

TRIPLE BOTTOM LINE ASSESSMENT FOR THE ACT GOVERNMENT

Discussion Paper

June 2011



ACT
Government




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Introduction

Public policy consideration of social and environmental factors, as well as economic factors, is nothing new. However, more detailed and formal triple bottom line (TBL) approaches are increasingly being adopted in both the public and private sectors. These approaches allow organisations to be explicit and transparent in how they take into account multiple factors in their reporting and assessment frameworks.

In December 2009 the ACT Government reaffirmed its commitment to achieving sustainability across the range of its policies and operations, and released an updated version of the sustainability strategy *People, Place, Prosperity*.

This current document discusses putting TBL principles into practice by implementing a TBL assessment framework. Developing and implementing the TBL assessment framework will help embed sustainability within decision-making processes, in line with the commitments made in *People, Place, Prosperity*. By using the TBL framework, policies and procedures that influence and support key decision-making points within government will incorporate considerations of sustainability.

This document presents and discusses the issues associated with developing a TBL assessment framework and proposes an approach to implementing TBL assessment within the ACT Government.

The document is organised in two parts.

- Part 1 contains background material on what a TBL approach means for the ACT Government, together with some examples of applications of a TBL approach in government.
- Part 2 outlines a proposed approach to TBL assessment for the ACT Government.

The Chief Minister and Cabinet Directorate acknowledge the assistance of the Integrated Sustainability Analysis team at the University of Sydney in developing this discussion paper.

Any comments?

This paper is being released on the Chief Minister and Cabinet Directorate website for public comment.

If you would like to discuss the paper or provide feedback, you can contact Mr Daniel Stewart on 02 6205 0468 or Daniel.Stewart@act.gov.au

Comments on the paper are due by 26 August 2011.

Part 1

1. Background

The ACT Government launched its sustainability policy, *People, Place, Prosperity: A Policy for Sustainability in the ACT*, on 27 March 2003. The policy outlined that pursuing sustainability for the ACT Government, its agencies and authorities, means providing for people, protecting our place and creating prosperity — now and in the future.

Through the policy, the Government committed to incorporating sustainability principles into its systems and operations.

In December 2009, the ACT Government reaffirmed its commitment to achieving sustainability across the range of its policies and operations by releasing an updated version of *People, Place, Prosperity*¹. It includes the guiding principle:

Integrating environmental, social and economic goals in policies and activities.

People, Place, Prosperity also specifically commits the ACT Government to embedding triple bottom line (TBL) assessment into its day to day decision-making processes. The pilot Triple Bottom Line Annual Report said that the Government would:

Develop and trial a triple bottom line assessment tool which will establish a process for the evaluation of projects and policy proposals that includes financial, environmental and social assessments to further support informed, strategic and sustainable decision-making.

The 2009 update of *People, Place, Prosperity* adopted a definition for sustainability, revised the guiding sustainability principles, summarised ACT Government achievements and set out the Government's forward sustainability program. The TBL approach is also reflected in the Government's approach to sustainability, as set out in the *Canberra Plan* framework.

TBL considerations are, therefore, embodied within the broader strategic framework of the ACT Government.

In 2009, the ACT Government released a pilot TBL annual report for the Chief Minister's Department. The Government followed up by including requirements for departmental TBL annual reporting, starting in 2009-10.

Internationally, most effort to date in implementing a TBL approach has been on measuring and reporting performance against social, economic and environmental parameters after policies and practices have been implemented. This discussion paper, however, focuses on developing a framework that will support up-front assessment of government policy proposals and enable better informed policy development and decision making.

Developing this TBL assessment framework satisfies a key component of the Government's commitment to having sustainability embedded within the decision-making process. By using the TBL framework, policies and procedures that influence and support key decision-making points within government will incorporate considerations of sustainability.

¹ ACT Government 2009, *People, Places, Prosperity: The ACT's Sustainability Policy*, Canberra, http://www.cmd.act.gov.au/___data/assets/pdf_file/0003/119730/people_place_prosperity.pdf.

2. A TBL approach

There is no single, specific, or agreed definition of TBL, the term coined by John Elkington in the early 1980s.²

The triple bottom line focuses corporations not just on the economic value they add, but also on the environmental and social value they add — and destroy.

In its narrowest sense, TBL originally referred to a framework for measuring and reporting corporate performance against economic, social and environmental parameters.³ At the other end, in its broadest sense, it refers to a philosophy that may guide the overall performance of organisations, industries, communities and governments.

Notwithstanding the lack of a generally accepted definition, there are a number of characteristics and principles that could be attributed to a TBL approach, either relating to its adoption as a philosophy, or to the development of a specific framework for measuring and reporting. These are⁴:

- **broader scope and focus:** TBL focuses on a scope of measurement, reporting and decision making that is wider than financial and economic dimensions, and seeks the incorporation of social and environmental dimensions within the framework;
- **transparency:** governments have an obligation to be transparent about their decisions and activities, and their impacts, beyond the financial domain — in particular, social and environmental impacts, both in the immediate and longer term, need to be disclosed to the community;
- **accountability:** governments should be accountable, within reasonable limits, for the resources they consume in delivering services to the community, including environmental and social resources — this accountability also extends to future generations in regards to economic, social and environmental sustainability;
- **integrated planning and operations:** achieving economic prosperity, environmental quality and social wellbeing requires all these dimensions to be reflected in strategic planning — this in turn needs to be linked to decision-making, operational policy, management systems and reporting processes. In summary, core processes need to be engineered to recognise the multidimensional impacts of government' decisions and activities.

The above principles are not unique to a TBL approach and would appear in any discussion or text on sound public sector management.⁵ What is important and different, however, is the broader scope of the TBL and its links to sustainability principles, which means that it considers far more than just monetary concerns.

For example, the notion of accountability in the public sector, in general, refers to accountability for use of resources, particularly financial resources — that they are used efficiently and that they

² Elkington J 1980, *The Ecology of Tomorrow's World*, Associated Business Press, London.

³ Ibid.

⁴ ACT Department of Treasury 2004, *Budget 2004-2005, Supplementary Paper: Framework for Future Budget Presentation, Discussion Paper*, Publishing Services (Department of Urban Services), Canberra, http://www.treasury.act.gov.au/budget/budget_2004/_srcfiles/supp/supplementary.pdf.

⁵ Indeed, it has been suggested that governance be considered a separate attribute to the TBL, thus creating a fourth bottom line. There is great value in highlighting the importance of governance at all levels of society for achieving progress in sustainability. Being able to explicitly address social, economic and environmental aspects together fundamentally relies on good governance.

are used to deliver services for which they were originally allocated. The focus is essentially on what is consumed financially and, in a limited context, for what purpose. TBL, on the other hand, expands the scope of resources and impacts being considered.

2.1 TBL in practice — earlier applications

Over the last decade or so, the TBL approach to reporting has gathered significant momentum. Indeed, in early 2004, CPA Australia⁶ prepared a report examining how TBL principles were being applied within organisations in Australia and around the world.

CPA Australia defined a TBL report as a 'publicly released document that provides information about the social, environmental and economic performance of the reporting organisation' and found that many private sector firms and government departments were switching to TBL reporting. Behind this drive is an increasing trend and demand for organisations to demonstrate transparency and accountability beyond just financial performance. Reporting on TBL aims to extend decision-making and disclosure so that decisions explicitly take into consideration the impacts on natural and human capital, as well as financial capital.

Despite the increased trend towards TBL reporting, the extent to which this change is being reflected in decision-making processes is questionable. TBL reports are generally prepared ex-post to either provide information to shareholders or to demonstrate to the public that an organisation's focus extends beyond the profit line. This misses the much greater value of a TBL reporting framework, which is to show clearly how:

- the organisation can be better managed; and
- how impacts across the TBL are interlinked.

A good TBL accounting approach can show precisely how a change in one area causes changes throughout the whole TBL, providing invaluable information for the decision-making process.

2.2 TBL in Australia

2.2.1 Australian Government

In 2002 the Australian Bureau of Statistics (ABS) released *Measuring Australia's Progress*⁷ as its response to the call to extend the measure of progress beyond simply counting gross domestic product (GDP). In particular, this report responded to the growing realisation that *wellbeing* or *happiness* could be estimated and tracked. Also in 2002-03, the Australian Government Department of Family and Community Services (FaCS) produced the first verified⁸ TBL report of departmental activities for an Australian Government agency. In later years, the Department's report was reshaped as a sustainability report.

In 2003, the (now) Australian Government Department of Sustainability, Environment, Water, Population and Communities published a *Guide to Reporting Against Environmental Indicators* for the purpose of defining environmental aspects, one part only of the TBL.

⁶ CPA Australia 2004, Sustainability Reporting: Practices, Performance and Potential, http://www.cpaaustralia.com.au/cps/rde/xchg/SID-3F57FEDF-46899736/cpa/hs.xml/14131_8138_ENA_HTML.htm.

⁷ Trewin D 2002, *Measuring Australia's Progress*, Australian Bureau of Statistics, Catalogue No. 1370.0, Canberra, [http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/D9D4462358114E82CA256B90007CFCF3/\\$File/1370-0_2002.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/D9D4462358114E82CA256B90007CFCF3/$File/1370-0_2002.pdf).

⁸ Verified by the Australian National Audit Office.

In 2004, the same department produced its *Triple Bottom Line Report 2003-04*.⁹ It used 16 environmental, 12 social and five economic indicators from the Global Reporting Initiative (GRI) 2002 guidelines (see later in this document), chosen for their applicability and the availability of 'meaningful information'. The purpose of the report was to model TBL reporting and demonstrate a willingness to report on, and be open about, the department's environmental, social and economic performance. It was also used to identify internal reporting gaps and inform improvements. It was seen as important in attracting and retaining good staff. Data used for the report were verified to ensure completeness, accuracy, precision and reliability.

In 2005, the Australian Government commissioned research from the CSIRO and University of Sydney that resulted in the ground breaking publication *Balancing Act*¹⁰. This study provides a snapshot of Australia's TBL performance with a set of ten indicators¹¹ to benchmark 135 sectors of the Australian economy. It uses an environmentally and socially extended input-output accounting technique developed by the University of Sydney's Integrated Sustainability Analysis (ISA) group¹². It is still the only existing technique that can track performance against indicators of the three bottom lines simultaneously on the same unit to expose the effect of tradeoffs across the TBL. For example, it can show the economy-wide effect of changes to, say, energy use on employment or family income.

In 2010, the ABS *Measures of Australia's Progress* (MAP) report included social, economic and environmental indicators across 17 headline indicators¹³.

2.2.2 State and territory governments

The International Council for Local Environmental Initiatives (ICLEI) Oceania has worked with the governments of South Australia (Department of the Premier and Cabinet and Department of Environment and Heritage), Victoria (Department of Primary Industries, Department of Sustainability and Environment and Environmental Protection Agency (EPA) Victoria) and Queensland (EPA and the Department of Main Roads) to support a TBL reporting approach to government through its Australia New Zealand Reporting Alliance¹⁴. The Alliance provided support to address reporting challenges and develop best practice case studies for public sector reporting. ICLEI also worked with Victoria to help it develop TBL tools and capacity building among local governments¹⁵.

In 2002, the UN Environment Programme — International Environment Technology Centre (UNEP-IETC) initiated the Cities as Sustainable Ecosystems program, which was responsible,

⁹ Department of the Environment and Heritage 2004, *Triple Bottom Line Report 2003-04: Our Environmental, Social and Economic Performance*, Canberra, <http://www.environment.gov.au/about/publications/tbl/03-04/about.html>, Accessed 14 February 2011.

¹⁰ University of Sydney and CSIRO 2005, *Balancing Act: A Triple Bottom Line Analysis of the Australian Economy*, <http://www.isa.org.usyd.edu.au/publications/index.shtml>.

¹¹ From hundreds of possible indicators that are part of the ISA indicator suite available at http://www.isa.org.usyd.edu.au/research/InformationSheets/ISATBLInfo6_v1.pdf.

¹² ISA's TBL accounting framework captures the effects of the full supply chain, obviating the time-consuming task of drawing boundaries.

¹³ Australian Bureau of Statistics (ABS) 2010, *Measures of Australia's Progress, 2010: Appendices*, Canberra, <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1370.0-2010-Chapter~Appendix%20A%20%289.1%29>, Accessed 10 February 2011.

¹⁴ See ICLEI Oceania website for more information: <http://www.iclei.org/index.php?id=10546#c32989> (accessed 15 February 2011).

¹⁵ Sustainability Victoria 2008, *Triple bottom line capacity building*, <http://www.sustainability.vic.gov.au/www/html/2407-triple-bottom-line-capacity-building.asp>, Accessed 14 February 2011.

with support from EPA Victoria¹⁶, for the development of the Melbourne Principles for Sustainable Cities. These principles were later 'operationalised' with the development of a framework for action and a checklist to be used by elected officials to ensure that the principles were embedded in plans and processes. In 2003, the *Victorian Local Government (Democratic Reform) Act 2003* required all local councils to consider environmental, social and economic objectives.

In 2004, the ACT Government sought to implement 'TBL budgeting' to provide a better context for decision-making and allocation of resources¹⁷, and the Western Australian Government's EPA included TBL in its Preliminary Position Statement No 6: *Towards Sustainability*¹⁸. Also in 2004, the Victorian Auditor-General published an occasional paper, *Beyond Triple Bottom Line — Measuring and Reporting on Sustainability*, which set out how the Auditor-General's Office would conduct the auditing of sustainability initiatives.

In 2007, as part of the data framework of *Indicators in Domains and Policy Areas*¹⁹ for its Community Indicators Victoria Survey, the Victorian Government included questions from various national and international survey instruments to build its community wellbeing indicator framework. For example, as an indication of subjective wellbeing, the survey used questions from the Australian Unity Wellbeing Index²⁰. The EPA Victoria also investigated the use of the Ecological Footprint as a reporting indicator. The methodology (that is, the Environmentally Extended Input–Output Analysis Technique) used to calculate Victoria's Ecological Footprint of Consumption²¹ in 2008 for its State of the Environment report, was developed in 2005 by the University of Sydney's ISA group for the *TBL Balancing Act* research (see above). Both wellbeing and the Ecological Footprint can be used as indicators in a TBL indicator suite.

2.2.3 Local government

ICLEI Oceania has 111 Australian local government members. It has provided TBL tools for sustainability²² to 21 Australian local councils that took part in the Integrated Sustainability Services (ISS) TBL Program 2006–2009²³. This program has now been replaced by ISS 2010-11, which includes assistance in integrating TBL principles into council operations through its Sustainability Management and Integration Program²⁴.

¹⁶ ICLEI Oceania 2008, Melbourne principles for sustainable cities: background, <http://www.iclei.org/index.php?id=4501> Accessed 15 February 2011.

¹⁷ Australian Department of Treasury 2004, op cit.

¹⁸ Environmental Protection Agency 2002, *Towards Sustainability: Preliminary Position Statement No. 6*, Government of Western Australia, http://www.epa.wa.gov.au/docs/1517_PS602.pdf, Accessed 21 February 2011.

¹⁹ Domains and policy areas include: Health and Safety and Inclusive Communities; Dynamic Resilient Local Economies; Sustainable Built and Natural Environments; Culturally Rich and Vibrant Communities; Citizen Engagement (see http://www.communityindicators.net.au/data_framework, accessed 15 February 2011).

²⁰ Australian Centre on Quality of Life 2010, Australian Unity Wellbeing Index, <http://www.deakin.edu.au/research/acqol/index.php>, Accessed 15 February 2011.

²¹ Wiedman T, Wood R, Barrett J, Lenzen M and Clay R 2008, *The Ecological Footprint of Consumption in Victoria*, Stockholm Environment Institute (University of York) and the Centre for Integrated Sustainability Analysis (University of Sydney), Publication 1269, [http://epanote2.epa.vic.gov.au/EPA/publications.nsf/d85500a0d7f5f07b4a2565d1002268f3/6a4f318c29647984ca2574710004e3ad/\\$FILE/ATTAD7EZ/1269.pdf](http://epanote2.epa.vic.gov.au/EPA/publications.nsf/d85500a0d7f5f07b4a2565d1002268f3/6a4f318c29647984ca2574710004e3ad/$FILE/ATTAD7EZ/1269.pdf), Accessed 15 February 2011.

²² For more information on ICLEI Oceania's Integrated Sustainability Services, see <http://www.iclei.org/index.php?id=6335>, accessed 14 February 11).

²³ Including Hornsby Shire Council as outlined later in this report, see <http://www.iclei.org/index.php?id=10546#c32989> (accessed 14 February 2011).

²⁴ For more information on ICLEI Oceania's Sustainability Management and Integration Program, see <http://www.iclei.org/index.php?id=11306> (accessed 14 February 2011).

Hornsby Shire Council in Northern Sydney provides an example of TBL policy (2006)²⁵ developed to 'integrate TBL into the decision-making processes across Council to ensure consideration is given to social, environmental, and economic factors equally' (page 2). The policy aim is to provide a framework for the rollout of TBL throughout all of the Council's planning, operational and reporting processes to improve governance and align 'visions, values and action'.

Business Papers prepared for the Hornsby Shire Council must assess whether full TBL assessment is needed to accompany the Papers. The Council's policy was developed using the TBL Toolkit developed by City of Melbourne and ICLEI in 2002 (Local Governments for Sustainability). It has also been aligned with the Global Reporting Initiative's indicators.

In 2010, TBL was described by the Hornsby Shire Council as the tool supporting council's shift towards sustainability — 'a planning and reporting mechanism, and decision-making framework used to achieve sustainable outcomes'²⁶. This includes, for example, a TBL assessment of procurement before going to tender under its *Advancing Greenhouse Purchasing and Carbon Neutrality Framework*²⁷. The Hornsby case shows clearly the evolution of the TBL from solely a reporting role to a more active process, aligned with achieving better future outcomes.

In recent years, however, there appears to have been a shift away from TBL terminology. While the 2005-06 Northern Sydney Regional Organisation of Councils (NSROC) State of the Environment Report was dominated by references to the TBL, in the 2007-08 report references to the Ecological Footprint outweighed those of TBL, and in 2009-10 Ecological and Carbon Footprint had taken the place of TBL entirely. Clearly, ecological and carbon footprints are important components of the environmental sphere of the TBL, but there has been less recent attention to the other components. This and other examples may be a demonstration that organisations have struggled to put the full scope of a TBL approach into practice. Nevertheless, all Hornsby Shire Council papers still require a TBL assessment under the TBL policy framework²⁸.

In 2006, the City of Melbourne was using a TBL procurement tool to ensure that purchases complied with Council standards. By 2007, reference to 'TBL' in Council Business papers seems to have been replaced by 'Sustainability',²⁹ although some of the Eco-City Committee papers refer briefly to Ecological Footprint and TBL.

²⁵ Hornsby Shire Council 2006, *Triple Bottom Line (TBL) Sustainability Policy*, http://www.lgsa-plus.net.au/resources/documents/Hornsby-TBL-Policy_221007.pdf, Accessed 14 February 2011.

²⁶ Hornsby Shire Council 2010, Triple bottom line decision making, <http://www.hornsby.nsw.gov.au/environment-and-waste/climate-change-and-sustainability/triple-bottom-line>, Accessed 15 February 2011.

²⁷ Hornsby Shire Council 2009, *Advancing Greenhouse Purchasing & Carbon Neutrality Framework: A Criteria and Policy Framework to Enable Greenhouse Purchasing*, <http://www.hornsby.nsw.gov.au/media/documents/about-council/corporate-documents-and-reports/advancing-greenhouse-purchasing/Advancing-Greenhouse-Purchasing-and-Carbon-Neutrality-Framework.pdf>, Accessed 15 February 2011.

²⁸ To access Hornsby Shire Council business papers and minutes, see <https://businesspapers.hornsby.councilsonline.com.au/BusinessPapersFrameless.asp> (accessed 15 February 2011).

²⁹ To access the City of Melbourne's Council Business papers and minutes, go to <http://www.melbourne.vic.gov.au/AboutCouncil/Meetings/Pages/5feb0f19-2cc8-4b8d-8cce-5eeb100b1924.aspx> (accessed 15 February 2011).

2.2.4 Corporate reporting

In 2005, the Australian Government Department of the Environment and Heritage produced its third annual report on the state of sustainability reporting in Australia³⁰. The report presented information gathered from 486 companies, of which 119 were producing sustainability reports.

The number of companies reporting against Global Reporting Initiative (GRI) TBL guidelines increased from 30 per cent to 51 per cent³¹. While some companies were using the GRI guidelines, reporting tended to be referred to as ‘Sustainability’ rather than TBL reporting.

In the *State of CSR Annual Review 2010/2011*, the Australian Centre for Corporate Social Responsibility, which is an Organisational Stakeholder of the GRI, certified to deliver GRI training in Australia and New Zealand, found that ‘CSR is increasingly linked to positive organisations’ performance — economic, environmental and social. But there is still a long way to go before corporate social responsibility is truly integrated into business strategy.³²

Over the past ten years, use of a TBL reporting framework has increased in Australia, particularly in the water industry. TBL reporting by City West Water, Melbourne Water and Sydney Water, ‘is considered best practice on the world stage’ (Christen, Shephard, Meyer, Jayawardane and Fairweather 2006, p. 335)³³.

Australian use of the GRI TBL guidelines is growing. This is evident in the establishment of the GRI’s Australian Office³⁴ at the St James Ethics Centre in 2008, with founding support from CPA Australia and the Australian Government’s Treasury.

2.3 TBL around the world

2.3.1 The Global Reporting Initiative

The Global Reporting Initiative (GRI) has been very important in encouraging TBL reporting around the world, particularly within the private sector. The GRI describes itself as a ‘network-based organization that pioneered the world’s most widely used sustainability reporting framework.’ The GRI seeks to improve disclosure of environmental, social and governance performance.

At the centre of the GRI’s reporting framework are Sustainability Reporting Guidelines, which provides a comprehensive and detailed set of criteria and other prompts for reporting.

2.3.2 United Kingdom (UK)

In the UK, the Resources and Energy Analysis Programme (REAP) is used by local authorities, regional and national government³⁵ to ‘explore the environmental pressures associated with

³⁰ Department of the Environment and Heritage 2005, *The State of Sustainability Reporting in Australia 2005*, <http://www.environment.gov.au/sustainability/industry/publications/pubs/survey2005-summary.pdf>, Accessed 10 February 2011.

³¹ Despite this growth Australian companies are still lagging behind international trends

³² From approximately 500 survey responses (see <http://www.accsr.com.au/html/stateofcsr.html>, accessed 16 February 2011).

³³ Christen EW, Shephard ML, Meyer WS, Jayawardane NS and Fairweather H 2006, ‘Triple bottom line reporting to promote sustainability of irrigation in Australia’, *Irrigation Drainage Systems*, vol. 20, pp. 329–43.

³⁴ For more information on the GRI, go to <http://thehub.ethics.org.au/gri/> (accessed 10 February 2011).

³⁵ For example, Tees Valley & Greater Nottingham, Leeds City, Yorkshire, Humber and West Midlands, Wales (see http://www.darlington.gov.uk/dar_public/documents/Development%20and%20Environment/Localmotion/reap2.pdf, accessed 21 February 2011).

changes in population, consumption patterns and production technology over time.³⁶ It reveals the pressures that consumption (food, clothes, travel, heating and lighting) places on the environment, whether locally, in another local government authority or another country. Although it addresses only environmental pressures, the same technique can be used to address the TBL. REAP's advantage is that the user can define scenarios to quantify and compare the environmental effects of different policies.

In 2009, the UK Centre for Sustainability Accounting (CenSA) conducted a TBL and Footprint analysis for the environmental organisation WWF-UK³⁷. This study provided a quantification of TBL indicators, including the ecological, carbon and climate footprints, using the methodology developed by ISA, University of Sydney.

The major benefit of these UK examples is that the quantification of indicators provides a repeatable methodology and a rigorous and reliable basis for decision-making.

The UK's Department of Environment, Food and Rural Affairs (DEFRA) website search for TBL or triple bottom line makes few references to TBL³⁸. The report by the UK Advisory Committee on Organic Standards Research and Development Sub-Committee, June, 2006 on priorities for research in support of organic food and farming,³⁹ states that DEFRA would like to see the industry improve its sustainability by focusing on the TBL.

The report continues: 'We still need to develop tools that allow us to track performance against indicators of the three objectives simultaneously on the same unit (to identify any trade-offs or synergies) and to compare the performance of the same business over time and performance between businesses as a means of helping to enhance both individual and industry performance' (page 9). This is exactly the issue that CenSA and REAP (above) have solved using the methodology developed at the University of Sydney.

2.3.3 Canada

The city of Hamilton in Ontario partnered with ICLEI and the City of Melbourne to develop and operationalise the Principles for Sustainable Cities described earlier.

2.3.4 Japan

A 2007 study found that the extent of TBL reporting was higher among companies in Japan than in the USA⁴⁰. In the 2006 Japanese Ministry of Environment *Outline of the Basic Environment Plan*⁴¹, the top direction for future environmental policy development was 'integrated improvements of the environment, economy and society'. The document sets out ten priority fields for action with indicators, including the Ecological Footprint that can be used to monitor progress.

³⁶ Paul A, Wiedmann T, Barrett JM, Scott K, Dawkins E, Owen A 2010, 'The Resources and Energy Analysis Programme (REAP)', in Murray J and Wood R (eds), *The Sustainability Practitioner's Guide to Input-Output Analysis*, Common Ground Publishing LLC, Champaign, Illinois, pp. 133-43.

³⁷ Wiedmann T and Barrett J 2009, *A Triple Bottom Line and Footprint Analysis of WWF-UK (Panda House)*, Centre for Sustainability Accounting (CenSA) Research Report 09-02, York, UK.

³⁸ See <http://www.defra.gov.uk/>.

³⁹ Advisory Committee on Organic Standards (ACOS) Research and Development Sub-Committee, *Strategic Priorities for Publicly Funded Research in Support of the UK Organic Food and Farming Industries*, <http://archive.defra.gov.uk/foodfarm/growing/organic/standards/acos/pdf/acos-rd-0606.pdf>, Accessed 21 February 2011.

⁴⁰ Jennifer Ho L-C and Taylor M 2007, 'An empirical analysis of triple bottom-line reporting and its determinants: evidence from the United States and Japan', *Journal of International Financial Management & Accounting*, vol. 18, no. 2, pp. 123-50.

⁴¹ Ministry of the Environment (Japan) 2006, *Outline of the Basic Environment Plan: The Way to Richness Developed Out of the Environment*, http://www.env.go.jp/en/policy/plan/3rd_basic/outline.pdf, Accessed 22 February 2011.

2.3.5 USA

The GRI has recently entered into agreement to establish a GRI Focal Point in the USA. The Focal Point is supported by the accounting firms Deloitte LLP, Ernst & Young LLP, KPMG LLP and PwC US. The aim is to increase the number of organisations reporting across the TBL in a consistent way and to improve the quality of the reports.

As for government reporting across the TBL, a search of the USA Environmental Protection Agency resulted in 244 references dating from 2004. These include references to use of ICLEI resources as well as research reports and case studies. The Philadelphia Water Department's options analysis is a good example of using TBL in decision-making. It compares combinations of traditional infrastructure and green infrastructure approaches⁴² using a range of social, environmental and economic indicators including: recreational uses and values; property values; health (heat stress); water quality; wetland enhancement; poverty reduction (employment); energy usage; air quality; and construction and maintenance impacts.

2.3.6 The TBL assessment framework in this context

As outlined in the preceding sections, most of the effort to date in implementing a TBL approach has been on measuring and reporting ex-post performance against social, economic and environmental parameters. However, the focus of this discussion paper is on the development of a framework that will support ex-ante assessment of government policy proposals to support more informed policy development and decision making. As our scan of past experience shows, there are very limited examples of government practice in this area.

2.4 Examples of TBL assessment in practice

Below are two examples of TBL assessment in practice. Box 1 shows the framework used by staff at Hornsby City Council to decide whether or not a business paper needs to be accompanied by a TBL assessment before presentation to Council. Box 2 provides an example of a TBL assessment being used in infrastructure decision-making. It shows the key findings of a 2009 TBL assessment of traditional and green infrastructure options (also called low impact development (LID)) for controlling combined sewer overflow (CSO) events in Philadelphia's watersheds.

⁴² Stratus Consulting Inc 2009, *A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds*, http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf, Accessed 23 February 2011.

Box 1 Hornsby Council Decision-Making Framework for TBL Assessment

Use the following table to determine whether the Business Paper you are preparing requires a sustainability assessment using the TBL checklist. It is recommended that you complete the TBL assessment as early as possible in the process — that is, if a Business Paper is presented to Council several times, complete the assessment at the beginning and, if appropriate, update the assessment to reflect new information.

Type of business paper	Type of decision	TBL checklist required?
Management Plan and Budget	Adopt Note report	Yes No
Corporate plans (for example, Social Plan and SoE)	Adopt	Yes
Legal matters	Prepare proposal	Possible
Council procedures (for example, business rules)	Note report	No
Council community committees	Appoint representative Establish new committee Adopt charter	No Yes Yes
Expenditure	Approve expenditure	Yes
Income	Approve amendments	Possible
Tenders	Accept tender Not accept	Yes No
Council services and programs	Modify existing Adopt new Progress reports	Yes Yes No
Events	Approve events	Yes
Council developments and capital works	Determination of development / works	Yes
External developments (including tree removal)	Development determination	No
Purchase/sale/lease of Council assets (for example, land and equipment)	Sell/purchase/lease of asset	Yes
Studies (for example, environmental)	Note report Adopt study	No Yes

Box 2 A TBL assessment of traditional and green infrastructure options for controlling CSO events in Philadelphia's watersheds⁴³

Key findings

The key finding of this TBL assessment is that the green infrastructure approaches provide a wide array of important environmental and social benefits to the community and that these benefits are not generally provided by the more traditional alternatives. Two of the CSO control options under consideration were: the 50 per cent green infrastructure option (meaning runoff from 50 per cent of impervious surface in the City of Philadelphia is managed through green infrastructure); and the 30 foot Tunnel option (a system of storage tunnels with an effective diameter of 30 ft). These options were chosen to demonstrate the difference in net benefits between green and traditional infrastructure.

Recreation. Under the green infrastructure-based options, streamside recreational opportunities will be increased as a result of stream restoration and riparian buffer improvements. Recreation will also improve in non-creekside parts of the City due to the general increase in vegetated and treed acreage in the City. These recreational benefits are not anticipated under the traditional infrastructure approaches.

Increased community aesthetics, reflected in higher property values. Trees and plants improve urban aesthetics and community liveability and studies show that property values are higher when trees and other vegetation are present.

Heat stress reduction. Green infrastructure (trees, green roofs and bio-retention areas) creates shade, reduces the amount of heat absorbing materials and emits water vapour — all of which cool hot air. This cooling effect will be sufficient to reduce heat stress-related fatalities in the City during extreme heat wave events.

Water quality and aquatic ecosystem improvements. The traditional infrastructure options (for example, plant expansions, tunnels) are aimed at reducing the number of overflow episodes, but do little to directly improve the physical riparian area environment or otherwise enhance living resources in many of the City's watersheds. In contrast, the LID options, in conjunction with the related watershed restoration efforts, are expected to generate important improvements to these living systems.

Wetland creation and enhancement. The watershed restoration and related efforts, as associated with the LID options, are expected to create or enhance wetlands in the relevant watersheds. These added and enhanced wetland acres will provide a range of services in the urban area watersheds.

Poverty reduction from local green jobs. Specialised labour is required for construction of conventional stormwater management solutions (for example, boring, tunnelling). Such skilled labourers might typically be already employed in the construction field. Green infrastructure creates the opportunity to hire local unskilled — and otherwise unemployed — labourers for landscaping and restoration activities. Thus, the benefits of providing these local green jobs include the avoided costs of social services that the City would otherwise provide for the same people if they remained unemployed.

Energy savings and carbon footprint reduction. Green space helps lower ambient temperatures and, when incorporated on and around buildings, helps shade and insulate buildings from wide temperature swings, decreasing the energy needed for heating and cooling. In addition, diverting stormwater from wastewater collection, conveyance and treatment systems reduces the amount of energy needed to pump and treat the water. Reduced energy demands in buildings, and increased carbon sequestration by added vegetation, result in reduced CO₂ emissions.

Air quality improvement. Trees and vegetation also improve air quality by filtering some airborne pollutants (for example, particulate matter and ozone). Likewise, reduced energy consumption results in decreased emissions (such as SO₂ and NO_x) from power generation facilities. These air quality improvements can reduce the incidence and severity of respiratory illness.

Construction and maintenance-related disruption. All of the CSO options will result in some level of disruption due to construction and/or program activities. Social costs of disruption can include traffic delays, limited access to places of business, increased noise and pollution, and other inconveniences. Under all of the CSO alternatives, construction activities will likely result in occasional delays and increased travel times for passenger and commercial vehicle travellers in Philadelphia. However, the level of disruption will be considerably less for the LID options than many of the traditional infrastructure alternatives.

⁴³ Ibid, pp. S-1 to S-4.

3. Considerations in the development of a TBL assessment framework

3.1 What is a TBL assessment framework?

3.1.1 Definitions: framework versus tool

A *framework* is taken to mean a logical structure in which to examine an issue or action. It defines the boundaries of what needs to be taken into consideration and how it will be considered. In this respect, it is a frame of reference for ensuring that all relevant factors have been covered.

Frameworks delineate the dimensions used to build up a particular concept and create a logical structure that illustrates how these relate to one another.⁴⁴

According to the ABS:

[S]tatistical frameworks 'map' the conceptual terrain surrounding an area of interest. They are often presented, for simplicity, in the form of a diagram which summarises the key ideas involved. ...a framework defines the logical limits of the inquiry. Frameworks also identify and delineate the component concepts associated with the topic. That is, ideas of interest that are distinct from one another but together make up the whole. ...Finally, frameworks organise these ideas into a logical structure. (ABS 2010, *Future Directions for Measuring Australia's Progress*, p. 6)⁴⁵

A *tool* is taken to mean an instrument that facilitates the storage and manipulation of data. Data can be quantitative, qualitative or both. The logical structure of a framework can provide the indicators for which data need to be collected to address the 'area of interest'. A tool provides results from the manipulation of data that can be used to generate reports and support decision-making.

3.2 Why use a TBL framework: defining progress

When the ABS released *Measuring Australia's Progress*⁴⁶ in 2002 as its response to the call to extend the measure of progress beyond GDP, it was the first national statistical organisation to attempt to bring together measures from across the areas of social, economic and environmental activity as an indication of national progress. The ABS is currently (2011) engaged in a series of national forums to determine whether it is measuring the aspects of progress that Australians care about and, if so, what new or enhanced statistical measures might inform on these progress goals and achievements. Its aim is that 'the statistical framework that ultimately emerges from this work will:

- provide increased structure and direction to the process of measuring progress;
- allow gaps in measurement to be clearly identified; and
- prompt the development of new, targeted measures to fill those gaps.'

⁴⁴ Hall J, Giovanni E, Morrone A and Ranuzzi G 2010, 'A framework to measure the progress of societies', *OECD Statistics Working Papers*, 2010/05, OECD Publishing, <http://dx.doi.org/10.1787/5km4k7mnrkzw-en>.

⁴⁵ ABS 2010, *Measures of Australia's Progress 2010: Feature Article — Future Directions for Measuring Australia's Progress*, [http://www.ausstats.abs.gov.au/ausstats/free.nsf/vwLookupSubject/1370.0~2010~MAP%20downloads%20%288%29~13700_Sep210_FutureDirections.pdf/\\$File/13700_Sep210_FutureDirections.pdf](http://www.ausstats.abs.gov.au/ausstats/free.nsf/vwLookupSubject/1370.0~2010~MAP%20downloads%20%288%29~13700_Sep210_FutureDirections.pdf/$File/13700_Sep210_FutureDirections.pdf), Accessed 10 February 2011.

⁴⁶ Trewin D 2002, op cit., Accessed 10 February 2011.

Other prominent examples of an attempt to capture a more meaningful measure of progress are Bhutan's Gross National Happiness Index, against which every initiative must be tested before implementation, and the many examples of Genuine Progress Indicator(s) 'that attempts to provide a more complete assessment of economic welfare by subtracting economic activity that detracts from wellbeing (for example, loss of natural resources, expenditure on health remediation, cost of crime, etc.), and adding items that contribute to society (such as volunteer work, housework, etc.)'⁴⁷.

These examples indicate that people have, for some time, recognised the limitations of the single bottom line as a measure of progress. Even so, the concept of TBL assessment is still relatively new and evolving, with very few concrete examples available and virtually no systems in place that are ready-made for the ACT context.

TBL assessment represents a significant divergence from previous practices, moving beyond the traditional cost–benefit analysis by explicitly identifying and evaluating social considerations and environmental impacts. In this way, the TBL framework will support a comprehensive analysis of all of the costs and benefits of a particular proposal to be carried out, so that decision-makers are equipped with full information on a particular issue.

The primary goal of the TBL framework will be to integrate social, environmental and economic factors into the Territory's decision-making process by ensuring that decisions are informed by principles of sustainability. This will embed sustainability within the decision-making process and make certain that the Government is able to deliver on its commitment with respect to *People, Place, Prosperity*.

The framework must take account of a wide range of costs and benefits, which are broadly categorised into three bottom lines: the economic, the environmental and the social. These impacts should always be qualified, quantified where possible and appropriate, and reflected in the broader assessment.

3.3 How will the framework be used?

Consistent with the commitments made in both the ACT's sustainability policy and elsewhere, the overriding goal of the assessment framework is to embed considerations of sustainability within the decision-making process. The assessment framework will support both *ex-ante* and *ex-post* evaluation and highlight the three bottom lines for decision makers. It is expected that, through the framework, all Cabinet proposals will incorporate considerations of sustainability.

This TBL assessment framework will not automatically address all the limitations of the traditional cost–benefit analysis. Decision-makers will still be required to trade off costs and benefits of alternative proposals and will still need to determine the relative value of these alternatives, not all of which will be directly or readily comparable.

The quality of the assessment will also still depend on the skills of those undertaking the assessment and the availability of information. It is expected that the initial use of the framework will be a 'learning process', and that the assessment process will mature and become more sophisticated over time. Bringing additional information forward within the decision-making context over time may make the assessment of proposals more time consuming and complex. Nonetheless, TBL assessment is intended to assist the government in making balanced

⁴⁷ For example, the Queensland Government's Genuine Progress Indicator — see <http://www.epa.qld.gov.au/soe-online/SOWEB300.jsp?IndicatorId=417>.

decisions by ensuring that it receives a broad range of information about the costs and benefits — be they economic, environmental or social — of alternative options.

3.4 Features of the TBL framework

1. The framework should be scalable

The framework will need to be scalable so that it can be used for relatively simple proposals (for example, the direct sale of blocks of land) and for complex proposals (for example, development of major new infrastructure projects).

2. The framework should be easily changed

It is currently proposed that the framework (and associated tools) should ultimately be web-based. This way, the agreed output will be consistent across all users and sections can be readily changed and updated as necessary. It is recommended that the framework should be reviewed after an initial 18 month trial period.

3. The framework should address a range of policy priorities

Beyond the comprehensive breadth of a TBL approach, there are specific government priorities that should be folded into the TBL assessment framework. These include: gender impact analyses; reflecting the commitment in the Parliamentary Agreement; and climate change impact assessments. The framework should also build on the government's previous work on poverty impact assessment. Trigger points will need to be identified for these more detailed analyses.

4. The framework should inform the policy development process

It is desirable that the framework not be just used at the end of proposal development to assess its positive and negative effects. Rather, it is preferable to identify potential impacts during development of proposal options. In this way, proposals can be modified to maximise their net benefits, mitigating potentially negative aspects.

5. The framework should facilitate progress towards the government's major goals

The overall aim of the framework is to support improvements in the ACT. It should reveal synergies (win-wins) between the TBL spheres or, as a secondary aim, it should demonstrate that improvements are possible in one sphere with small or no negative impacts in the other two bottom lines. In other situations, it might make clear tensions between different objectives and highlight the tradeoffs. The framework should not be an impediment to policy development and assessment. It should support active decision-making and engagement with complexity, rather than a status quo or 'do nothing' approach.

6. The framework should support capacity building

The framework should support building capacity in the delivery of policy analysis. This means that the approach that is implemented should be capable of further development and maturity.

7. The framework should encourage collaboration and integration across government

The framework should encourage early collaboration and integration across the new government directorates, consistent with the objectives of the Hawke Review (*Governing the City State*).

Part 2

4. A TBL assessment framework for ACT Government

It is proposed that the TBL assessment framework provide a structured approach for ACT Government agencies to assess and document the economic, environmental and social impacts of their policy proposals prior to consideration by Government.

There are several options for translating the proposed framework into a practical TBL assessment tool. The use of the assessment tool will depend on the range of activities for which it is deemed appropriate. Initial thinking, however, is that it would be established as a web-based tool that can be accessed by policy officers or policy proponents via (for example) Business Portals. Proponents would be guided through the layers of the framework in a similar way as they would to complete an online survey.

As a first step, the Government has committed to progress a TBL pilot by applying the framework as outlined below to major policy proposals on the Cabinet agenda from 1 July 2011. Ministers have also been asked to exercise their discretion in applying the framework to additional projects or pieces of work. The Government will evaluate the pilot after four months and use this, and feedback from these wider discussions to finalise an approach by December 2011.

4.1 The proposed TBL framework

An outline of a TBL Assessment Framework for ACT Government is provided in figure 1. A two-step approach is proposed.

The first step is a preliminary assessment (multi-dimensional scan) of the proposal against a matrix of social, economic and environmental criteria. This is a rapid prima facie assessment as to whether the proposal is likely to have significant impacts against any of the criteria.

For each criterion where a significant impact is identified in the first step, additional analysis is required. An indication of possible criteria under the first step assessment is outlined in section 5. Guidance for more detailed second step assessments for criteria is provided for social, economic and environmental criteria in sections 6–8.

Where significant impacts on gender, poverty and climate change are likely, a detailed stand-alone impact assessment will be generated in these areas — more detailed trigger points will need to be identified. Further detail on these stand-alone reports is provided in section 9.

5. Preliminary TBL assessment

The first part of the TBL assessment process is to identify any criteria against which the proposal will have an impact, positive or negative. These criteria are laid out in the TBL preliminary assessment matrix (table 1). The assessment is not detailed, but reflects a judgement on the basis of the information already available.

The response to each criterion would be a simple 'yes' or 'no'.

Figure 1 TBL assessment framework for the ACT Government

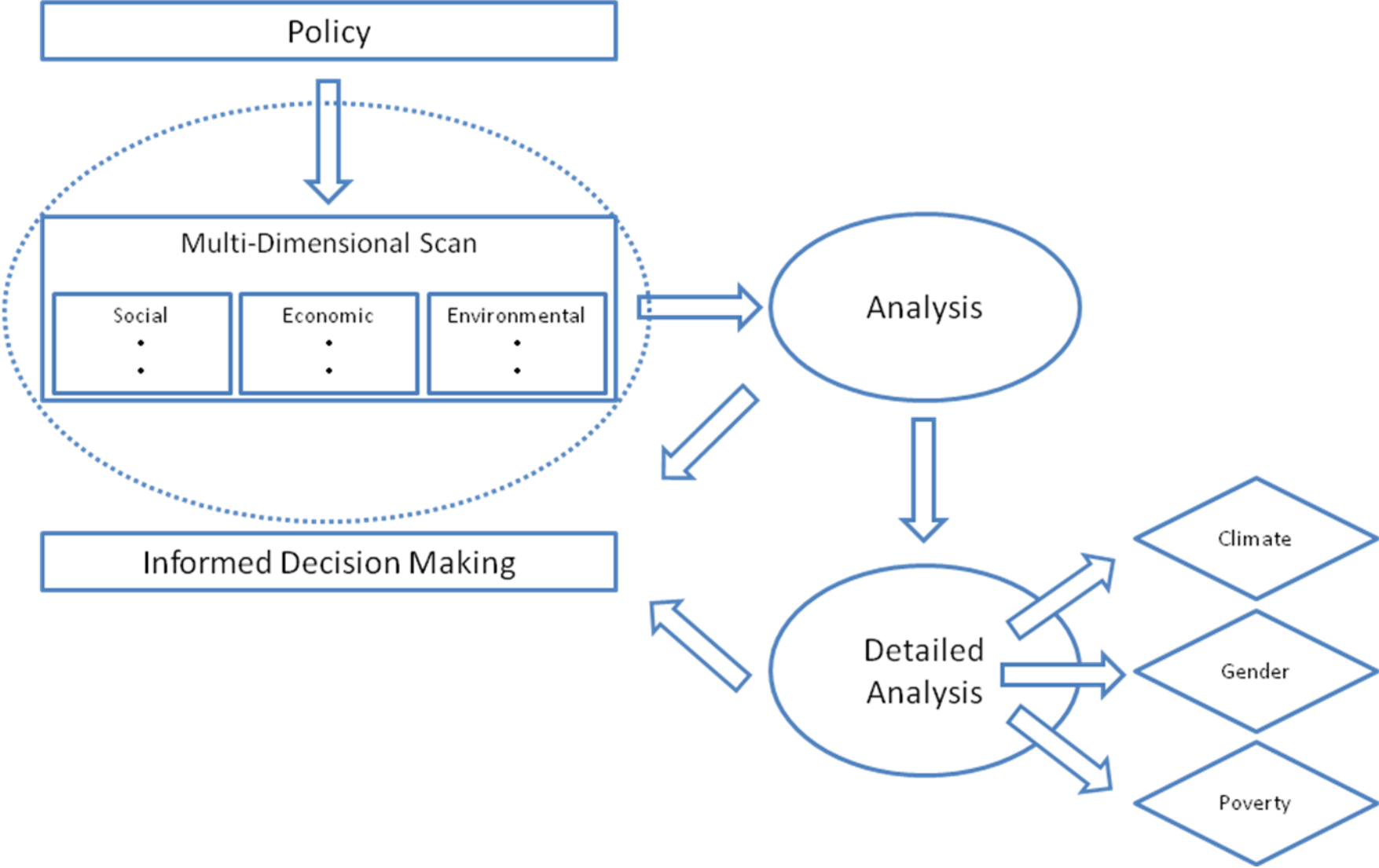


Table 1 TBL preliminary assessment matrix

Social	Economic	Environmental
Community and individual health	ACT Government Budget	Biodiversity
Access to services	Productivity	Landscape changes
Access to housing	Income levels and distribution	Heritage
Access to social networks	Employment	Natural resources
Participation in community activities	Workforce composition	Environmental quality
Justice and rights	Skills	Greenhouse gas emissions***
Differential impacts across genders*	Investment	Water
Differential impacts across sectors	Consumption	Air
Differential impacts across age groups	Competition	Microclimate
Disability	Cost of living	Visual quality
Disadvantaged and vulnerable**		Waste

* Establish a threshold for gender impact analysis

** Establish a threshold for a poverty impact assessment

*** Establish a threshold for climate change impact assessment

6. The social assessment

There is a large potential crossover between the social impacts of a project or policy, and the environmental and economic impacts. Consequently, defining a set of well-targeted and discrete indicators is difficult.

The literature includes a range of different approaches to social impact assessment. Some of the international models emphasise factors most relevant to developing countries, such as the development of democratic institutions. The social component of a TBL assessment, therefore, is best moulded to meet the particular circumstances: in this case, the assessment of the social impacts of ACT Government proposals.

This framework proposes the following structure for categories of social impact.

Demographic impacts

The assessment should consider whether the proposal will have significant impacts on the size or composition of the ACT population. Note that demographic change of itself is not of primary policy concern, so much as the consequential social impacts that flow from those changes.

Impacts on access to services in the ACT

This assessment should consider access to such matters as:

- health and wellbeing services (including prevention and early intervention);
- education and training;
- adequate transport options (both public and private);
- information and communication technology facilities; and
- access to community space and facilities.

Impacts on affordable and adequate housing in the ACT

This assessment should consider access to housing, both public and private, for those buying and renting, and impacts on homelessness support infrastructure (for example, emergency accommodation) and services.

Impacts on the community's sense of wellbeing (for example, social networks and social involvement, and feeling safe and secure at home)

This assessment should consider:

- access to social networks, connectedness and opportunities to participate in the community;
- participation in community and cultural activities;
- feeling safe and secure at home and in the community;
- the level of risk faced by the community or government; and
- the complexity faced by ACT residents in managing their daily activities.

Impacts on community and individual human health

The assessment should consider the suite of potential human health impacts.

Impacts on justice and rights

The assessment should consider the impacts on justice and rights, having regard particularly to the *ACT Human Rights Act 2004*.

Different impacts across different sectors of the community relative to gender, age, cultural background, household type and location, and across vulnerable groups

This analysis should consider whether there are any groups impacted by the proposal more than others. Specifically, the assessment should fulfil the Government's commitment to undertake gender impact analysis. Such analysis identifies whether particular groups of females or males are significantly affected by a proposal.

The analysis also needs to be extended to identify any other groupings that are particularly affected by a proposal, whether on the basis of income, cultural or ethnic background, age, or any other categorisation.

7. The economic assessment

The full potential economic assessment comprises two components: an assessment of the impact of an initiative on the ACT Government's financial position and an assessment of the initiative's impacts on the broader ACT economy.

Financial impacts on the ACT Government

Costs and benefits should be identified and analysed in two main groupings. These are:

- the agency; and
- whole-of-government.

Costs

Costs can normally be divided into capital, operating and transition costs such as:

- capital — upfront capital outlay, including costs associated with construction, acquisition and or implementation;
- operating costs — including accommodation, maintenance, financing costs, leasing costs, staffing (including on-costs), consultants and contractors, and consumables; and
- transition costs— including relocation, disposal of old equipment, use of interim facilities, redundancy payments and/or retraining, negotiation and preparation of contracts, and new management information systems.

Labour on-costs including leave loadings, superannuation, administrative and operational expenses, accommodation and corporate support should be included for direct and indirect staff. If an agency-specific overhead factor is not available, reference should be made to current ACT Government Guidelines. Non-salary related on-costs, such as accommodation, should also be included for contractors as applicable.

Care should be taken not to double-count operational costs and accommodation costs.

Benefits

Benefits should be quantified and valued to the extent possible. Benefits normally include:

- realisable cost reductions compared with existing arrangements — care should be taken to ensure that these cost reductions are not already reflected in lower costs included in the analysis;
- increases in revenue due to dollars generated;
- increased productivity such as improvements in performance or quality as measured, for example, by decreased time to produce outputs;
- additional costs avoided; and
- residual value of any assets no longer required — the residual value should be costed according to its highest value alternative use.

Broader economic impacts

There is no clear division between what are economic impacts and social impacts, given that

changes in the ACT economy have direct social impacts.

The economic assessment should consider employment matters, including the capacity to find work, underemployment, casual and part-time work, and proportion of people living in jobless households. Workforce composition and skills are also important considerations in this context.

The assessment should also consider the impact of the purchasing capacity of households for utilities such as food, electricity, water, etc.

The impacts of the proposal on investment, consumption and competition should also be considered.

8. The environmental assessment

The principles and concepts underpinning environmental assessment are familiar to most policy makers, as environmental impact and assessment procedures have become well established since their introduction in the early 1970s.

The environmental assessment in the TBL framework should identify material changes to the physical environment, whether adverse or beneficial, wholly or partly resulting from the activities relating to the proposal in question.

Quantification of impacts is important, particularly where there may be environmental standards for particular indicators. Quantitative prediction of impacts can, however, be very difficult, due to the complexity of the natural systems involved and the absence of relevant or up to date data.

Ideally, it would be possible to place a dollar value on environmental impacts, and a range of economic methods have been developed for this purpose. There remain questions as to whether such methods can accurately determine dollar valuations for environmental values in the absence of an operating market. It is, therefore, proposed that the TBL assessment predict environmental impacts as accurately as possible in relation to the changes to indicators of the physical environment.

There are considerable potential overlaps between environmental impact assessments on the one hand, and social impact assessments and economic cost–benefit analyses on the other. This framework recognises that some impacts could be placed in one or more of the assessments.

This framework proposes the following structure for categories of environmental impact.

- Impacts that do not directly affect human economic or other interests, such as the broader natural environment systems, including biodiversity and natural features.
- Impacts on physical features, natural or human-made, that directly affect human economic or other interests.
 - Environmental impacts on economic interests.
 - Impacts on human psychological and physical health.
- Impacts on national or international environmental systems.
 - Impacts on the ACT's greenhouse gas emissions.
 - Impacts on other nationally and internationally important environmental systems, such as the Murray Darling Basin system.
- Impacts on ACT's resource use, including consumption (and recycling) of non-renewable resources.
- Other impacts.

Impacts on the ACT's broader natural environment, including biodiversity and natural features

The assessment should consider the range of biological impacts as they affect populations of species, species, ecosystems and broader landscapes. Impacts can be directly on entities such as a species (for example, clearing an area of habitat for a threatened plant), or on ecological processes, such as migration (for example, draining of wetlands that provide habitat for migratory birds).

Non-biological natural features should also be considered, such as the impacts on soils, soil-creating processes and karst (limestone cave) systems.

Impacts on the physical elements, natural or human-made, that directly affect human economic or other interests

The proposal might impact, for example, on economic natural resources, such as the productivity of soils, or access to mineral or other extractive resources. If identifying these impacts in this section, it will be important that they are not double-counted in the economic section.

It could also include impacts on traffic or transport systems in the ACT. It should assess the impacts on traffic volumes and congestion.

This assessment should include ambient noise, air quality and water quality.

It should also consider whether the proposal would increase natural hazards, such as soil vulnerability to landslips and the regulation of storm surges and downstream vulnerability to flooding.

Impacts on national or international environmental systems

This assessment should consider both the direct and indirect emissions caused by the proposal. For example, direct greenhouse gas emissions would include those due to increased petrol-driven motor vehicles. Indirect emissions would include the emissions generated by interstate power stations to provide electricity to meet increased ACT Government demand.

This assessment considers the ACT's role as a 'good national and international citizen'. Generally, assessment should be against explicit national commitments agreed by the ACT, such as under Murray Darling Basin agreements, or international agreements entered into by the Australian Government.

Impacts on the ACT's resource use, including consumption (and recycling) of renewable and non-renewable resources

This question relates to non-greenhouse components of the ACT's 'ecological footprint.' This assessment should consider changes to ACT consumption of renewable resources, such as water.

The assessment should consider the impacts on ACT consumption of non-renewable resources, particularly where these might be scarce or damaging to produce. Examples include land, natural gas, electricity, firewood and motor vehicle fuel. The assessment should also consider the impacts of the proposal on the ACT's waste management systems.

Other impacts

Other impacts that should be considered include:

- impacts on the microclimate of the site and adjacent areas; and
- impacts on the visual quality of the existing landscape (note that this might impact economic values, such as land prices).

9. Stand-alone assessments

As indicated in section 5, in some cases the preliminary assessment scan might indicate the need for detailed stand-alone assessments in some areas of particular significance.

These stand-alone assessments address specific commitments made by the Government, including in relation to:

- gender;
- poverty; and
- climate change.

9.1 Gender impact analysis

Gender impact analysis can be used to assess the different impacts of proposed government policies, programs or activities on women, men, girls and boys, and whether or not they will advantage or disadvantage them. The statements can be used to:

- assess compliance with anti-bias and anti-discrimination policies;
- assess risks attached to proposals, including the impacts on access to affordable housing, employment, transportation, food, emergency services and medical care, and quality schooling; and
- help policy makers monitor trends and evaluate implementation outcomes — for example, will the proposal benefit or disadvantage communities in particular areas or of particular cultural backgrounds.

To the extent that it will assist in identifying the different impacts proposals have on males and females, and whether they will contribute to or help to alleviate gender inequality, gender impact assessment is a key part of gender mainstreaming.

While a policy proposal may impact differently between all females and all males, gender impact analysis should identify whether particular groups of males or females are specifically affected — for example, women of non-English speaking backgrounds or homeless men. In this way, the analysis can be seen as part of a broader social impact assessment.

Attachment A provides further guidance on conducting gender impact analysis.

9.2 Poverty impact assessment

In some cases, a poverty impact analysis will be required. The ACT Government has developed an approach to poverty impact assessment. It outlines the following questions to assess whether a poverty impact analysis is required.

- What is the main aim of this policy proposal?
- Which population groups does the proposal target? How will the proposal affect those groups in terms of their income, the 'poverty gap' and their capacity to participate socially and economically?
- Will this proposal affect people outside the target group? Who are they and how will they be affected?

The questions to answer when a full poverty impact analysis is required are at [Attachment B](#).

9.3 Climate change impact assessment

As part of the Parliamentary Agreement for the 7th Legislative Assembly for the ACT (2008), the ACT Government has committed to:

3.10 The provision of Climate Change Impact Analysis to be required for all Government Bills and major policy proposals.

The Government is proposing to incorporate this work into the broader TBL assessment framework, but as a more detailed component. Although further work is under way to develop the approach, our initial thinking is that a climate change impact assessment will be triggered when:

- a) a policy or proposal is understood to have significant impacts on greenhouse gas emissions (positive or negative); or
- b) a policy or proposal is understood to be significantly affected by the impacts of climate change.

In relation to (a), proponents should attempt to estimate the quantity of greenhouse gas emissions generated or abated (in tonnes CO₂-e). Where a proposal is anticipated to increase emissions substantially, the assessment should also include costed options for mitigation and an estimate of the likely reductions arising from such measures.

In relation to (b), proponents should outline those risks or vulnerabilities to the policy or proposal arising from the impacts of climate change and provide an overview of any adaptation measures being proposed. In this regard, the ACT Planning and Land Authority commissioned AECOM Australia to do a pilot study into the vulnerability of Canberra's population to projected climate change.

AECOM modelled a two degree average temperature rise by approximately 2050, which is considered to be a likely future. The key findings are outlined below.

Bushfire

The risk of bushfire is expected to increase, due to the expected increase in hotter and drier weather. The number of days rated as high or extreme (under the old system) is expected to increase from 23 to 36 days per year. The overall risk is also likely to be exacerbated by fewer opportunities for hazard reduction burning. Bushfire is one area of risk that has been extensively studied and the data available to inform decision makers is readily available. The report suggests areas of analysis that could be enhanced.

Extreme heat

Of all natural events, heatwave has historically been the biggest killer. Climate change is very likely to result in higher exposure to extreme heat as the number of hot days (temperatures in excess of 35°C) and very hot days (temperatures in excess of 40°C) are projected to increase. One of the key data gaps identified was the prevalence and extent of the urban heat island effect — that is, localised city 'heat traps'.

Flooding

Since the 1970s, flood attenuation has been included as part of the integrated urban form. Open space, such as parks and ovals, is often used to manage and reduce potential flood hazards. The

study identified the general ageing status of drainage infrastructure as an issue, as well as the need to incorporate anticipated climate change impacts into any new studies.

Water supply

The surface runoff feeding the ACT's dams decreased from the mid-1990s. Climate projections indicate this trend is likely to continue or even worsen in the future. Water sources in the ACT are rainfall dependent and, as such, are sensitive to any change in rainfall pattern. An understanding of the implementation of water conservation initiatives at the suburb level would greatly increase the vulnerability assessment.

Population vulnerability

The most vulnerable in our society are those who will be most affected by the risks posed by impacts from climate change — that is, the very old, very young, sick, poor and least educated.

In locating groupings of more vulnerable people, such as in old age residential complexes and hospitals, consideration needs to be given to mitigating all risks, including those that may be exacerbated by climate change.

A further discussion paper on climate change impact analysis will be released in August 2011.

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Attachment A: Gender impact analysis

Gender impact analysis provides a basis for the robust examination of the different impacts of a proposal on women, men, girls, boys and transgender people, and avoids conclusions being based on incorrect assumptions and stereotypes. The analysis is guided by 'frameworks' or 'impact assessments' that can draw on multiple gender concepts.

This process will allow the ACT Government to consider the impact its policies may have on women, men, girls, boys and transgender people in the ACT, and whether or not different groups will be advantaged or disadvantaged by them. It does this by examining the relationships between the groups and identifying any gender inequities that may exist.

Undertaking an analysis ensures that appropriate consultation and negotiation processes have taken place, and that the interests of the different population groups have been properly considered.

Conducting a gender analysis involves:

- identifying how gender is considered for proposed and existing policies;
- understanding the different needs and priorities of women, men, girls, boys and transgender people;
- undertaking appropriate consultation;
- collecting and disaggregating relevant data — for example, by ethnicity, disability or sex;
- identifying any inequities that may exist in proposed or existing policies; and
- completing the pro forma steps below.

An effective gender analysis should explore a diversity of perspectives. It is important that those conducting the analysis have an awareness of gender and understand the process for conducting a gender analysis.

Steps to undertaking a gender impact analysis follow.

Title of the policy:

Rationale for policy

STEP 1: Identify problems and issues.

STEP 2: Define goals. What is the policy trying to achieve and what are the desired outcomes?

STEP 3: Identify options to address the issues. How will each option impact on different groups? Is the impact acceptable or unacceptable? What are the risk factors?

STEP 4: To what extent will the policy affect women and men, girls, boys and transgender people, directly or indirectly? Are the impacts the same for everyone or do they need to be different?

STEP 5: What are the risks if the policy is not implemented?

STEP 6: Are there existing policies that could be modified to meet the identified need? If yes, what are the policies, and the reasons and options for modification?

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STEP 7: Data collected. Outline what data have been used in the gender analysis and what strategies will be put in place to consider other data in its ongoing assessment.

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STEP 8: Were all key stakeholders considered in the consultation process? Outline the process, including the strategies that were employed to give key stakeholders opportunities to provide input.

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STEP 9: Will the policy impact on particular groups of males or females (for example, those of low income or particular ethnic backgrounds)? Describe these groups, the impacts on them and what strategies will be employed to give those groups opportunities to be consulted on the potential impact?

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STEP 10: Describe how feedback from consultations has been taken into account.

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STEP 11: Who needs to be made aware of this policy? What is the timeframe for implementation? Are there processes in place to ensure that different impacted groups are made aware of the change? How will this be done?

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STEP 12: What measures are in place to ensure the intended outcomes are being achieved during implementation?

STEP 13: Outline the measures in place to review or redesign the policy if it is not delivering the intended outcomes.

Key findings of the analysis

This should include the impacts and implications for different groups

Outcomes

Attachment B: Poverty impact assessment

The main purpose of a poverty impact assessment is to help policy-makers identify and focus on possible impacts arising from their policy proposal on the three indicators of poverty — income, depth of poverty and capacity to participate. It also prompts thinking about possible methods of alleviating these poverty impacts. The detailed questions to fulfil a poverty impact assessment are outlined below.

What is the main aim of this policy proposal?

Which population group is the policy aimed at (the ‘target group’) and how will the proposal affect those groups in terms of their income, the ‘poverty gap’ and their capacity to participate socially and economically?

Will this proposal affect people outside the target group? Who are they and how will they be affected?

What type of impact (in terms of income level) will the policy have for these vulnerable groups?

	No impact	Positive	Negative
Those living under the poverty line*			
Women			
Children and young people			
The elderly			
Aboriginal and Torres Strait Islanders			
People with a disability			
Long-term unemployed			

What type of impact (in terms of income level) will the policy have for these vulnerable groups? (continued)			
	No impact	Positive	Negative
Single parents			
People with a mental illness or drug/alcohol issues			
Migrants, ethnic minorities, and those with low level English			
Other			

It is important to assess not only changes to income levels, but also the expected impact on household expenditure and rises in prices for goods and services. This will give a basic indication of whether the policy will push more people below the poverty line and/or affect the depth of poverty for households already below the poverty line.

The impact of ACT Government and Australian Government concessions on mitigating impacts on these groups should also be taken into account at this stage of the analysis.

What type of impact would the proposal have on the depth of poverty across the whole community (using the indicators listed below)?			
	No impact	Positive	Negative
Income distribution (Gini co-efficient)			
Long-term unemployment rate (greater than 12 months)			
Proportion of people living in jobless households			
Proportion of young people successfully completing secondary or vocational studies			
Proportion of adults with post-school qualifications			
Proportion of the population experiencing primary homelessness			

What impact will this proposal have on the capacity of people to participate socially and economically?

	No impact	Positive	Negative
<p>In what way will this policy affect the Canberra population (with particular focus on the vulnerable groups listed above) in their ability to:</p> <ul style="list-style-type: none"> – have a social network? – be involved in the community (via activities, group membership, civic involvement)? – feel safe and secure? – access appropriate healthcare? – access adequate and affordable housing? – access adequate transport (both public and private)? – access information/communication technology facilities (that is, email, phone, computer and internet access)? – attend or participate in cultural activities (that is, sport, recreation and creative arts)? 			

If the proposal would have a negative effect on poverty (that is, increase numbers in poverty, the depth of poverty and/or decrease the capacity to participate), how would this occur and what changes to the policy could be made to alleviate this?

When considering the financial impact on individuals and any possible changes to the proposal, it is important to consider the current ACT concessions regime and whether current concessions could mitigate negative impacts of the policy proposal.

If the proposal would have a positive effect on poverty (that is, reduce numbers in poverty, depth of poverty and/or increase the capacity to participate), how would this occur and could the positive effects be further enhanced?

If the proposal would have no impact on poverty, what options could be considered to produce a positive effect?

If the policy is implemented, how can its impact on poverty be measured or monitored? (For example, what data could be collected, what questions could be included in funding agreement monitoring and review, what issues should be considered in evaluation?)