for comparative purposes.

4.1.1 Environment Protection Authority

Tasmania's Environment Protection Authority (EPA) is supported by staff of EPA Tasmania, a Division of DPIPWE. The EPA reports on environmental indicators such as air quality, water quality, contaminated land as part of ongoing monitoring regimes and also reports on singular issues as necessary, such as part of development assessments. The Derwent Estuary Program is operated from within the EPA.

4.1.2 Natural Resource Management

Tasmania's three regional NRM regions also produce some report cards and reports relating to specific habitats, such as saltmarsh monitoring and the *2016 Tamar Estuary Report Card*. These have variable relevance to the SoE reporting, depending upon the breadth of their focus.

²⁵ 'Stats Matter'

4.1.3 LISTdata

theLIST provides publicly available accessible mapping data for a variety of environmental 'assets'²⁶ including:

- climate and environment;
- coasts, oceans and estuaries;
- geology and soils;
- inland waters and elevation;
- plants and animals; and
- reserves and administrative boundaries.

Specific datasets are available within those categories. A future Tasmanian SoE reporting system could easily link to and capitalise on LISTdata.

4.2 Sustainable Timber Tasmania

Sustainable Timber Tasmania reports on several parameters that may relate to the Tasmanian SoE reporting within forested areas. The annual reports²⁷ summarise information on indicators such as:

- the forest reserve system;
- biodiversity performance and initiative;
- soils;
- chemical usage;
- weeds, pests and diseases;
- air quality; and
- cultural site management.

4.3 Forest Practices Authority

The Forest Practices Authority (the FPA) must produce a report on the state of Tasmania's public and private forests every five years, under section 4Z of the *Forest Practices Act 1985*. Whilst not prescribing the content of the report, it is to be developed in consultation with Sustainable Timber Tasmania, Private Forests Tasmania, DPIPWE and any other agency with statutory or management responsibilities in relation to forests or forested land. The report is to be tabled in Parliament accordingly. It is then published on the FPA website.

The current *State of the forests Tasmania 2017*²⁸ was produced as a PDF summary booklet and full report PDF. It was developed in consultation with the Department of Primary Industries, Parks, Water and Environment, Sustainable Timber Tasmania, the Department of State Growth, Private Forests Tasmania and the Australian Government Department of Agriculture and Water Resources. The report includes details of Tasmania's forest types, changes in forests, tenure and reservation, managing reserved and production forests, employment in forests, soil and water conservation and cultural heritage values. Some of these indicators are likely to be relevant to the Tasmanian SoE reporting.

²⁶ LISTdata

²⁷ [Forestry Tasmania Annual Report 2016/17](#)

²⁸ [State of the forests 2017](#)

4.4 Sense-T

Based at the University of Tasmania, Sense-T²⁹ is a partnership between the University, CSIRO and the Tasmanian Government; and is also funded by the Australian Government. It provides the capacity for an integrated, real-time statewide monitoring network for water, air, energy, transport, carbon and population data.

Sense-T has built an innovative spatio-temporal data platform that allows near real-time data to be processed and combined. The platform enables industry partners and government to store data related to the physical world. The data platform also provides a centralised foundation for protecting confidential information and enabling the re-use and sharing of data.

Currently, there are over 18,000 data streams available on the platform and more than ten organisations currently contributing, using and sharing the data. Sense-T is also developing tools and apps that provide real-time data for some indicators, such as air quality.

A rejuvenated SoE reporting system could well link into and capitalise on this project.

4.5 CSIRO Data Access Portal

The CSIRO Data Access Portal³⁰ provides access to research data, software and other digital assets published by CSIRO across a range of disciplines. The portal is maintained by CSIRO Information Management & Technology to facilitate sharing and reuse. Some data are only available to registered users.

Available data include that for soils, specific fauna and flora, landforms etc.

4.6 Australian Government

Australian Government agencies produce indicators relevant to the Tasmanian SoE. For example, the Department of the Environment and Energy (AG) publishes a National Greenhouse Gas Inventory Trend, by industry sector, for the States and territories. Similarly, the Australian Bureau of Statistics catalogues some environmental data on a State basis (e.g. water use in Tasmania), although these data can be quite dated and are mostly in a static Excel spreadsheet form. In addition, it is likely that these agencies acquire their data from the States, being the same source as the SoE uses.

²⁹ [Sense-T](#)

³⁰ [CSIRO Data Access Portal](#)

5.0 Discussion and recommendations

SoE reporting across Australia varies from jurisdictions not yet committed to developing an SoE program (Northern Territory), through those that have let it lapse (Western Australia, Tasmania) to the majority remainder (National, ACT, Victoria, South Australia, New South Wales, Queensland) and New Zealand that undertake full reporting at legislated regular intervals.

It is suggested that the best option for Tasmania would be to resume its SoE reporting program, in keeping with most Australian jurisdictions. The National SoE draws from national and State and Territory reports, and a resumption of the Tasmanian SoE would also assist this process to give a more complete picture of the Australian environment.

The national SoE program has established a cross-jurisdictional SoE reporting forum, with members from all Australian SoE reporting agencies, to provide mechanisms to improve quality, consistency and linkages across all SoE reports. Tasmania could benefit from this association in adopting similar approaches and thereby becoming both more efficient and relevant with future reporting.

Nevertheless, there are three possible options for the Tasmanian SoE reporting program:

Option 1 - SoE reporting follows previous program format

This option would involve reallocating Commission resources to deliver a SoE report of similar scale to previous reports. The previous SoE unit comprised three to four staff: a manager, 1-2 project officers and a GIS officer.

Significant resources were required to achieve production of the 2009 SoE Report. Unless there is specific direction placed upon the unit, this option is unlikely to address the issues regarding the report's relevance, or its effectiveness in influencing the management of the State's natural resources.

This option is not recommended.

Option 2 - Not proceed with an SoE reporting program

Under this option, the SoE reporting program would cease.

Other reporting frameworks may continue to publish information on the Tasmania's natural resources – including the State of the Forests, estuary programs, NRM reporting, and the National SoE Reporting. However, without an SoE program, there would be no centralised, independent reporting of Tasmanian environmental data.

This option would require legislative amendment to rescind it entirely from the Act.

This option is not in keeping with the cross-government support it received when established when it was established. Nor is it in keeping with other jurisdictions (being the majority) undertaking SoE reporting in Australia.

This option is not recommended.

Option 3 - Seek whole-of-government commitment to deliver an SoE program from within the Commission

This option would involve cross-agency support to produce a suitable interactive web-based SoE report, similar to that of Queensland. Government commitment and inter-agency resources would be needed to develop the technical side of the report (website build, GIS support etc.). In which case, the Commission might only need to seek and allocate resourcing for two staff. This option also relies on the availability of adequate open data becoming available in the near future.

Given that the SoE reporting was supported by all sides of Government at its inception, and therefore enshrined in legislation, this may be a tenable option. Once web-based data become

widely available, and a suitable web-site is built to house the SoE, the role of the SoE unit would largely be to organise, synthesise, link and discuss the data.

An SoE program produced from within the Commission is likely to be considered the 'one-stop-shop' that could link all relevant data and programs under the one banner, for ease of access. Operating the program within the Commission would also maintain the 'independence' of the program, whereas operating the program from within an agency may give rise to the perception of bias towards some areas of investigation. This option may only involve minor legislative amendment if it was desired to update the Act regarding digital reporting.

This option is recommended.

If this option is chosen, the following matters require consideration:

Legislative requirements

Three jurisdictions produce their SoE under an independent statutory authority: Tasmania, Victoria and the ACT. Amongst other things, this allows for independent recommendations to be made to government (although this was omitted in the 2009 Tasmanian SoE report). Other jurisdictions usually house their SoE functions in their State environment department or version of the EPA. These jurisdictions do not make recommendations in their report, but comment on trends and facts.

Producing the Tasmanian SoE under the Tasmanian Planning Commission also allows the report to be produced 'at arm's length' from the data sources thereby being able to give near-equal focus and coverage across all indicators.

Recommendation 1:

That the Tasmanian SoE reporting program continues from within the Tasmanian Planning Commission.

All jurisdictions that undertake SoE or other environmental reporting are required to do so under specific legislation. However, the prescriptive nature of the legislation varies from the very general (national SoE under the EPBC Act) to the detailed ACT legislation. The Victorian legislation only requires that the report addresses four environmental objectives. Other States' and New Zealand legislation fall in between the very general and the detailed in terms of prescriptions. Similarly, the Tasmanian *State Policies and Projects Act 1993* provides broad guidelines for the SoE report, including a provision relating to recommendations [s.29(1)(d)].

Whilst it may be tempting to provide detailed prescriptions under legislation, this can be counterproductive, in that matters *not* included in those prescriptions are then omitted from the SoE reporting, in compliance with the legislation. Within reason, the more general the provisions, the more likely matters not envisaged at the time of legislative drafting can be included in future reporting. The Tasmanian legislation is likely to be adequate, provided there is the will and ability to produce a full and useful SoE report. However, it may be desirable to amend the legislation to reflect any moves away from hard copies and more towards an interactive digital platform.

Recommendation 2:

That consideration is given to amending the State Policies and Projects Act 1993 to reflect future production of the SoE report on a fully digital platform.

Timelines

Timelines for production of the SoE or environmental reports vary from six months (New Zealand's individual domain reporting) to five years. Queensland has now reduced its timeline to two years following the introduction of real-time interactive web-based reporting and the consequent relative

ease of updating the web-site (report). Two years is considered the minimum period to be able to notice any significant trends in environmental data movement. Tasmania is required to report every five years, but this could change, if necessary or desired, with the introduction of an interactive website. At this stage, it is considered that the current timeline should remain until an interactive web-based report is fully developed and subsequently evaluated regarding timelines. Any change in timeline would require legislative amendment.

Recommendation 3:

That the current timeline of five years for publishing SoE reports remains, pending evaluation of future interactive web-based reports.

Digital interactive reporting

In the past, a lack of continuity in key datasets, many of which were not maintained over the long term was an obstacle for many SoEs. However, in recent years, most jurisdictions have moved to web-based reporting, with the national SoE and notably Queensland now providing real-time interactive web-based reports. Victoria is developing its current SoE reporting as digital reporting. Some (e.g. NSW) link to static datasets. Interactive, real-time web-based reporting would be expected to increase with better and more accessible data services across agencies. Such improvements in reporting would address some of the above criticisms and barriers. The more recent SoE reports (particularly the interactive ones) are also aiming for better relevancy, by linking to their previous reports and reporting on any governmental responses and implementations from previous reports (e.g. ACT).

Tasmania is now moving towards an open access data environment, whereby future SoE reporting could be developed as interactive web-based platforms similar to the Queensland system. The advent of Sense-T, LISTdata, the CSIRO Access Data Portal and the more recent Tasmanian Government 'Stats Matter' strategy should enhance SoE capabilities in the future. The SoE should not be replicating available datasets but rather linking into those via an interactive digital platform.

Recommendation 4:

That a full digital interactive web-based reporting system is investigated and implemented for the next SoE report.

Post-reporting evaluation

Previous criticisms of SoE reporting included presenting information in a manner which is too scientific and too difficult for most readers to understand; presenting information in a way which was of little value to policy makers; lack of meaningful or useful bench-marks; lack of alignment between State and national SoE reporting; and unclear links between policy and research.

The Tasmanian 2013 Review discussed general observations made regarding SoE reporting in Australia up to about 2009. The main conclusions drawn were that:

- SoE reporting was often viewed as an end, rather than a means to inform better environmental management, with many agencies appearing to 'go through the motions' of SoE reporting;
- SoE reports were produced with little referral to previous reports, resulting in no comparative tracking and analysis of longer-term environmental trends;
- SoE reports were not considered useful tools by targeted stakeholders, partly because reporting agencies appeared unclear as to their targeted audiences and user groups;
- reports have focussed too much on the pressure and condition/state elements, with less effort on the response sections;

- for SoE to be effective, the issues included in SoE must be included as response strategies in a government's strategic planning process. However, at that stage, there were no clear effective mechanisms in government planning processes for this to happen.
- most SoE reports contained descriptive tracts on environmental planning and management matters without a focus on future actions or recommendations.

However, very little formal post-report evaluation has occurred in any jurisdiction. Only Queensland has completed a formal evaluation of its previous report. Workshops were conducted with stakeholders, and an online survey and questionnaire undertaken. As well as site usage and satisfaction, the evaluation also investigated the website design.

Victoria has produced the 'Framework for the Victorian 2018 State of the Environment Report: State and Benefit' which sets out the proposal for developing its 2018 SoE report. There is some referral to past reports, but no formal evaluation. Other jurisdictions have compiled web visitor numbers, but do not appear to have used these to inform any future directions.

It is considered that formal evaluation of the most recent Tasmanian SoE report would be valuable in setting directions for future reports, including addressing some of the interpretation criticisms, future production modes and website design matters.

Recommendation 5:

That formal, wide ranging evaluation of past SoE reports, particularly the most recent, is undertaken before embarking on future reports. Such evaluation should consider content and technical production matters.

Funding

Adequate funding has been historically considered a barrier to the SoE reaching its full potential and is likely to be an ongoing issue, particularly if a 'stand alone' SoE unit was established. However, with the advent of interactive reporting, Queensland has demonstrated that a two-person team can produce a sizeable and meaningful SoE report provided there is governmental and cross-agency support, particularly with the mechanics of website build, and with a communications strategy and design³¹. A 'whole-of-government' support was necessary for the Queensland model to successfully operate, and any future Tasmanian SoE should seek this approach to minimise (and prevent duplicating) resourcing requirements at the SoE-team level.

Recommendation 6:

That government commitment is sought for adequate funding for the Tasmanian Planning Commission to undertake the program.

Recommendation 7:

That government commitment is sought for formal inter-agency support to assist the SoE program.

³¹ Ken Horrigan, Manager, Queensland SoE Reporting Team pers. comm.

6.0 Conclusions

SoE reporting is undergoing significant changes across Australia in recent years with the introduction of easily-access interactive digital web-based platforms. Several States and New Zealand are already capitalising on this production mode, by being able to produce high quality informative websites with real-time data. This has enabled a shorter timeframe updating, which may be advantageous in some instances where data change rapidly. Such frequent updating in these cases will keep the SoE relevant to users, rather than a five-year interval, that can be significantly extended by the time the SoE report is published.

The introduction of an adequate digitally-produced report in Tasmania would require specific 'whole-of-government' support and may require legislative amendment. There are already the 'bones' of an open data system in Tasmania, with more dataset advances proposed. An interactive web-based SoE report would no longer have the need to re-work data, as it would link directly into the relevant datasets, in real-time (depending upon the data owner's updates). Past criticisms that the SoE is of little use to anyone, has not targeted its audiences and has been apparently created in a vacuum may be dissipated if it can be produced to access and comment on real-time data. Nevertheless, formal evaluation of past reports and consideration of target audiences and stakeholder needs are essential in developing a structured guide or framework for future programs and delivering a cost-justifiable and meaningful SoE report.

A strategic approach to rejuvenating the Tasmanian SoE would seek to involve other agencies' expertise in technical matters such as web-build and communications. This would be more cost-effective than establishing a 'stand alone' unit which would attempt to duplicate (but may not be effective) the technical details.

7.0 Consolidated recommendations

Recommendation 1:

That the Tasmanian SoE reporting program continues from within the Tasmanian Planning Commission.

Recommendation 2:

That consideration is given to amending the *State Policies and Projects Act 1993* to reflect future production of the SoE report on a fully digital platform.

Recommendation 3:

That the current timeline of five years for publishing SoE reports remains, pending evaluation of future interactive web-based reports.

Recommendation 4:

That a full digital interactive web-based reporting system is investigated and implemented for the next SoE report.

Recommendation 5:

That formal, wide ranging evaluation of past SoE reports, particularly the most recent, is undertaken before embarking on future reports. Such evaluation should consider content and technical production matters.

Recommendation 6:

That government commitment is sought for adequate funding for the Tasmanian Planning Commission to undertake the program.

Recommendation 7:

That government commitment is sought for formal inter-agency support to assist the SoE program.

**Appendix: Review of the State of the Environment Reporting 25
January 2013**





REPORT

Review of the **State of the Environment** Reporting



25 January 2013



DRAFT

Table of Contents

	Page
<u>Executive Summary</u>	3
<u>Introduction</u>	5
<u>Purpose of the Review</u>	5
<u>Need for a Review</u>	5
<u>Scope of the Review</u>	5
<u>Methodology</u>	6
<u>Background</u>	6
<u>Overview of approaches to State of the Environment Reporting in Tasmania, 1997–2009</u>	7
<u>State of the Environment Tasmania 1997</u>	7
<u>State of the Environment Tasmania 2003</u>	9
<u>State of the Environment Tasmania 2009</u>	10
<u>Other Jurisdictions</u>	12
<u>Evolution of State of the Environment reporting</u>	12
<u>The Commonwealth</u>	14
<u>Victoria</u>	15
<u>Australian Capital Territory</u>	16
<u>Northern Territory</u>	18
<u>New South Wales</u>	19
<u>Queensland</u>	19
<u>Western Australia</u>	20
<u>South Australia</u>	20
<u>Organisation for Economic Cooperation and Development (OECD)</u>	21
<u>New Zealand</u>	22
<u>Other SoER reviews</u>	22
<u>Tasmanian Environmental Reporting</u>	24
<u>Stakeholder engagement</u>	27
<u>Conclusions</u>	34
<u>Options and Recommendations</u>	38
<u>Options</u>	38
<u>Recommendations</u>	39
<u>Attachment 1 - Review of the State of the Environment Reporting Format – Issue Paper pp17-19</u>	40

Executive Summary

In April 2012, the Tasmanian Planning Commission (TPC) initiated a review of the Tasmanian State of the Environment Report (SoER). The primary aim of the review is to ensure that future SoE reporting continues to be a relevant and cost effective tool for the Tasmanian government and community.

A key outcome for the review is identifying some practical options for the future which recognise legislative obligations, other related reporting processes (at a state and regional level), the expectations of stakeholders and the resourcing challenges facing the TPC.

The production of a SoER is a requirement of the *State Policies and Projects Act 1993*. Section 29 provides that the TPC must, at intervals of 5 years, produce a consolidated SoE Report relating to: (a) the condition of the environment; (b) trends and changes in the environment; (c) the achievement of resource management objectives; and (d) recommendations for future action to be taken in relation to the management of the environment.

The last SoER was produced in October 2009. Four major environmental themes were identified - air, water, natural values, and people and places. A pressure-state-response approach was used to present information by topic and issue for the reporting period up until and including 2008, supported by approximately 130-140 broad indicators. Indicators were compiled using data from a variety of sources covering weather, climate change, greenhouse gases, air quality, catchment quality, biodiversity, threatened species, plant and animal pests and diseases, and population and settlement. Content was reviewed by experts prior to publishing to ensure the quality of information presented.

Some of the complexities and constraints in preparing a SoER were identified in the 2009 Report. In particular, it was noted that reporting had been constrained by deficiencies in access to consistent, reliable and comparable data since the SoE process commenced in 1996.

As with earlier reports, significant effort was required on the part of those contributing data. Considerable resource input was required in planning, analysing, writing and publishing the report. Aside from the direct costs associated with producing the report, costs were incurred by the many agencies which contributed content (in terms of both data management and analysis undertaken by staff). The estimated cost to Government of preparing the 2007 Report is in excess of \$1 million.

The next SoER is due in October 2014. The scope of the review considers:

- the extent to which the Report duplicated information available elsewhere and data provided through other reporting mechanisms;
- the effectiveness of the Report format and outputs in meeting its intended purpose;
- whether the TPC is best placed to deliver the Report, given the nature of its principal functions; and
- whether there is a more cost effective format for delivering a report which still satisfies its intended purpose.

As part of the review process, responses to an issues paper were sought from previous contributors and other interested stakeholders. Comment was also sought from other jurisdictions, including through a national forum of SoE reporting agencies held in Hobart.

Stakeholder responses confirm that there is no clear view on what the specific purpose of the SoER should be. The Report to a large extent duplicates data made available elsewhere. In addition, the new Sense T project will have the capacity to provide a range of relevant Tasmanian environmental data in real time. While the SoER process has identified gaps in current data and triggered other organisations to review their data and analyses, the overall value add of SoER to other processes does not appear to be significant.

A key aim of the Report is to provide an assessment of environmental condition and inform the management of the State's natural resources. Previous reports have been significant achievements given resourcing, data and other constraints. They have provided comprehensive statements on the state's environment and identified trends and environmental issues. The reports have made valuable contributions to our understanding of the environments in which we live. Nevertheless, the objectives of the SoER have not been fully realised. The extent to which the Report has impacted on land use planning policy decisions, and resource management and allocation decisions is unclear, but appears limited.

The TPC's role and responsibilities relate to land use planning and it is arguable as to whether it is best placed to comment on many of the environmental elements covered in the previous SoER. The extent to which the report directly informs land use planning decisions and processes is questionable. However, the TPC (as publisher) does provide an independent review of data provided by other bodies.

The preparation process and focus of recommendations has been refined for each Report since the first 1997 Report published by the Sustainable Development Advisory Council. Nevertheless, current resource constraints necessitate a more cost-effective way of delivering future reports.

As such, a new approach to the production of the SoER is recommended, with clearly defined objectives for the Report. The key elements of the proposed approach include:

- identifying a limited number of key indicators directly relevant to policy and decision making within the resource management and planning system, in consultation with contributors and users;
- basing indicators on robust, available data;
- implementing online regular, report-card style reporting that increases accessibility and value to users; and
- ensuring the reporting is complementary to other state and regional reporting functions (including Sense T).

The TPC does not have sufficient resources to produce a SoER in 2014, given its significant responsibilities in relation to the Government's planning reform agenda. Many contributing agencies have also indicated that their previous level of support for SoER cannot be sustained.

It is recommended that the Government allocate additional resources to establish a dedicated SoE Unit (with ongoing funding) to develop and implement the new reporting approach. If this is not practicable then it is recommended that the production of the 2014 Report be deferred until the completion of the current phase of planning reform.

Introduction

Purpose of the Review

In April 2012, the Tasmanian Planning Commission (TPC) initiated a review of the State of the Environment Report (SoER)³². The primary aim of the review was to ensure that future SoE reporting continues to be a relevant and cost effective tool for the Tasmanian government and community.

Need for a Review

In 2009, the TPC released the third SoER. A *condition-pressure-response* (CPR) model was used in preparing the 2009 Report. Four major environmental themes were identified – air, water, natural values, people and places. These themes were the focus of chapters and the CPR model was used to present information for the reporting period up until and including 2008, supported by environmental indicators. One hundred and fourteen broad indicators were compiled using data from a variety of sources covering weather, climate change, greenhouse gases, air quality, catchment quality, biodiversity, threatened species, plant and animal pests and diseases, and population and settlement.

The 2009 Report identified the need for a flexible reporting approach to meet future sustainability challenges, further, that there was a need for data to be accessible in a manner that reflected contemporary issues and for themes to be subject to review.

Since production of the 2009 Report a number of other jurisdictions have amended their reporting format, moving away from a strict adherence to the CPR model.

Scope of the Review

The review considers:

- the extent to which the Report duplicated information available elsewhere and data provided through other reporting mechanisms;
- the effectiveness of the Report format and outputs in meeting its intended purpose;
- whether the TPC is best placed to deliver the Report, given the nature of its principal functions; and
- whether there is a more cost effective format for delivering a report which still satisfies its intended purpose.

³² "A State of the Environment Report provides an assessment of the impact of human activities and responses on the environmental condition of a defined geographical area" – ACT State of the Environment [Framework, Themes, and Indicator Groups](#), ACT SoE 2011 Report, August 2010, p3

Methodology

In latter part of 2012 an issues paper was circulated to a limited number of key stakeholders, including contributors to previous SoERs, inviting comment. Responses were sought on a range of questions covering the scope of the SoER, key indicators used and the process for preparing the report. In November 2012, Tasmania hosted a national forum of SoER state representatives. This forum provided an opportunity to discuss common issues and solutions. Of particular interest to Tasmania were measures taken by other jurisdictions to rationalise the reporting process in response to policy changes or resource constraints. Comments received have shaped recommendations.

Background

The Second Reading Speech³³ to the *State Policies and Projects Bill 1993* in May 1993 indicates that the State of the Environment Report was established to:

- provide an assessment of environmental condition;
- provide a means by which the effectiveness of actions taken to protect the environment could be evaluated;
- report environmental progress on a State, regional or catchment basis;
- identify environmental issues that would require policy, planning, management or resource allocation decisions;
- provide an active management tool by which resources could be allocated on the basis of priority, or can be redirected to minimise adverse environmental effects; and
- supplement any national report which may be produced.

Reports were to be prepared by the then Sustainable Development Advisory Council every five years. It was hoped that the Reports would 'come to be regarded as the environmental equivalent of the Auditor-General's Report'³⁴.

It is currently the responsibility of the TPC to prepare a report every five years. Three reports have been prepared previously:

1997 – by the Sustainable Development Advisory Council

2003 – by the Resource Planning and Development Commission, and

2009 – by the Tasmanian Planning Commission.

The next report is due in October 2014.

³³ Hansard Tuesday 4 May 1993 - Part 1 - Pages 1 – 54 - Second Reading Speech - *State Policies and Projects Bill 1993*

³⁴ Ibid 1993, pages 1-54

Legislative Requirements

The legislative requirements relating to the Tasmanian SoER are set out in section 29 of the [State Policies and Projects Act 1993](#).

- (1) The Commission must, as soon as reasonably practicable after the commencement of this Act and after that commencement at intervals of 5 years, produce a consolidated State of the Environment Report relating to –
 - (a) the condition of the environment; and
 - (b) trends and changes in the environment; and
 - (c) the achievement of resource management objectives; and
 - (d) recommendations for future action to be taken in relation to the management of the environment.
- (2) The Commission must –
 - (a) submit a State of the Environment Report produced by it to the Minister; and
 - (b) cause notice to be given, as prescribed, that the State of the Environment Report will be available to the public for inspection and purchase.
- (3) The Minister must cause a State of the Environment Report to be laid on the table of each House of Parliament within the first 15 sitting days of the House after the Report is received by the Minister.

The legislation requires the production of a hard copy document which is capable of tabling in Parliament. However, while the scope of the Report is specified there does appear to be some flexibility in terms of how the report is developed and how the content might be managed or presented.

Overview of approaches to State of the Environment Reporting in Tasmania, 1997–2009

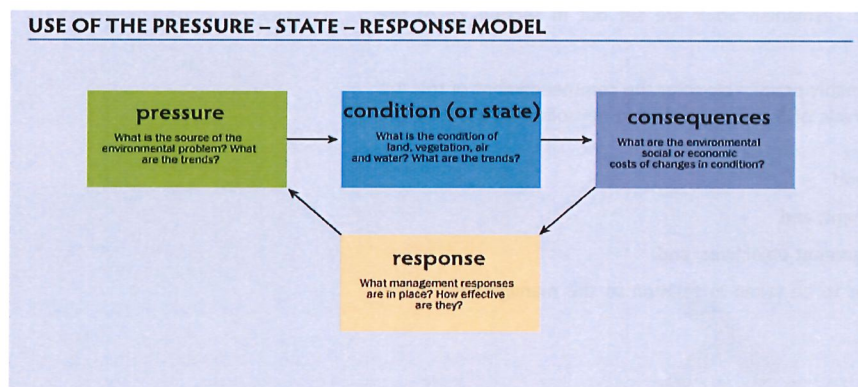
State of the Environment Tasmania 1997

The SoER 1997 (Volume 1) examined seven environmental themes: atmosphere; land; inland waters and wetlands; biodiversity; human settlements; cultural heritage; and coastal, estuarine and marine. Part 2 of Volume 1 reviewed key economic sectors in terms of resource management and environment.

Hard copy publications of the Report (Volumes 1 and 2) were printed under the Sustainable Development Advisory Council (SDAC) banner. Subsequent electronic versions were released under the Resource Planning and Development Commission (RPDC) banner.

SoER 1997 was broadly based around the accepted international Condition-Pressure-Response (CPR) or Pressure-State-Response (PSR) model adapted to meet the legislative requirements for the Report, refer Figure 1.

Figure 1: Pressure – State – Response (PSR) Model



The SoE PSR model was developed by the OECD in the early 1990s. The PSR model indicates the pressures of human activities on the environment, the current state (or condition) of the environment and natural resources, and the responses by government, business, organisations and the community.

The structure and framework for SoER 1997 was complex and multi layered. [Volume 1](#) (Conditions and Trends Report) included a review by major environmental themes with a detailed breakdown of seven chapters together with a sustainability review of major economic sectors and 76 case studies in total. Volume 2 contained the Report's recommendations.

The research, data gathering and writing role for the Volume 1 Report was largely undertaken through a SoE Unit established within the Information and Land Services Division of the then Department of Environment and Land Management (DELM).

The focus for the preparation of the Volume 2 Report was largely within SDAC, however, support was also provided by the SoE Unit.

Preparation of SoE 1997 was very resource intensive, over a number of years. Partnerships were established between government, industry, the University of Tasmania and the community.

Partnerships supported information exchange and provided informed commentary on the range of topics covered. Work started on preparing the report in early 1994 with the creation of two documents: *Framework for the Tasmanian State of the Environment Report*, and *Guidelines for Reference Group Authors*.

Advertisements were placed in Tasmanian newspapers inviting contributions. Once an initial list of possible contributors was prepared, a two day workshop was held in October 1994 to introduce the program and to form seven scientific reference groups.

Reference groups were established for each of the seven Part 1 chapters. Groups met over a 6–8 month period. Reference groups were the primary mechanism for ensuring that the subject

matter included in Part 1 reflected issues of concern to the community, as well as the current state of understanding of the environment.

A management group was formed to enable discussion of those issues that covered more than one group or that fell between the gaps in the coverage of reference groups. Significant funding was required, as a number of consultancies were needed to assist reference groups with information gathering and data synthesis.

While the drafting of Volume 2 was largely internal within SDAC, a wide-ranging consultation then occurred including a series of regional workshops around Tasmania.

The process resulted in the following outputs:

- State of the Environment Tasmania Volume 1 hard copy;
- State of the Environment Tasmania Volume 2;
- Draft for Consultation and Final State of the Environment Tasmania;
- CD ROM containing Volumes 1 and 2;
- Teachers Guide to the State of the Environment Report Review; and
- Future Directions for State of the Environment Reporting, 1998

Issues relating to the production of SoER 1997

The framework and administrative arrangements were complex and unwieldy. Considerable funding was required for external consultancies. The hard copy report was expensive to produce and only achievable because of in-house capacity within the Information and Land Services Division of DELM.

It was difficult to satisfy the needs of so many contributors in relation to the coverage of the Report with many specialists dissatisfied that their particular topics were not given due emphasis.

Doubts were expressed about the role and intent of recommendations. For example, were they intended as recommendations to State government about government processes and policy or did they have a wider community and sustainability focus?

State of the Environment Tasmania 2003

SoER 2003 was produced by the RPDC and responded to key findings in the 1997 Report. The framework for SoER 2003 again remained broadly based around the condition-pressure-response approach.

A major change was the move to web based publication for the bulk of the Report. The reporting framework was simplified with the sustainability review of economic sectors removed.

An effort was made to reduce the administrative arrangements used in producing SoER 1997, through a less formalised reference group process, which was replaced by a management group with commissioners from the RPDC. The process was generally more efficient and enabled a greater degree of ownership by the RPDC. Editing and review was undertaken within the RPDC.

A number of external consultancies were used in preparing SoER 2003. This included development of a second whole of Tasmania Landsat data set together with a classification of land cover. These data sets were used to support a range of indicators in the Report. The development of a content management system was a significant additional cost in developing the Report.

The output from this work was a system that supported the preparation of a layered web based reporting product with integration to the underlying data and to the recommendations. The content management system also enabled other innovations including an on-line glossary of terms and definitions.

In contrast to SoER 1997, the process and consultation was largely internal within State Government. Development of the Report involved liaison with State Government agencies to secure access to data and consultation in relation to prospective draft recommendations for action.

The process resulted in the following outputs:

- State of the Environment Tasmania web based report;
- State of the Environment Tasmania: Summary and Recommendations; and
- State of the Environment Tasmania: CD ROM.

Issues relating to the production of the SoER 2003

Significant administrative effort was required to generate the environmental indicators for the SoER 2003. These indicators were framed to meet the statutory requirement to report on conditions, trends and changes in the environment.

The content management system allowed a number of new functions and features to be included. However, the process of coding and data entry for web publication was complex and resource intensive and it became clear after the report was produced that further rationalisation of the process would be required.

The reality was that there were often limited long-term datasets that described trends and changes in environmental condition and even fewer reliable sources of information on the effectiveness of management responses.

State of the Environment Tasmania 2009

SoER was prepared principally by the RPDC, but published by the newly created Tasmanian Planning Commission. In preparing the SoER 2009, the TPC reduced the amount of content which was a feature of earlier reports.

The [pressure-state-response \(PSR\) model](#) was again adopted. Four major environmental themes were identified - air, water, natural values, and people and places. These themes were the focus of chapters and the PSR model was used to present information by topic and issue, for the reporting period up until and including 2008, supported by environmental indicators.

Approximately 130-140 indicators were compiled using data from a variety of sources covering weather, climate change, greenhouse gases, air quality, catchment quality, biodiversity, threatened species, plant and animal pests and diseases, and population and settlement. Content was reviewed by experts prior to publishing to ensure the quality of information presented.

Mention was specifically made in the Report of some of the complexities and constraints in framing an SoE report. The need to review current governance structures for coordination and management of key datasets was identified as a key issue.

The following comments were made:

- SoER is 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.
- 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.
- Quality data is not accessible for planning, management and reporting. Data collection and analysis is often not consistent, coordinated, comparable or reliable and can be fragmented or out-of-date.
- Monitoring programs are often conducted using different methodologies and data management tools making comparison difficult. Often the quality and reliability of data cannot be verified.
- Deficiencies were noted in communication and the sharing of information by data collectors and there was a lack of awareness of other data collection programs that are the same or similar.
- The lack of knowledge about a number of environmental themes or issues and the lack of consistent data collection seriously limited the ability to fully report on trends and changes in an informed way.

As with earlier SoERs, considerable work was required on the part of those contributing data, including: the 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; and Australian Antarctic Division.

Over the three SoE Reports, there has generally been a shift towards making recommendations to government.

Issues relating to the production of the SoER 2009

As with earlier reports, significant administrative effort was required to generate environmental indicators.

Coordination and analysis of information was able to be undertaken only through the establishment of a unit within the TPC, specifically dedicated to the reporting task.

Considerable resource input was required over several years, in planning, analysing, writing and publishing the Report. It is estimated that the total cost to the Government in producing the 2009 SoER was in excess of \$1m³⁵. Aside from the direct costs associated with producing the Report,

³⁵ Estimated direct costs to produce 2009 Report

Salaries 3 officers over a number of years + on costs:

band 7 x 3 yrs + oncosts =	\$360,000
band 6 x 2 yrs + oncosts =	\$216,000
band 4 x 1 yr + oncosts =	\$78,000
band 6 (.7 FTE) mapping 1yr =	\$76,000

considerable costs were incurred by the many agencies which contributed content (data and detailed analysis).

Other Jurisdictions

Evolution of State of the Environment reporting

As noted above, the Tasmanian SoE reporting format evolved from the initial PSR model of analysis developed by the Organisation for Economic Cooperation and Development (OECD) in the early 1990s.

In 1999, the European Environment Agency extended the PSR model by developing the Driving Forces-Pressure-State-Impact-Response (DPSIR) SoE model. Like PSR, DPSIR provides a framework within which to present the indicators on environmental quality and the resulting impact of the political choices made, or to be made in the future.

Most jurisdictions adhere to the PSR or DPSIR model of analysis and report within a thematic framework³⁶.

The DPSIR model³⁷ extends the PSR framework by taking into account the driving forces or significant causes of change, as well as the impacts on environmental, social and economic systems (see Fig 2). The DPSIR model is increasingly being used for SoE reporting in place of the original PSR model.

The DPSIR framework details a causal relationship beginning with 'driving forces' (human activity – industry, agriculture, energy, transport, households) (Kristensen 2004). These human activities exert 'pressures' on the environment as a result of the production/ consumption processes (excessive use of resources, changes in landscape, emissions, discharge of waste water).

As a result of these pressures, the 'state' of the environment is affected, the quality of the various environmental elements (air, water, soil).

The 'state of the environment' is the combination of the physical, chemical and biological conditions:

- air quality (regional, local, urban);

band 5 (.2 FTE) graphics 1yr =	\$18,000
production costs/printing =	<u>\$60,000</u>
	\$808,000

This estimate excludes costs to contributing agencies – estimated total cost to Government in excess of \$1M.

³⁶ These are the main things one is likely to think of when thinking of the environment, land and water, air, biodiversity, climate and people. These ... provide an overview of the key findings, effectiveness of responses, emerging issues and recommendations in relation to different areas of the environment . [Reports usually address] ... changes, challenges and improvements under each theme (ACT SoE 2011 Exec Summary).

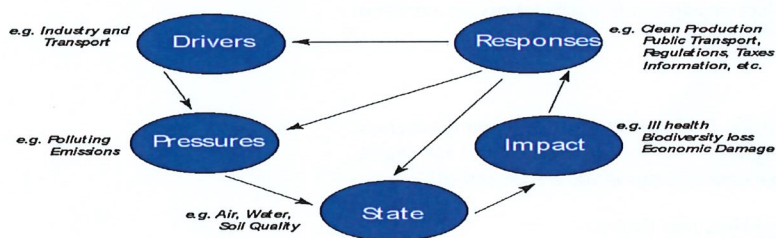
³⁷ [Kristensen, P.](#) *The DPSIR Framework*, Paper presented at the 27-29 September 2004 workshop on a comprehensive / detailed assessment of the vulnerability of water resources to environmental change in Africa using river basin approach. UNEP Headquarters, Nairobi, Kenya 2004.

- water quality (rivers, lakes, seas, coastal zones, groundwater);
- soil quality (local, natural areas, agricultural areas);
- ecosystems (biodiversity, vegetation, soil and water organisms);
- humans (health); and
- soil use.

Changes in the state of the environment (in physical, chemical or biological conditions) may result in environmental or economic 'impacts' on the functioning of ecosystems and ultimately on human health and economic performance (eg. water unsuitable for drinking)³⁸.

Impacts on ecosystems, human health and activities, may lead to political 'responses' (priority action, target setting – eg watershed protection).

Figure 2: DPSIR Framework



Source: [European Environment Agency web site](#)

Internationally and in Australia, more recent approaches to SoE reporting include providing more timely and integrated information using multiple presentation formats to meet a variety of user needs.

Increasingly, aggregated indicators (such as the ecological footprint or carbon footprint) have been used to illustrate broader sustainability trends and performance.

There are a range of challenges with SoE reporting which are experienced by all jurisdictions. These include (but are not limited to):

- integrating SoE reporting into land use planning and management in a meaningful way (ie producing information in a format which is useful for strategic land use planning);

³⁸ Kristensen (2004, p3)

- integrating SoE reporting into the continuous cycle of planning, management and decision making;
- identifying and selecting an appropriate framework, themes, issues and indicators;
- establishing efficient data collection processes and ensuring quality data;
- providing for independent report preparation or review;
- aligning SoE reporting across different levels of government;
- providing for timely reporting of information and results, and
- promoting the results of SoE reporting to key stakeholders to achieve change.

In Australia, SoE reporting has been undertaken at national, state and local levels for several decades. The first national SoER was published in 1996. It is clear that considerable resources have been directed to the production of SoE reporting in other jurisdictions.

Jurisdictions are consistent in structuring their reports based on themes/major issues (eg. climate, water, air) and use available environmental indicators.

Reporting agencies have refined their themes to suit local requirements and indicators are identified to suit their local needs and purposes³⁹.

The Commonwealth

National SoE reporting obligations were legislated in the *Environment Protection and Biodiversity Conservation (EPBC) Act (Commonwealth) 1999*, that requires that an Australian national SoE Report be produced every five years. Subsequent reports have been released in 2001, 2006 and 2011.

The Australian Government's [2011 SoE Report](#) is divided into nine themes:

- [inland water](#);
- [land](#);
- [marine environment](#);
- [antarctic environment](#);
- [biodiversity](#);
- [heritage](#);
- [built environment](#);
- [coasts](#); and
- [future reporting](#).

Each theme is assessed at a national scale following a similar approach. The main [drivers of change](#) in the Australian environment are also described and the report concludes with a discussion of opportunities and challenges associated with future reporting.

³⁹ B Austin & S Garnett, *State of the Environment Reporting: A Review of Theory and Practice*, 14 July 2009 – for the Department of Natural Resources, Environment, the Arts and Sports, Northern Territory.

The national report draws upon information in state reports, even though reporting cycles are not synchronised and there is duplication in the coverage of a significant number of environmental areas.

Victoria

The Victorian 2008 SoER explored issues and themes by means of the [DPSIR](#) methodology.

However, in developing its [2013 Review](#), Victoria has departed from a rigid acceptance of the DPSIR model of inquiry. The Commissioner for Environmental Sustainability was of the view that the DPSIR methodology did not appropriately address the interconnected nature of the natural environment and human dependence upon it.

She noted that:

‘Environmental reporting is undergoing a ‘scientific revolution’. Traditional models of reporting such as DPSIR are being replaced by methodologies which include considerations of people, culture and policy relevance along with the knowledge provided by natural science. New paradigms are often difficult to institute. They require time, innovation and the perseverance to change established conventions. I intend for my framework [Science, Policy, People](#) to contribute to the ‘scientific revolution’ which recognises that the integrity of environmental reporting relies on its transformation into an interconnected, trans-disciplinary endeavour’.

The level of complexity faced by all reporting jurisdictions, or bodies, necessitates, at the very least, the reconfiguration of the DPSIR methodology if not a broader change. Some reports for example have focused on a looser configuration of ‘underlying issues’ rather than ‘drivers’ or potentially limiting lists of indicators’.

Victoria has implemented a staged approach to SoER development and is producing individual, yet interlinked, ‘Foundation Papers’ on the themes of [Climate Change](#) (2012), [Biodiversity and Land](#) (2012) and [Water and the Environment](#) (2013). These Foundation Papers inform the development of the SoER, which will also be completed in 2013.

In an attempt to make reporting more ‘responsive, reflective and compelling’ - data provided by the natural sciences will be incorporated with the analysis of the social sciences to ‘better explain trends in environmental conditions and resource management’.

The 2013 Victorian SoER will be drafted to include the following:

- community aspirations;
- cultural and social underpinnings, values in and of the environment;
- historic trends and the current state of the environment as understood by science and the community;
- the outlook under a ‘business as usual’ model;
- the important gaps; and
- strategic proposals.

Victoria has undergone a process of significantly rationalising the number of environmental indicators to be used in its 2013 Review.

Australian Capital Territory

In the ACT, SoE reporting is a requirement of s19 of the ACT's [Commissioner for Sustainability and the Environment Act 1993](#). The Office of the Commissioner has undertaken a State of the Environment (SoE) Report for the ACT every four years beginning in 1994-95. The ACT Report includes recommendations which the government must respond to and report on annually.

The ACT [2011 SoER](#) adopted a framework of headline indicators, driving forces, themes, and indicators and indicator clusters to assess and report on the environment.

- [Headline indicators](#) – are a [small set of indicators](#) designed to provide simple and clear information to decision-makers and the general public about the overall condition of the environment and the changes that have taken place since the last reporting period.
- [Driving forces](#) – are indicators that provide data on demographic, social and economic developments, which, in turn, exert pressure on the environment. Four driving forces were identified (population, consumption, climate and land use and transport).
- Themes – consist of land and water, air, biodiversity, climate and people. These papers provide an overview of the key findings, effectiveness of responses, emerging issues and recommendations in relation to different areas of the environment.
- Indicators and Indicator Clusters – are the key measurement areas, which are analysed and interpreted in order to provide an assessment of each theme. Key indicators have been identified, defined and grouped within individual Indicator Cluster papers. The purpose of the Indicator Cluster papers is to group related condition, pressure, impact and response indicators and highlight interconnections and positive and negative relationships within and across themes.
- Progressing Sustainability – this section of the report places the findings into a wider sustainability framework and provides information on the key challenges and opportunities for progressing sustainability in the ACT into the future.

The Report is set out in thematic format ([land and water](#), [biodiversity](#), [air](#), [climate](#), [people](#) and [progressive sustainability](#)) and poses the following for each theme:

- what has changed;
- challenges;
- how are we responding; and
- how can we improve?

The Report was presented to the ACT Parliament on [1 May 2012](#), being a requirement of the *Commissioner for the Environment Act 1993 (ACT)*.

For the next SoER, it is likely that the Office will again adopt a DPSIR approach. It is planned to stay as close to the 2011 Report as possible in overall structure – though with some review of the indicators. The ACT is giving some consideration to strengthening the chapter on Driving Forces which was a part of the 2011 Report.

Under the ACT legislation, directorates must provide data for the Report. However, the Office is looking to establish a better process for working with them to identify what data they routinely

collect, where it is held, also what data projects are underway, so that less time is spent in collating, with more time devoted to analysis.

To this end officers in that jurisdiction are working with directorates, other data collection sources (NGOs/universities/research institutes/ students etc), writers and others over a longer period of time – and using the review process as the first stage of preparing the next report. This will mean that formal working arrangements will carry over a period of years rather than months – which should also facilitate data collection and collation as well as drafting of interim papers and report cards.

The Office has also been investigating the worth of periodic report cards and how these might assist, not only in a more consistent approach to data collection by directorates and collation by the Office, but also in monitoring progress in relation to government and other initiatives.

The ACT's framework for its 2011 SoE Report emerged from a review undertaken in 2009/10. Of particular note was the inclusion of headline indicators. The Review noted that a small set of headline indicators could provide simple and clear information to decision-makers and the general public about the overall condition of the environment⁴⁰.

The ACT SoER 2011 Reference Group recommended the following seven Headline Indicators⁴¹ that were adopted for the ACT SoE 2011 Report:

- ecological footprint - a measure of the area of land and water needed to support the resource demands (including the raw material for food, building, energy, etc) and to absorb the wastes of a given population or specific activity, using prevailing technology and resource management practices.
- greenhouse gas emissions – the volume of carbon dioxide, methane and nitrous oxide emissions by source;
- physical climate effects – an index of key physical climate effects covering changes in temperature, rainfall and wind from 1950 to present;
- land health – an index of key land health indicators addressing vegetation cover, vegetation condition, soil acidity and erosion from a 1993 baseline;
- water quality at two key sites ;
- biodiversity – an index of key biodiversity indicators addressing protected areas and native species from a 1993 baseline; and

40

http://www.envcomm.act.gov.au/_data/assets/pdf_file/0012/200424/OCSE_SoE_Indicators_Report_Aug_2010.pdf
p16/17

http://www.envcomm.act.gov.au/actsoe2011/library/overarching-papers/1229-ACT_SoE-Report-Papers_HeadlineIndicators_FA_WEB.pdf

41 These represent a small set of indicators that help provide simple and clear information to decision-makers and the general public about the overall condition of the environment and the changes that have taken place since the last reporting period (ACT SoE 2011 : Exec Summary)

- waste – the volume and type of waste per person per year.

It should be noted that the ACT 2011 SoER also contains many lower level indicators organised within themes⁴².

An agreed set of headline indicators might be useful in a Tasmanian context. However, rather than reporting on a large number of indicators, it may be possible to report on a smaller set of agreed indicators which in total address the condition of the environment, the data sets of which would be sustainable over time. More detailed condition indicators could be referenced via a web-link to contributor agencies.

The ACT SoER 2011 Reference Group also recommended that the number of driving forces could be rationalised and suggested four. Each were reported on by a number of indicators:

- population (reported on by 2 indicators);
- land use and transport systems (reported on by 2 indicators);
- climate (reported on by one broad indicator); and
- consumption (reported on by 3 indicators).

Northern Territory

The Northern Territory has not as yet established a SoER program. To inform its development of an SoE reporting process, the Territory commissioned a review of theory and practice surrounding SoE reporting nationally and internationally.

The *State of the Environment Reporting: Review of Theory and Practice* (Austin & Garnett, July 2009) is discussed in more detail below.

42 eg. Theme: Biodiversity – Indicator cluster : native species – flora. The indicators for this cluster are:

- Status of native species (C) - status of native plants including threatened species listings and other data for common species;
- Native seed harvesting (P) - extent and distribution of native seed harvesting;
- Weed impacts (I) - nature of weed impacts on native species; and
- Threatened species conservation (R) - effectiveness of threatened species plant conservation.

Condition indicators (C) present data that tell us the state of the environment at any particular time.

Pressure indicators (P) present data about the main human activities that could potentially adversely affect the condition of the environment.

Impact indicators (I) present data on the effect that environmental changes have on environmental or human health.

Response indicators (R) present data about the main things we are doing to alleviate pressures, or to improve the condition of the environment

New South Wales

Preparation and release of a SoER for New South Wales every three years is a statutory requirement under the *Protection of the Environment Administration Act 1991*. The NSW [SoE 2009](#) Report followed the PSR framework.

The NSW 2009 SoER was prepared by the Department of Environment, Climate Change and Water (DECCW). The NSW [SoER 2009](#) is structured around seven major themes:

- people and the environment;
- climate change;
- human settlement;
- atmosphere;
- land;
- water; and
- biodiversity.

Thirty environmental issues are reported on (within these themes) with data and information addressing 86 environmental indicators. The majority of these indicators are consistent with those covered in previous reports, and align with the core environmental indicators approved by the *Australian and New Zealand Environment and Conservation Council* in March 2000.

The NSW EPA recently released the 2012 SoER. The Report covers 22 different environmental issues across five chapters with data and information that addresses 86 indicators. The Report is presented through 5 themes/chapters (people and the environment, atmosphere, land, water, biodiversity).

Queensland

The Queensland [SoE Report 2011](#) (the fifth report) uses the DPSIR framework and describes the environment in terms of nine major themes (chapters):

In contrast to the three previous reports, the approach taken in this reporting cycle differs slightly through a more rigorous application of the DPSIR framework.

The Queensland [Report](#) is structured as follows:

- general introduction to state of the environment reporting;
- main driving forces that affect Queensland;
- pressures;
- state;
- impacts;
- responses; and
- summary of future challenges.

The key natural and cultural assets - atmosphere, water, land and cultural heritage are considered as topics under each of the DPSIR headings.

The Report was compiled by government agencies, research agencies and universities. Each issues paper was prepared by a nominated author or authors and then reviewed by experts in the field.

The production of the Report was overseen by the Sustainability and Environmental Reporting Interdepartmental Committee.

Queensland is currently re-assessing its SoE reporting framework and is considering a range of options to rationalise the reporting process. One option being considered is the production of a more concise report, focussed on significant environmental issues.

The next report will continue to use the DPSIR model, however it may that there is a return to arranging information by asset (eg. land, water etc), however using the DPSIR framework to knit the indicators together, with the aim of making the information more accessible.

In the Tasmanian context, while the PSR model of analysis and thematic framework is still relevant it is probably timely to review whether this format will best serve the purpose of future reports.

Western Australia

The Western Australian Government produced its last SoER in 2007 using the PSR framework. The report was produced by the Environmental Protection Authority in that State. Previous reports were prepared by the Western Australian Government in 1992 and 1998.

Similar to many other state and national SoE reports, WA's reports are structured around environmental [themes](#), [issues](#) and indicators. 'Themes' refer to major groupings of the environment, including [fundamental pressures](#), [atmosphere](#), [land](#), [inland waters](#), [biodiversity](#), [marine](#), [human settlements](#), [heritage](#) and [towards sustainability](#).

'Issues' refer to environmental problems and are reported under each theme. Environmental indicators are used to provide a summary measure of the changes and/or trends in the environment or for environmental issues.

South Australia

The South Australian 2008 [SoER](#) was produced by the Environmental Protection Agency (EPA) in that State and follows a similar format to that used in other jurisdictions.

This Report maintains the structure set by previous South Australian reports in that it is centered on seven major environmental themes: The PSR model is used, with the report structured by 7 [themes](#) (atmosphere, [coasts](#), [biodiversity](#), and [inland waters](#), land, human settlements and heritage. While this thematic classification provides a convenient basis for reporting, environmental themes are often interconnected and there is a degree of cross referencing between chapters.

Within themes the discussion is structured in terms of achievements/commitments, trends moving forward and recommendations.

The SA EPA and the Department for Environment, Water and Natural Resources (DEWNR) have indicated an intention to move from the periodic project approach to an ongoing reporting program.

The recently released SA [Natural Resources Plan 2012-2017](#) includes a priority to develop an integrated NRM reporting framework for SA designed to improve the understanding of natural

resource condition⁴³. Work is currently in train within that State to developing a model which will deliver on this priority.

Organisation for Economic Cooperation and Development (OECD)

In addition to using PSR or DPSIR models of analysis⁴⁴, many countries also adhere to environmental indicators published by the OECD.

The OECD has published an [Environmental Data Compendium](#)⁴⁵ which shows the state of air, inland waters, wildlife, etc., for OECD countries. The Compendium, published regularly since 1985, provides the factual basis for measuring environmental indicators and for assessing countries' environmental performance.

Many OECD countries are also increasingly interested in using a reduced number of indicators selected from existing larger sets.

The OECD uses a set of [key international environmental indicators](#)⁴⁶ in its country environmental performance reviews. These key indicators are:

- climate change – CO2 and greenhouse gas emission intensities;
- ozone layer - ozone depleting substances;
- air quality – sulphur oxides and nitrogen oxide emission intensities;
- waste generation – municipal waste generation intensities;
- freshwater quality – waste water treatment connection rates;
- freshwater resources – intensity of use of water resources;
- forest resources – intensity of use of forest resources;
- fish resources – intensity of use of fish resources;
- energy resources – intensity of energy use; and
- biodiversity – threatened species.

⁴³ Natural Resources SA, [Our Place Our Future](#), State Natural Resources Management Plan South Australia 2012 – 2017, p20

⁴⁴ Among OECD countries, 87 per cent use the PSR framework, or a modified version of it, in their most recent state of the environment report. <http://www.mfe.govt.nz/environmental-reporting/international/index.html>

⁴⁵ <http://www.oecd.org/env/environmentalindicatorsmodellingandoutlooks/oecdenvironmentaldatacompendium.htm>

⁴⁶ <http://www.oecd.org/env/environmentalindicatorsmodellingandoutlooks/37551205.pdf>

New Zealand

The New Zealand Ministry for the Environment's environmental reporting program also uses a PSR model of analysis. The [national environmental reporting program](#)⁴⁷ uses a core set of environmental indicators aimed at providing information on high-priority issues for the environment. Indicators⁴⁸ were selected with the aim of providing a picture of the environment's overall health, when combined.

New Zealand's national environmental reporting program has [22 core](#) environmental indicators, which are reported using 66 national datasets. Each indicator focuses on a high-priority issue in one of 10 domains (air, atmosphere, biodiversity, household consumption, energy, fresh water, land, oceans, transport, and waste), amongst other vital aspects indicating the environment's health.

Each of the 22 indicators has a different [reporting frequency](#). Where possible the indicators are updated regularly on the internet (mostly annually) in the form of an environmental report card⁴⁹. [Report cards](#)⁵⁰, sometimes referred to as 'indicator updates', provide updated information on these 22 indicators.

The timing of each update depends on the availability of data, and also reflects, where possible, the policy priorities of the Ministry. Other variables affecting the timing are the availability of staff and a budget to commission or purchase data, and the timely provision of data from the Ministry's reporting partners.

The core set of national environmental indicators specifically excludes social, economic and heritage indicators and sustainable development indicators as they are included in national programs run by other central government agencies

Other SoER reviews

A number of observations have been made with respect to the various approaches across jurisdictions. Austin and Garnett (2009:20-29) in their report to the Northern Territory suggest that:

- SoE reports are produced with little regard to previous reports. Reports tend to be developed on a stand-alone basis with little connection to what has been reported or achieved previously. This has resulted in a reduction in capacity to track and analyse longer-term environmental and policy trends.

⁴⁷ <http://www.mfe.govt.nz/environmental-reporting/about/tools-guidelines/indicators/index.html>

⁴⁸ Sixty-four per cent of **New Zealand's** core environmental indicators are identical or very similar to OECD's indicators.

⁴⁹ <http://www.mfe.govt.nz/environmental-reporting/report-cards/index.html>. The release of report cards is in addition to the production of national environment reports. The Ministry has produced two national state of the environment reports, in 1997 and 2007, although this is not a legislative requirement. Legislation to monitor the environment in a consistent and independent manner has been [proposed](#), with an [issues paper](#) released, but not yet introduced.

⁵⁰ <http://www.mfe.govt.nz/environmental-reporting/report-cards/index.html>

- Reports have not been seen as a useful tool by targeted stakeholders. Reporting agencies appear unclear as to their target audiences and user groups. This would seem to stem from a lack of clarity about the purpose of the SoE reporting itself.
- Reports have focused too much on the pressure and condition/state elements with less effort on the response sections.

[Manganov \(2006\)](#)⁵¹ suggests that organisations appear to be going through the motions of SoE reporting, without genuinely attempting to follow up or respond to the findings and outcomes presented.

[Varshney et al 2001](#)⁵² make a number of points:

- SoE reporting is an end in itself rather than a means to inform better environmental management.
- For SoE to be effective, the issues included in SoE should also be included in a government's strategic planning process, earmarked as themes of response strategies. However there is no mechanism in the government planning processes that allows this to happen.
- Most SoE reports contain descriptive tracts on environmental planning and management matters, and lack a focus on actions needed to correct perceived problems.

Austin and Garnett make the comment that, given the many issues with SoE reporting, 'it is hardly surprising that there has been low levels of buy-in' within jurisdictions.

Some of the common barriers noted to reaching the full potential of SoE reporting include:

- inadequate funding;
- lack of continuity in key data-sets, many of which are not maintained over the long term;
- presenting information in a manner which is too scientific and too difficult for the majority of readers to understand;
- presenting information in a manner which is of little value to policy makers;
- lack of meaningful or useful bench-marks;
- lack of alignment between state and national SoE reporting; and

⁵¹ Peter Manganov P 2006, "SoE What?" paper presented the State of Australian Cities Conference, NSW Griffiths University 2006.

Also note [Maganov P, 2006](#) "Sustainability – Are we there yet (and would we know it if we got there?) paper presented at the State of Australian Cities Conference NSW University 2009.

⁵² Varshney et al 2001, "Local-area sustainability assessment system: a theoretical and operational overview" paper presented at the State of Australian Cities Conference NSW University 2009.

- a disconnect between policy and research.

Tasmanian Environmental Reporting

Many State and Australian Government agencies produce their own data and reports on environmental changes for their own purposes. A number of these reporting processes contain indicators relevant to SoE reporting.

Tasmania Together

Tasmania Together⁵³ reports on a number of 'head line' environmental indicators⁵⁴, under Goal 12 – Natural Resources.

Standard 12.1 Land use

Protection of native vegetation	12.1.1 Threatened native vegetation communities
Native vegetation - area	12.1.2 Proportion of Tasmania covered by native vegetation

Standard 12.2 Air and water quality

Air quality	12.2.1 Breaches of National Environment Protection Measure air standards
Drinking water quality	12.2.2 Breaches of Australian Drinking Water Standards Recreational water quality
River health	12.2.3 Breaches of recreational water standards 12.2.4 Proportion of sampled river sites with an impaired or impoverished biological condition
Erosion	12.2.5 Proportion of water measurement sites showing increase in turbidity

Standard 12.3 Chemical use

1080 usage	12.3.1 Levels of usage of 1080
Pesticide usage 1	12.3.2 Proportion of water samples with pesticides exceeding national guidelines

Standard 12.4 Sustainable energy

Renewable electricity	12.4.1 Capacity of renewable electricity generation
Residential electricity use	12.4.2 Residential electricity consumption

⁵³ Tasmania Together is in a period of transition and future reporting priorities are at this time unclear.

⁵⁴ <http://www.tasmaniatogether.com.au/benchmarks#1/12>

Petrol use	12.4.3 Average fuel consumption of petrol vehicles
Greenhouse gas emissions	12.4.4 Levels of greenhouse gas emissions (carbon dioxide equivalent)

Department of Primary Industries, Parks, Water and Environment

The Department of Primary Industries, Parks, Water and Environment (DPIPWE) produces a number of reports which include key indicators relevant to the state of the environment ([native plants and animals](#); [vegetation](#); [water](#); [land management and soils](#); and [marine environment](#))⁵⁵.

Relevant indicators reported on include:

- area of land affected by salinity⁵⁶;
- water samples where pesticides exceed national guidelines;
- threatened native vegetation communities; and
- threatened species⁵⁷

Environment Protection Authority

The [Environment Protection Authority](#) produces a number of relevant reports (eg. [air quality](#), [water, quality](#)).⁵⁸ The EPA monitors a number of environmental indicators included within the [Tasmanian Indicator Compendium](#).

Natural Resource Management

Tasmania's three regional Natural Resource Management organisations also produce reports relating to:

- water and river health;
- coastal and wetland management;
- weed and pest management
- soil condition; and
- land management⁵⁹

Forestry Tasmania

⁵⁵ [http://www.dpiw.tas.gov.au/inter.nsf/Attachments/LBUN-8MK347/\\$FILE/DPIPWE_AR11_TasTogether.pdf](http://www.dpiw.tas.gov.au/inter.nsf/Attachments/LBUN-8MK347/$FILE/DPIPWE_AR11_TasTogether.pdf)

⁵⁶ DPIPWE Annual Report

⁵⁷ <http://www.dpiw.tas.gov.au/inter.nsf/Attachments/LJEM-8YA7KF?open>

⁵⁸ <http://epa.tas.gov.au/epa/results?k=Tasmanian%20Indicator%20Compendium> and <http://epa.tas.gov.au/coastal/indicators>

⁵⁹ <http://www.nrmnorth.org.au/>

Forestry Tasmania undertakes a number of SoE-related processes:

- Annual Sustainability Report (a range of environmental and related social indicators);
- 5 yearly Sustainability Report (required under the Regional Forests Agreement);
- compilation of Tasmania contribution to the 5 yearly national State of the Forests Report.

Forest Practices Authority

The Forest Practices Authority is required to submit a report on the state of Tasmania's forests every 5 years under section 4Z of the *Forest Practices Act 1985*.

The [State of the Forests Tasmania 2012 Report](#) was prepared by the Forest Practices Authority in cooperation and consultation with the Department of Primary Industries, Parks, Water and Environment, Forestry Tasmania, the Department of Infrastructure, Energy and Resources, Private Forests Tasmania and the Australian Government Department of Agriculture, Fisheries and Forestry.

The Report covers a number of relevant environmental criteria, including:

- conservation of biological diversity;
- maintenance of productive capacity of forest ecosystems;
- maintenance of ecosystem health and vitality;
- conservation and maintenance of soil and water resources; and
- maintenance of forest contribution to global carbon cycles.

Tasmanian Sensor Network (Sense T)

The State Government, University of Tasmania and CSIRO, are working in partnership to create a real time environmental monitoring system for Tasmania - [Sense T](#). [Sense T](#) provides the capacity for an integrated statewide monitoring network for water, air, energy, transport, carbon and population flows.

Sense T, operating through the broadband network, brings together different sensors into a single, large-scale, open-access system and allows data (collected from strategically placed remote sensors) to be collated and analysed to make meaningful deductions about the state of the environment.

Sense T has the capacity to significantly change the landscape with respect to environmental reporting in Tasmania and in part deliver on a number of SoER's expected outputs. A refined SoE reporting system would seek to capitalise on this project.

Statistical and spatial initiatives

The State Government recognizes the importance of robust and effective statistical data for good decision making, and is currently developing a long term strategy to build the Government's statistical assets and capability.

The Government is also investing over \$3 million in its spatial infrastructure through the Spatial Information Foundations Project. This project will improve the Land Information System Tasmania (LIST) capability for delivering Tasmanian data spatially to support services and decision making.

A refined SoE reporting system would seek to capitalise on this project to present information in an accessible format.

The Australian Government

There is some duplication in reporting data between the national [SoE Report](#) and the Tasmanian SoE Report. For example, climate (temperature and rainfall) data⁶⁰, air quality⁶¹, threatened species⁶², pests⁶³, forestation⁶⁴ and threatened species⁶⁵.

Australian Government agencies produce a number of indicators relevant to the state of the environment:

- estimates of [carbon emissions by sector](#) for Tasmania by industry sector - ABS⁶⁶
- [water use](#) in Tasmania by industry sector - ABS⁶⁷

Stakeholder engagement

In October and November 2012, contributors to previous SoERs and a limited number of other key stakeholders were invited to provide comment on an issues paper. The paper sought responses on a range of questions covering the scope of the SoER, key indicators used and the process for preparing the report. See Attachment 1 for the specific questions.

A number of respondents submitted written comments, others provided verbal reports. Comments were received from the principal contributors to previous SoERs:

- Bureau of Meteorology – Tasmania;
- Department of Primary, Parks, Water and the Environment;
- Department of Premier and Cabinet;
- Department of Infrastructure, Energy & Resources;
- Forestry Tasmania;
- Hydro Tasmania;
- NRM North;

⁶⁰ [State of the Environment Report](#) – Australia 2011, pp75 - 81

⁶¹ Ibid , pp162-183.

⁶² Ibid , pp220-221

⁶³ Ibid, pp 233-235

⁶⁴ Ibid, pp324-325

⁶⁵ Ibid, pp593-597

⁶⁶ [Department of Climate Change and Energy Efficiency](#)

⁶⁷ [Water Account, Australia, 2009-10 \(cat. no. 4610.0\)](#)

- NRM South;
- Tasmania Together Unit – DPAC; and
- Staff and students of the University of Tasmania School of Geography and Environmental Studies.

Comments were also received from officers involved in the development of the 2009 SoER.

Many of the issues identified through this review are not unique to the Tasmanian experience and have also been identified at the national level. In November 2012, Tasmania hosted a national forum of SoER state representatives. This forum provided an opportunity to discuss common issues and solutions. Of particular interest to Tasmania were measures taken by other jurisdictions to rationalise the reporting process in response to policy changes or resource constraints.

The following is a summary of the views provided by stakeholders, contributors and other jurisdictions.

What is the scope of the Report – what are the agreed expectations? – have they been met?

Stakeholders differ in their views as to the expected scope of the Report. However, the majority agree that, although the requirements are detailed in the legislation, the scope is unclear.

One respondent indicated that the Tasmanian SoE Reports 'have been too broad in scope, too infrequent, too lacking in continuity and... unconnected to policy decisions'. This view was held by the large majority of respondents.

A significant number of respondents commented that the Report fell short of meeting the requirements of the legislation, namely s29(1) (c) and (d):

- (c) the achievement of resource management objectives; and
- (d) recommendations for future action to be taken in relation to the management of the environment.

A number of stakeholders commented that there was a need to clarify the application of the SoER. For example, 'the legislation listed the *achievement of resource management objectives*; and *recommendations for the management of the environment* as outputs of the SoE Report, yet there did not appear to be any specific responsibility for/or ownership of these outputs'. It was stated that 'assigning ownership to these outputs would ensure that the SoE Report is relevant to a target audience'.

The comment was made that 'as the target users of the SoER are not specified in the legislation, the relevance of the Report is difficult to ascertain'. For example, are the intended users government agencies or external stakeholders (students, academics)?

A number of stakeholders indicated that SoE reporting holds the government of the day to account in terms of the adequacy of its response to environmental issues and its ongoing management of the state's environmental resources. However, others noted that there was no requirement for any area

of government to respond to recommendations made (in the SoER) for future action with respect to the management of the environment. This was viewed as a weakness of the SoER.

Some stakeholders indicated that there should be greater linkages between the Tasmanian SoER and the Commonwealth SoER⁶⁸.

One respondent indicated that the PSR and DPSIR models exceeded the expectations of information required. The view was that such detailed analysis would be more relevant and applicable if undertaken by agencies responsible for the management of the specific areas commented on in the SoER.

To what extent is the Report useful or relevant – and to whom?

The majority of stakeholders expressed the view that the Report has limited relevance to their work, and that it has little impact on management of the environment (although see comments below – it may be that the process of producing an SoER impacts positively on management practices).

Software designed to capture the level of activity on the 2009 SoER website records a significant level of activity (number of 'hits' over the last year in excess of 50,000)⁶⁹. Detailed usage statistics are not available. It was assumed that members of the public and academics access the Report, however academics and students who responded indicated that they were more likely to access information directly from source agencies, as this provided more current data.

State government agencies who responded to the Issues Paper, indicated that they did not use the Report as a management tool, due to the infrequency of reporting. Invariably, State government agencies indicated that the summary and analysis within the SoE Report was not directly applicable to their business areas, as in most cases their information needs are quite specific and are required to be current. Most contributors indicated that staff within these areas tended to go to primary sources rather than the Report for information.

A number of respondents questioned the purpose of the Report (ie. suggesting that while there may have been good reason to require that a Report be tabled in Parliament 20 years ago, this may no longer be the case). It was suggested that the current level and frequency of reporting initiated by State government agencies was such that the additional reporting by way of the SoER was now unnecessary.

Does the Report add value?

⁶⁸ While the Commonwealth uses data from a variety of sources within jurisdictions, there does not appear to be a direct link between the capture of environmental information within jurisdictions for SoER purposes and preparation of the national SoER. Each jurisdiction produces its Report using different legislative timeframes with no national coordination in terms of environmental data sets maintained or production of the national Report.

⁶⁹ The extent to which this number reflects the activity of search engines locating the site (on a key word search) is not known, but this automated activity may be a significant contributor to this figure.

Stakeholders differ in their views as to the additional value provided through publication of the Report (over and above other environmental reporting by government).

Most respondents indicated that the Report was not used to obtain information – all relied on more up to date data from other sources. However, a number of stakeholders suggested that the Report did provide an opportunity to refer to previous reports and offers a longer term analysis. It was also noted that in many cases it was difficult to get a picture of trend due to significant data gaps⁷⁰.

One contributor asked what 'gap' in environmental reporting was being filled by the SoER? It was suggested that, if it was the case that other areas of government already satisfied this gap, then (rather than try and fix the Report) the need for the SoER should be questioned.

Reference was made by one contributor to the New Zealand's annual 'report card' approach which provides updated information on a select number of indicators, on a rolling basis. It was noted that this would have the effect of improving the relevance and application of SoER.

One respondent indicated that there is no other process or document within the State Government which provides such a complete coverage of environmental issues. It was suggested that the SoE reporting process resulted in tangible benefits. The Report process generated a significant amount of analysis that subsequently triggered other agencies and organisations to conduct more thorough investigation/research. Some examples provided were: assessments of introduced animals into Tasmania (which initiated a more comprehensive debate); the assessment of the sustainability of Tasmania's fisheries (which was very incomplete prior to the SoER exploration of the issue); an analysis of indoor air quality; and the identification of heritage buildings not on heritage lists that are in danger of being developed.

What should be the focus of the Report?

Stakeholders differ in their views as to what should be the focus of the Report.

Some stakeholders are of the view that the Report should present an environmental snapshot, others suggested that the Report should focus on recommendations to government about management of the environment. Others were of the view that the Report should operate as a tool for land use managers.

Some stakeholders indicated that the Report is significant as snapshot of the environment every 5 years. Others saw this as a major failing in that the Report lacked currency and the data was out of date at the time of publishing.

⁷⁰ The lack of continuous data was also commented upon in the Summary to the 2009 SoER. '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'. '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' (2009:p6)

A number of stakeholders indicated that if the purpose of the report was to show trend data, then this would be better served through a report card approach, presenting a few key indicators with explanation sufficient to elucidate the indicators used.

A number of stakeholders indicated that any re-packaging of the SoE Report should ensure that the reporting is of use in the land use management process at the regional level (ie. through Regional Land Use Strategies) and reflected in local council planning schemes. However, others noted that it may prove difficult to align such a Report (as a useful planning tool) with the Report's current focus (as a broad statement on the environment) framed to meet legislative reporting requirements.

One stakeholder suggested that if the purpose of the Report was merely to meet the legislative requirement then this would be best served by a brief report that involved minimal effort and input on the part of contributors.

A number of stakeholders suggested that the focus of the Report should be on making recommendations to Government with respect to the management of the environment.

The majority view was that the Report's capacity as a tool for government was not fully realised.

To what extent is the Report used as a land management tool?

Stakeholders noted the broad scope of the current Report. Neither contributors, nor other stakeholders, indicated that the Report was used as a land management tool. The majority view was that the Report's capacity as a useful land management tool was not being realised.

However, as noted above, a number of stakeholders were of the view that SoE reporting should be of use in the land use management process at the regional level. It is likely that the focus of the Report would need to change significantly to operate as an effective resource for land use planners at the regional or local level.

Is legislative change necessary?

Stakeholders generally were of the view that legislative change was not necessary.

One respondent indicated that the scope of legislation appeared sufficiently broad to allow tailoring of the Report to be more accessible and useful to end-users without requiring legislative change, other than for matters such as changes in timeframes and responsibility for producing the Report.

One stakeholder suggested that while one might question whether the TPC is the most relevant or best placed organisation to produce the Report (any change would require legislative amendment), it was seen as important that appropriate funds and resources to coordinate SoER collation and analysis be committed, before considering any transfer of responsibility.

One respondent commented that the TPC was best placed to produce the Report given its Resource Management and Planning System (RMPS) responsibilities.

Are there priority areas of the environment which should be reported on?

There was no discernible view on whether the Report should report on key environmental priority areas, or on what these were.

A number of respondents suggested that the SoER fulfilled its purpose in making a statement on the condition of the environment every 5 years and that this necessarily involves a broad brush approach with comment on all areas of the environment.

One respondent noted that consideration of environmental sustainability in the context of economic development may require the adoption of a whole-of-government approach⁷¹. The nexus between the economy and the environment is noted in the *Tasmanian Economic Development Plan 2011-2015*⁷². **Goal 3** of the Plan is to improve the social and environmental sustainability of the economy.⁷³ Two outcomes listed under goal 3 are relevant to identifying priority areas of environmental reporting:

- work with the state's biggest emitters to better understand the opportunities to reduce emissions and support the transition to a low carbon economy; and
- research and identify key environmental indicators for business and industry.

If the focus of the Report were to change significantly in terms of making recommendations to government then this might result in a need to highlight priority environmental areas.

Should the number of indicators be reduced and if so how?

A number of stakeholders indicated that there was an opportunity to condense the number of indicators. However, it was noted that reducing the reporting priority areas may result in missed opportunities to monitor changes in the environment.

One stakeholder noted that the establishment of (and on-going adherence to) stable environmental reporting indicators is critical in inducing the long-term investment that environmental reporting requires.

⁷¹ 'Consideration of environmental sustainability in the context of economic development requires the adoption of a whole-of-government approach. Policy frameworks such as environmental regulation, strategies to respond to climate change and planning guidelines all have an impact' – source: *Tasmanian Economic Development Plan 2011-15* – Department of Economic Development, Tourism and the Arts. The 'lack of a broad 'whole of government' direction to the development of environmental policies by Government agencies was commented on in the Summary to the 2009 SoER. The comment was made that 'a whole of government approach [would] assist the delivery of RMPS objectives.' – (SoER Summary 2009: P8)

⁷² http://www.development.tas.gov.au/_data/assets/pdf_file/0017/47024/111078_-_EDP_Goal_Three_final.pdf

⁷³ The Economic Development Plan's vision is for economic development in Tasmania that is both socially and environmentally sustainable. This is sometimes referred to as a triple bottom-line approach, where not only economic costs and benefits are accounted for, but also social and environmental costs and benefits. It means that economic growth is not undertaken at the cost of foregone social sustainability and environmental benefit.

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A second stakeholder suggested (in response to the suggestion that the number of indicators and amount of analysis be reduced) that considerable analysis might still be required behind the scenes to inform the indicators.

One respondent noting 'the level of duplication in the numerous SoE-related reporting processes', highlighted the benefits of a 'measure and collate once – report many times' approach to the collection of data.

A stakeholder indicated that 'unless there is a regulatory or business imperative to maintain and analyse data, rational organisations will not do so, leaving SoE reporting with little of value to report'.

DPIPWE (a major contributor to previous SoE reports) commented that the Report would be more cost effective if it used indicators that are:

- already compiled by contributors as part of the current business processes (ie. using indicators that are already reported on by agencies);
- regularly reported on (eg. annually); and
- maintained over a lengthy period..... eg, the Tasmanian Reserve Estate (area of Tasmania reserved as at 30 June in each year).

One stakeholder suggested that staging reporting against existing available indicators would enable an annual reporting cycle (similar to the report card approach applied in New Zealand). However, it was noted that where possible an attempt should be made to maintain consistency with Commonwealth reporting.

Is the current format useful?

All contributing agencies were of the view that the Report in its current format was not useful to their business areas. A number of stakeholders indicated that there was no longer a need for such a report given the changes in environmental reporting undertaken by government agencies.

A number of stakeholders indicated that the Report was not useful as a tool for government or as a more specific tool in land management.

A number of stakeholders suggested that a more regular report card approach, detailing objectives, actions and achievements in relation to specific environmental indicators would be an applicable alternative and potentially relevant tool for government agencies when considering annual objectives and budgets.

Others suggest that the Report should more closely align with the RMPS, and have more direct relevance at the regional level and through council plans. The Report would require significant amendment to function as a relevant tool for land use planners, particularly within regions. Such a re-alignment might not necessarily fit with the broad purpose of the Report, reporting statewide.

In producing a much reduced Report, in terms of scope and indicators, one respondent issued a note of caution by suggesting that producing something concise may still require considerable analysis. It

was noted that 'summaries are a synthesis of wider issues.... you still need to understand the wider issue'. 'How [would] you identify issues that have been overlooked or are missing/incomplete, if a broad assessment is not interrogated first'.

A key respondent indicated that the Issues Paper sought responses to a number of important policy questions that need to be resolved before any recommendations are made regarding changes to the format of the Report (ie.. the purpose of the Report, the target audience).

Summary of stakeholder responses

Stakeholder comments can be summarised as follows:

- It is unclear if the SoER is intended to be a report card on the State's environment to Parliament, an assessment for policy makers, a tool for land use planners or land managers, and/or a resource for students/academics.
- The relevance and value of the Report to users (in its current format) is unclear. A number of stakeholders (external to government), view the SoER as worthwhile exercise, albeit in a revised form. However, contributing government agencies see limited value for them in the Report, as they typically rely on more frequently produced indicators generated internally.
- Based on stakeholder responses, it appears unlikely that decision makers within government agencies use the Report or make decisions based on Report recommendations.
- Although identified at inception as a tool to enable better land management, it would appear that the Report is not used in this capacity by the TPC or other State government agencies.
- Several responses proposed a simpler reporting process based on existing indicators, which are readily accessible, which require minimal manipulation and synthesis of data sets and for which underlying data are maintained on a long-term basis. Others argued that this would significantly diminish the worth of the Report (ie. that the content of the Report would be driven solely by the availability of indicators – resulting in large gaps in reporting on the environment).
- A number of stakeholders suggest that more frequently reports might prove of greater value. The New Zealand approach was suggested⁷⁴.

Conclusions

This section reports on the key findings of the Review and provides some options and recommendations for future reporting.

The following commentary examines the Review questions in greater detail.

⁷⁴ As noted the NZ report card approach supports the production of national SoER Reports. The national Report is not replaced by report cards.

[The extent to which the Report duplicates information available elsewhere](#)

The Report relies to a large extent on data provided by custodian agencies. These agencies maintain environmental data sets and publish relevant environment indicators as part of their legislative obligations. The TPC is not a custodian of any significant environmental data in its own right. The preparation of previous reports has required that TPC officers contact custodian agencies and seek access to data sets.

The majority of those contributing agencies (who responded to the issues paper) are of the view that the SoER data is replicated or reported elsewhere.

The preparation of previous reports involved piecing together information from discrete data sets to enable reporting on specific environmental indicators which may not have been reported on by custodian agencies. Considerable effort has been undertaken in the past to add value to indicators by providing additional context and further information/analysis. In a number of instances, this additional analysis by the SoER has triggered custodian agencies to review their data capture and reporting.

The Sense T project is a major (and well resourced) new reporting development which is expected to significantly change the environmental monitoring and reporting landscape in Tasmania. Sense T will, in part, deliver on a number of SoER's expected outputs by reporting on a range of environmental indicators in real-time.

[The effectiveness of the report format and outputs in meeting its intended purpose](#)

A key aim of the Report is to provide an assessment of the State's environmental condition and to inform the management of the State's natural resources. Previous reports have been significant achievements given resourcing, data and other constraints. They have provided comprehensive statements on the State's environment and identified trends and environmental issues. The reports have made valuable contributions to our understanding of the environments in which we live.

Research undertaken by the Commonwealth environmental reporting agency indicates that decision makers do take note of the national SoE Report. However, the extent to which the Tasmanian Report has impacted on policy decisions, resource management or resource allocation decisions within this State is not clear, but appears to be limited. State government agencies (that responded to the review issues paper) indicated that they did not use the Report as a management tool, partly due to the infrequency of reporting.

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. It is not clear whether this was achieved, in part, due to the SoER process – or whether the changes would have resulted independently of the SoER process.

The 2009 SoER noted that future reports should ensure that indicator development, data collection and analysis be placed on a strategic footing.

[Is the Tasmanian Planning Commission best placed to deliver the Report?](#)

The TPC's role and responsibilities relate to land use planning, and it is arguable as to whether it is best placed to comment on many of the environmental elements covered in previous reports (eg . estuary management, pests and plant diseases, air quality, threatened species, climate change). The extent to which the Report functions as a land use planning tool is unclear and its relevance to the current work of the TPC is questionable.

The SoER could potentially be prepared by other agencies or authorities. However, some stakeholders noted the importance of a separation between data contributors and the report author. Other jurisdictions also reinforce this separation through the establishment of independent statutory bodies specifically charged with preparing the Report and through the review of content by a panel of independent experts.

The TPC does provide an opportunity for some independent review of data provided. Legislative amendment would be required to reallocate this responsibility.

[Is there a more cost effective format for delivering a report which satisfies its intended purpose?](#)

Previous reports have been significant documents, containing a large volume of data and reporting on a significant number of indicators. For contributor agencies the provision of data and information for the SoER has been a significant task.

Previously, quality data have not been available to inform reporting. Since commencement, SoE data collection and analysis has often not been consistent or comparable. In many cases data is not current at the time of reporting. There is a need to reach agreement with contributors on a set of core condition indicators⁷⁵ which can be provided by agencies on a sustainable basis and which can be delivered on a frequent basis, to ensure the currency of reporting. This might result in the content of the Report being driven by available indicators. This would be viewed by some stakeholders negatively (ie. only those areas of the environment for which data was available would be discussed in the Report). However, such a scheme would ensure that data could be replicated over time. Where the data for a key area was found wanting, expert commentary could be sought.

The prevailing view of stakeholders is that existing data sets should be used as a basis for establishing and measuring the key indicators going forward⁷⁶.

The scale of the SoE reporting task, the challenges of data quality and availability, current resourcing constraints, and needs of Government policy and decision makers suggest that a more cost effective, streamlined model of reporting is required:

⁷⁵ In this regard note that the CSIRO's Guidebook to environmental indicators CSIRO 1998

<http://www.csiro.au/csiro/envind/code/pages/17.htm>

⁷⁶ The relevance of the State Government's *Stats Matter* Project is noted in the longer term. A number of environmental indicators may be identified as part core State statistical assets necessary for government.

- The proposed approach establishes a process involving data custodians, resource management agencies and other stakeholders developing a small number criteria (and limited number of indicators) which together say something meaningful about the state of the environment.
- Reporting should be based on robust, available data which could be reported on more regularly and efficiently over the long-term.
- Indicators (though small in number) should be ones which, in total, present a strategic snapshot of the environmental resources of the state and build on information being reported through other processes.
- This limited number of key indicators should be directly relevant to policy and decision making within the resource management and planning system (land use managers/ policy and decision makers within the planning system and strategic planners).
- Reporting should complement other Government initiatives, including Sense T and its investment in spatial infrastructure and the LIST.
- To cater for public access to information the SoER web site could provide links to more detailed information held by custodian agencies.
- Information could be updated on the website (a modified report card approach).
- The Report could be structured by theme with each indicator framed by a discussion of condition, pressures and responses. Indicators should be selected to present a broad picture of the condition of the environment, both good and bad. Where necessary the Report could highlight stand out issues, however detailed analysis would be limited.

Options and Recommendations

Options

The three main options are summarised below.

Option 1 - Business as usual.

Reallocate TPC resources to deliver a SoE report of similar scale to previous reports.

The TPC's key priority for 2013/14 is implementation of the Government's planning reform agenda. The TPC has been re-structured to achieve this objective and is directing all available human resources towards this output. No funding allocation has been made to produce the SoER in the current or 2013-14 financial year.

Significant resources were required to achieve production of the 2009 SoER. This option would directly impact on the planning reform program.

Under this option, it is unlikely that the Report could be completed until the end of the current phase of planning reform. A report could not be completed by October 2014. This option would not address the issues regarding the Report's relevance, or its effectiveness in influencing the management of the state's natural resources.

This option is not recommended.

Option 2 – Allocate additional resources to develop and implement a streamlined SoER.

Under this option, additional resources would enable a dedicated SoE Unit to be established to scope and deliver a simplified reporting process focussing on headline environmental indicators (based on the ACT approach).

This task could potentially be completed by late 2014 and would not impact on the planning reform program. The estimated cost is \$480K⁷⁷ per annum.

This option is recommended.

Option 3 – Not proceed with a separate SoE Report.

Under this option, the preparation of SoE reports would not continue.

Other reporting frameworks would continue to publish information on the Tasmania's natural resources – including the [State of the Forests](#), estuary programs, NRM reporting, and the National SoE Reporting. This option would require legislative amendment.

This option is not recommended.

⁷⁷ Three FTE's plus \$120k for equipment, software, data acquisition, analysis and expert review

Recommendations

It is recommended that:

1. High level and long term reporting on the state of the Tasmanian environment has an important role to play in the RMPS and should continue.
2. The format and focus of that reporting be modified to be:
 - targeted on key indicators;
 - based in robust, available data;
 - relevant to evidence based policy and decision making;
 - useful as a tool for land managers;
 - complementary to other state and regional reporting functions; and
 - published in a format and frequency that increases its accessibility and value to users.
3. A dedicated SoE Unit be established with ongoing funding to scope and implement the modified reporting arrangements.
4. If this is not practicable then it is recommended that the production of the 2014 Report be deferred until the completion of the current phase of planning reform.

Attachment 1

Review of the State of the Environment Reporting Format – Issue Paper pp17-19

The following issues are presented for discussion.

1. Scope of the Report

The legislative objective is very broad. There does not appear to be a consensus on what the SoE report is supposed to deliver – its scope (a ‘general environmental report’, a ‘report on environmental progress’, ‘identify environmental issues’), nor on who is the audience, or indeed if there is an audience.

To whom is this report of interest? Most people or groups interested in specific environmental issues (including trend analysis of key indicators) would contact the contributor agencies to obtain information directly, on a more frequent basis.

Notwithstanding the legislative requirement, who benefits from the production of this report – who are the users? Many contributors provide data to inform development of the Report. However, the Report would appear to be of little value to these contributors, since they already have the information they need – does the Report fill in any gaps, or add value, in reporting on the environment?

Is the aim of the report to provide a snapshot of key condition and pressure indicators relating to the natural environment or to the impact of human settlement on the environment, or both? Should the focus of the report change over time – is it useful to report on the same set of indicators over a lengthy period?

Is the aim of SoE to report on the impact of pressures on the natural environment? Is its objective to report on the impact of human settlement on the environment at a regional level – as a tool for land management planners? If the objective of SoE is to report on the pressure impacts on the natural environment, is the Tasmanian Planning Commission best placed to deliver such a report? The TPC's current role and responsibilities⁷⁸ are greatly changed from those of the Sustainable Development Advisory Council⁷⁹.

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One aim of the report was to provide an active management tool by which resources could be allocated on the basis of priority, or redirected to minimise adverse environmental effects. It would appear that this expectation is not being met.

Is the report trying to deliver too much, for too many audiences?

⁷⁸ *Tasmanian Planning Commission Act 1997 (No. 85 of 1997)*

s6 Functions and powers of Commission

- (1A) the Commission has the following functions and powers:
- (a) to provide advice and support to the Minister in relation to the performance of his or her functions, and the exercise of his or her powers, in relation to land use planning under this or any other Act;
 - (b) to provide advice to the Minister in respect of matters related to land use planning;
 - (c) to plan for the coordinated provision of transport, and of infrastructure, for land development;
 - (d) to provide advice to local government in relation to planning schemes under the Land Use Planning and Approvals Act 1993 and the functions of local government under that Act;
 - (e) to review, and advise the Minister in respect of, State and regional strategic land use planning matters.

⁷⁹ *State Policies and Projects Act 1993 (No. 65 of 1993)*

s32. Functions of Advisory Council

- (1) The functions of the Advisory Council are –
- (a) to report to the Minister on the preparation of draft State Policies; and
 - (b) in accordance with directions under section 20(1), to report to the Minister on projects of State significance; and
 - (c) to prepare State of the Environment Reports; and
 - (d) to perform such other functions as are imposed on it by or under this or any other Act.

Responses are sought to the following:

- 1.1 What is the scope of the Report - what are the agreed 'core' expectations?
- 1.2 To what extent have these expectations been met?
- 1.3 To what extent is the Report useful, relevant, to whom?
- 1.4 To what extent does the Report add value to information/data available through other sources?
- 1.5 What should be the focus of the Report – how might it be made more useful or relevant?
- 1.6 Are there 'priority areas' of the environment which should be the subject of reporting, rather than the current areas of interest?
- 1.7 Should the Report operate as a report card on the wider 'environment' or should it focus merely on areas under threat?
- 1.8 To what extent is the Report useful as a land management tool (for example to planners at the local government level)? - should it be?
- 1.9 Is legislative change necessary – to allow for a more useful report?

2. Key Indicators

The content and focus of previous reports have been driven by the availability of data in each reporting period.

Data in previous reports have been 'patchy'. For some areas the availability of data has been non-existent, for others areas data has been good. The availability of data has 'driven' report content with discussion generated about areas where data is available. In some areas trends cannot be established, for others areas trend analysis is possible. The maintenance of data sets is inconsistent across business areas and are to some extent at the mercy of funding cycles. In some instances only key data sets are maintained.

Previous reports have required that contributing agencies provide data on a goodwill basis

A report involving considerable fewer condition and pressure indicators, but which are still meaningful in indicating changes in the environment might prove more sustainable for contributing agencies? However, in some instances key indicators may themselves result from the production of lower level indicators.

Previous resourcing of SoE reports cannot be sustained. How might a meaningful SoE report be produced with a reduced number of key condition and pressure indicators?

Responses are sought to the following:

- 2.1 If the number of performance indicators was to be reduced significantly to a few key indicators – what would they be? (noting that reporting on these key indicators should be sustainable (allowing snapshot and trend analysis)?

