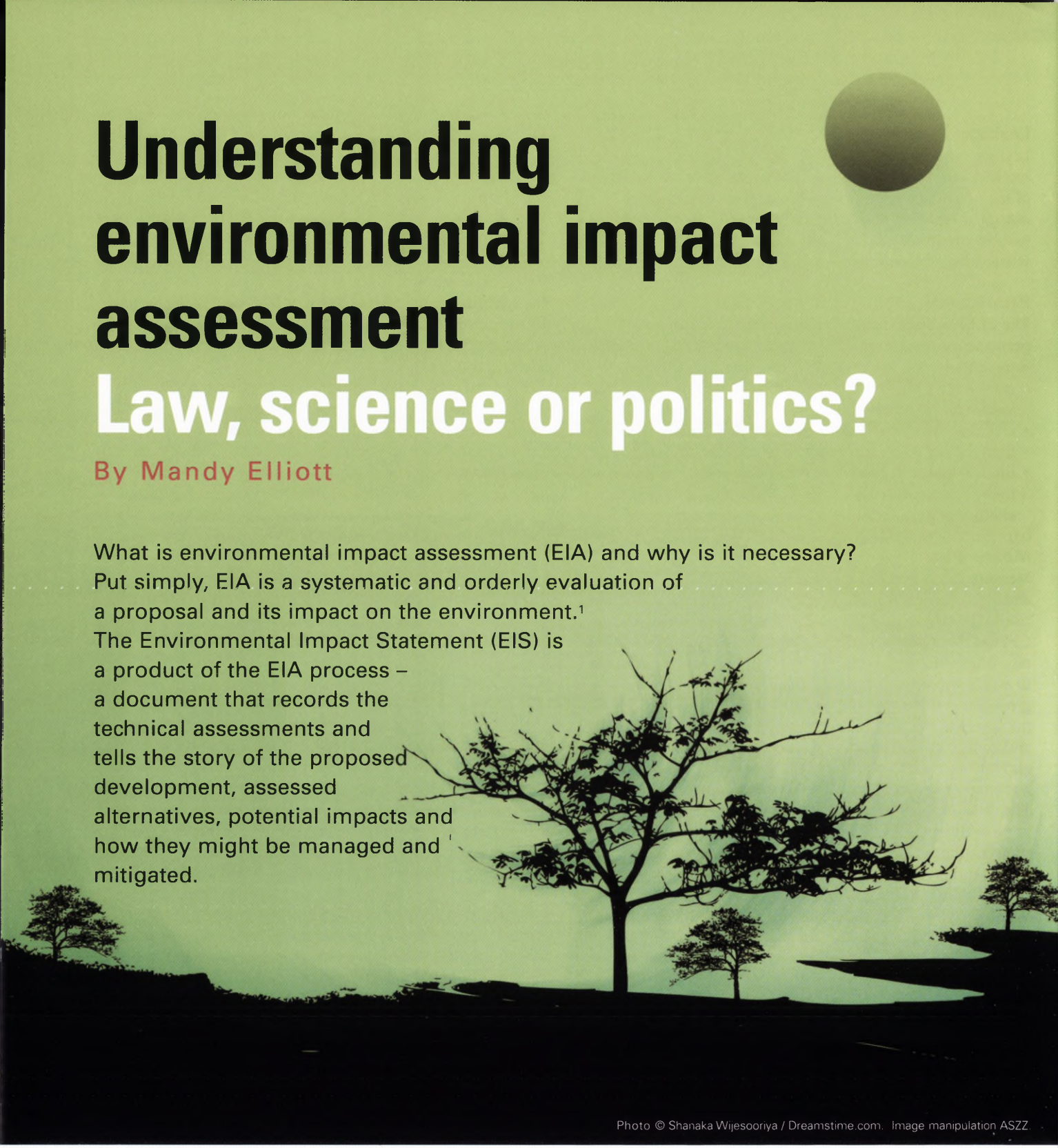
Understanding environmental impact assessment

Law, science or politics?

By Mandy Elliott

What is environmental impact assessment (EIA) and why is it necessary? Put simply, EIA is a systematic and orderly evaluation of a proposal and its impact on the environment.[1] The Environmental Impact Statement (EIS) is a product of the EIA process – a document that records the technical assessments and tells the story of the proposed development, assessed alternatives, potential impacts and how they might be managed and mitigated.



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Anyone practising environmental and planning law in Australia is already likely to have been exposed directly to an EIA process, while most people will have some awareness and understanding of EIA from media coverage of controversial development projects. This article aims to provide an understanding of EIA and its role in decision-making; the key components of EIA (which are similar in jurisdictions around Australia and elsewhere in the world); and an overview of EIA legislation in Australia.

INTRODUCTION

EIA is not a new concept. During the 1960s, concern over pollution, public health and the natural environment helped to raise the community's awareness about its environment. This growing environmental awareness was the catalyst

that led to the introduction of EIA legislation (and broader environmental protection legislation) and policy in the late 1960s and early 1970s in Western countries.[2]

In the USA, the *National Environmental Policy Act* 1969 introduced the practice of assessing the environmental impact of proposals (projects or works) with the intention of informing decisions on whether to approve such projects or not. At this time, 'environment' referred primarily to the physical environment (flora, fauna, water), and human health (air quality, noise), and the proposed project's impacts upon them. Since then, over 70 other countries around the world have implemented EIA legislation similar to the US model,[3] with approximately 200 major EIA regimes being established in over 100 countries by the mid-1990s.[4]

In 1974, Australia introduced the *Environment Protection (Impact of Proposals) Act* (Cth). Commentary on this Act's history and its effectiveness over 25 years can be found in Fowler and Formby.[5] It has since been replaced with the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act), a much broader Act which emphasises the protection of biodiversity across Australia, as well as prescribing a detailed EIA and approval process.

All states and territories have their own EIA regimes, some having stand-alone legislation (Victoria and the Northern Territory). In other jurisdictions, EIA legislation has been incorporated into planning legislation (NSW, ACT and South Australia). In Western Australia, EIA is part of the environmental protection legislation. Queensland and Tasmania's EIA regimes gain their powers from a combination of the planning legislation and environmental protection legislation, as well as specific major development legislation. This article provides a brief overview of the Commonwealth regime.[6]

The Role of EIA

The International Association of Impact Assessment (IAIA) defines EIA as 'the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made'.[7]

Specifically, the key objectives of EIA are to:

- ensure that environmental considerations are explicitly addressed and incorporated into the development decision-making process;
- anticipate and avoid, minimise or offset the adverse significant biophysical, social and other relevant effects of development proposals;
- protect the productivity and capacity of natural systems and the ecological processes which maintain their functions; and
- promote development that is sustainable and optimise resource use and management opportunities.[8]

The role of EIA is clearly to assess the environmental effects of proposed developments prior to decisions being made on whether or not they should go ahead. One of the limitations of project-based EIAs is that they assess only the environmental impacts of a particular project, and not necessarily the impacts of other projects close by, unless the minister or government agency responsible for 'scoping' the impact assessment process has implicitly requested that a cumulative impact assessment be undertaken. Traditionally, EIA has not been used to assess the environmental impacts of policies or plans, only of proposed projects.

Strategic Environmental Assessment (SEA) is being used more by regulators to assess the environmental, social and economic impacts of plans, policies and multiple projects within regions. SEA allows consideration of impacts across a larger geographic area, and over a period of development. Typically, SEA would be used at a national or regional level to assess broad policies (such as climate change); plans (for example, strategic land use plans); and programs (such as public transport expansion programs). On the other hand, more local projects, such as a road link or freeway duplication, would be assessed through an EIA process.

The many aspects of EIA are described by Caldwell:

'1. Beyond preparation of technical reports, EIA is a means to a larger end – the protection and the improvement of the environmental quality of life.
2. It is a procedure to discover and evaluate the effects of activities (chiefly human) on the environment – both natural and social.
3. It is not a science, but uses many sciences (and engineering) in an integrated interdisciplinary manner, evaluating relationships (and risks) as they occur in the real world.
4. It should not be treated as an appendage ... to a project, but regarded as an integral part of project planning ...
5. EIA does not "make" decisions, but its findings should be considered in policy and decision-making and should be reflected in final choices ...
6. The findings of EIA should focus on the important or critical issues, explaining why they are important and estimating probabilities in language that affords a basis for policy decisions.'[9]

STAGES OF EIA

The key stages of EIA are screening (whether the project requires impact assessment due to possible environmental impacts); scoping (assessing the key issues to be assessed); preparation of the EIS (the 'product' of the EIA process); and public review and assessment (public inquiry, ministerial or government agency).

Screening

The screening process begins when a proponent refers its proposed project to the relevant state/territory agency seeking a determination as to whether the proposal requires environmental assessment under the relevant legislation of that state/territory. In many instances, the proponent will also refer the proposal to the Commonwealth government under the EPBC Act.

A set of criteria is available to proponents and decision-makers to assist in determining if a proposed development could have significant environmental impacts. These criteria, known as screening or referral criteria, have evolved from the following criteria developed by the Australian and New >>

Zealand Environment and Conservation Council (ANZECC) in 1996:

1. The character of the receiving environment;
2. The potential impacts of the proposal;
3. Resilience of the environment to cope with change;
4. Confidence of prediction of impacts;
5. Presence of planning or policy framework or other procedures which provide mechanism for managing potential environmental impacts;
6. Other statutory decision-making processes that may provide a forum to address the relevant issues of concern; and
7. Degree of public interest.[10]

A component of determining if a project requires EIA is whether the proposed environmental effects are significant. What constitutes a potentially significant impact?

The concept of significance has been tested under the Commonwealth EPBC Act in *Booth v Bosworth*[11] (the Spectacled Flying Fox Case), where it was determined that a 'significant impact' is an 'impact that is important, notable or of consequence having regard to its context or intensity'.[12]

The Spectacled Flying Fox case concerned the significant impact on the heritage values of the Wet Tropics World Heritage Area that could result from destroying large numbers of flying foxes (not themselves listed as endangered), which ventured from the Wet Tropics World Heritage Area in search of food. The species is considered to be important for seed dispersal, evolutionary processes and general ecological function within the Wet Tropics rainforest.[13] The case involved an application for an injunction under the EPBC Act on the practice of a lychee farmer who, to protect crops, had erected electric grids, which were killing Spectacled Flying Foxes as they roamed for food.

In this case, the test for 'significant impact' proposed by Branson J – 'an impact that is important, notable or of consequence having regard to its context or intensity' – is consistent with its plain meaning, case law, extrinsic material and the objects of the EPBC Act, Biodiversity Convention and World Heritage Convention. It also satisfies the constitutional constraints of Commonwealth legislative power. Consequently, it is suggested that the Federal Court will follow this test when considering the EPBC Act in the future and that the test therefore is authoritative.[14]

Scoping

Scoping is the process of determining which matters require assessment as part of the EIA process. It is important to point out that the term 'environment' is not always defined in legislation. Over time, it has been tested and demonstrated that the 'environment' is a far broader term than the physical factors around us such as air, water, noise, odour, plants and animals that is generally provided in environmental protection legislation (such as the *Environment Protection Act* 1970 (Vic)).

The definition of environment has expanded over time and in the context of an EIA process was discussed in *Friends of Mallacoota Inc v Minister for Planning and Minister for Environment and Climate Change*.[15] In this case, the environment was considered to include economic and social effects and not just physical effects.

Section 528 of the EPBC Act defines the environment to include:

(a) ecosystems and their constituent parts, including people and communities; and
(b) natural and physical resources; and
(c) the qualities and characteristics of locations, places and areas; and
(d) heritage values of places; and
(e) the social, economic and cultural aspects of a thing mentioned in paragraph (a), (b), (c) or (d).[16]

Essentially, scoping will set out the requirements for the EIS (or equivalent) and, in so doing, will identify what the EIS should contain. These matters may include impacts on biodiversity, air, social, noise, traffic and transport, cultural heritage, climate change, landscape and more. Specialist consultants and experts usually undertake the technical assessments.

There has been criticism that, over time, the scope of EISs has evolved to encompass all issues rather than focusing on the key matters that need to be assessed. Many EIA jurisdictions have been undertaking reforms in the past five years and have attempted to address this matter.

A scoping document (known as Assessment Requirements, Terms of Reference, Scoping Requirements) is usually put out to the public for comment. The scope is then finalised and issued to the proponent. Examples of scoping requirements can be found on the Victorian EIA website under each project listed as currently undertaking an EES.[17]

The Environmental Impact Statement

The EIS (or Environment Effects Statement, Public Environment Report, Public Environmental Review – see Table 1), is the document that presents information on the potential environmental effects of actions to decision-makers. The EIS will usually have a main volume and technical assessment volumes for those who wish to have more detailed information. Consultants and the proponent usually prepare the EIS.

Public review

Consultation with key stakeholders and the broader community is an important component of the EIA process. If engagement with the community occurs too late in the environmental assessment process, the wider community will suspect that the outcome has already been determined and that project approval is a *fait accompli*.

The public review stage of the EIA process refers to the formal opportunity for the community and stakeholders to have a say about the proposed project. The EIS is placed on public exhibition, usually with some form of notification in the media, and provides for between two and four weeks for submissions from the public. Some jurisdictions, such as Victoria and the Commonwealth, have a public inquiry process that often involves lawyers.

Assessment

The assessment stage of an EIA process is undertaken by a government agency. The assessment of the EIS is provided to relevant decision-makers in order for them to determine if the project should go ahead or not and, if so, with what conditions. In preparing an assessment, the government agency will consider the EIS (or equivalent documentation), public submissions, relevant legislation and policy, and the outcomes of any public inquiry process.

EIA IN AUSTRALIA

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The EPBC Act protects biodiversity and heritage in Australia, as well as prescribing a detailed environmental assessment system from initial referral process (screening) to levels of assessment.

The EPBC Act applies to actions that have, or are likely to have a significant impact on matters of national environmental significance as defined in Part 3 of the Act. These eight matters of national environmental significance are described in detail in Part 3 division 1 (subdivision A-FA) of the Act and are:

- world heritage properties;
- national heritage places;
- wetlands of international importance (listed under the Ramsar Convention);
- listed threatened species and ecological communities;
- migratory species protected under international agreements;
- Commonwealth marine areas;
- the Great Barrier Reef Marine Park; and
- nuclear actions (including uranium mines).[18]

A proponent must refer its project (the term 'action' is used under the EPBC Act) to the Commonwealth for a decision as to whether EIA is required under this legislation. If a project is determined to be a 'controlled action', then an EIA process will be required.

The levels of assessment prescribed under Part 8 of the EPBC Act are:

- assessment on referral information (Division 3A);
- assessment on preliminary documentation (Division 4);
- public environment report (Division 5);
- EISs (Division 6); and
- inquiries (Division 7).

In some jurisdictions, such as in Victoria, there is only one form of assessment process under the Act (the Environment Effects Statement). However, a recent inquiry[19] into the EES process in Victoria led to the Victorian government announcing that 'a tiered suite of EIA processes will be developed to enable efficient assessment of project proposals with a variable potential for significant environmental impacts'.[20]

The EPBC Act also provides for an approval process, whereby the Commonwealth Minister for the Environment both assesses the environmental impacts of a development and also approves (or decides not to approve) a 'controlled action'. Unique to the EPBC Act, strategic assessments can be undertaken under s146 of the EPBC Act, such as the current Great Barrier Reef strategic assessment, which aims to protect the Great Barrier Reef World Heritage Area against potential impacts from activities ranging from increased shipping to urban development. The Commonwealth government suggests that this is the largest, most wide-ranging and most complex strategic assessment ever undertaken in Australia and will cover not only the Great Barrier Reef World Heritage Area but also the adjacent coastal zone where a range of activities occurs that could impact on its environmental and heritage values.[21]

Under s45 of the EPBC Act, the Commonwealth government can accredit a state/territory EIA system via a bilateral agreement, with the purpose of eliminating duplication of EIA processes at the state/territory and Commonwealth levels. After assessment, the proposed action still requires approval from the minister under the EPBC Act. This means that two green lights are required for the proposed action (project) to proceed. Approval bilaterals are also a function of the EPBC Act and, if an approval bilateral covers a state/territory EIA process, then it will be assessed and approved by the state/territory in accordance with an agreed management plan. No further approval is required from the Commonwealth under an approval bilateral. As of the time of writing, there are no approval bilaterals in place.[22]

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Table 1: EIA KEY LEGISLATION IN AUSTRALIA

State/ Territory	Act and relevant guidelines/procedures	Comment
Victoria	• *Environment Effects Act* 1978 Ministerial guidelines for assessment of environmental effects under the *Environment Effects Act* 1978	• Stand-alone legislation with links to the planning system. • One EIA process, Environment Effects Statement (EES)
Western Australia	• *Environmental Protection Act* 1986 • Environmental Impact Assessment Administrative Procedures 2010	• Linked to environmental protection legislation. Two levels of EIA – Public Environmental Review (PER) and Assessment on Proponent Information (API).
ACT	• *Planning and Development Act* 2007 (P&D Act) (Chapters 7 and 8) • *Planning and Development Regulations 2008*	• Embedded in planning legislation and the ACT planning system. • One tier of EIA – Environmental Impact Statement. • The P&D Act allows for strategic environmental assessment to be prepared when a major policy matter is proposed, such as a major variation to the Territory Plan.
NSW	• *Environment Planning and Assessment Act* 1979	• The planning system allows a number of pathways for EIA in NSW: • All development applications must be accompanied by a Statement of Environmental Effects (except 'designated' or state significant projects, which are assessed under Part 4 of the Act). Part 4 'designated' or state significant projects require an Environmental Impact Statement.
Northern Territory	• *Environmental Assessment Act* 1982 • *Inquiries Act* 1985 (some provisions for EIA)	• Stand-alone legislation with links to the planning system. • Two levels of EIA – Environmental Impact Statement (EIS) and Public Environmental Report (PER)
Queensland	• *Sustainable Planning Act* 2009 (SP Act) • *Sustainable Planning Regulation 2009* • *Environmental Protection Act* 1994 (particularly mining and petroleum projects) • *Environmental Protection Regulation 2008* • *State Development and Public Works Organisation Act* 1971 (for significant projects) • *State Development and Public Works Organisation Regulation 2010*	• Depending on the type of development proposed and the potential for significant impacts, an Environmental Impact Statement (EIS) can be required under either of theses Acts. • Under the SP Act, a level of EIA called 'information request process' may be used to assess environmental impacts of a development.
Tasmania	• *Environmental Management and Pollution Control Act* 1994 *(EMPC Act)* • *Land Use Planning and Approvals Act* 1993 • *State Policies and Projects Act* 1993 (SPP Act) • *Resource Management and Planning Appeal Tribunal Act* 1993	• EIA in Tasmania has links to both the planning and environmental protection regimes. Most EIAs are undertaken via the EMPC Act. Levels of EIA under the EMPC Act are: – Level 1 – Level 2 – either Environment Effects Report (EER) or a Development Proposal and Environmental Management Plan (DPEMP) is prepared – Level 3 EIA is undertaken under the SPP Act for major projects (for example, Gunns' Bell Bay Pulp Mill)
South Australia	• *Development Act* 1993	• Linked to the planning system, there are three levels of EIA: – Environmental Impact Statement (EIS); – Public Environment Report (PER); and – Development Report.

> Not always defined in legislation, the term 'environment' has expanded to include economic and social as well as physical effects.

CONCLUSION

In Australia, EIA is a mix of environmental protection, planning, major development and stand-alone legislation. Yet, all follow the key stages of EIA: screening, scoping, the EIS (or equivalent), public review and assessment. The EIA process is a combination of science, politics and law and ultimately is provided to the government (or decision-maker) to enable them to make more informed decisions about whether a project should proceed. Although criticisms of bias, lengthy delays, costs and duplication of processes are levelled at the EIA process in Australia and elsewhere, surely the requirement to examine large projects with potentially significant environmental impacts in its decision-making process is necessary? ■

Notes: **1** WA EPA, *EIA Process website http://www.epa.wa.gov.au/eia/assessdev/Pages/default.aspx Accessed 20 July 2012)* **2** M Elliott, and I Thomas, *Environmental Impact Assessment in Australia: Theory and Practice,* Federation Press, Sydney, p8. **3** R Leshinsky, (2010) *Environmental Impact Assessment,* at 1. Accessed 3 August 2012 at <www.lawhandbook.org.au/handbook/ch11s01s03.php#> **4** C McGrath, 'Avoid the legal pitfalls in the EPBC Act by understanding its key concepts' (2005) *National Environmental Law Review,* Spring edition at 34. **5** In RJ Fowler, (1982) *Environmental Impact Assessment, Planning and Pollution Measures in Australia,* AGPS, Canberra and Formby, J (1981), 'The Australian Experience', in T O'Riordan, and WRD Sewell, (eds), *Project Appraisal and Policy Review,* Wiley, Chichester. **6** All states' and territories' EIA legislation is documented in Table 1. **7** International Association of Impact Assessment, 1999, *Principles of Environmental Impact Assessment Best Practice,* at 2. **8** *Ibid.* **9** LK Caldwell, 1989, 'Understanding Impact Analysis: Technical Process, Administration, Reform, Policy Principle', in RV Bartlett, (ed), *Policy Through Impact Assessment,* Greenwood Press, Westport Ct, pp7-16 in Elliott and Thomas, see note 2 above, p9. **10** ANZECC Working Group on National Environmental Impact Assessment *ANZECC Guidelines and Criteria for Determining the Need for and Level of Environmental Impact in Australia,* (June 1996) at 1-2. **11** [2001] FCA 1453 at [99]. **12** Leshinsky, note 3 above, at 4. **13** McGrath, note 4 above, at 2. **14** *Ibid,* at 17. **15** [2010] VSC 222 (27 May 2010). **16** *Environment Protection and Biodiversity Conservation Act* 1999 (Cth), s528. **17** See http://www.dpcd.vic.gov.au/planning/environment-assessment/projects. **18** EPBC Act 1999 (Cth), Part 3, Division 1, Subdivisions A- FA. **19** Parliament of Victoria, Environment and Natural Resources Committee, *Inquiry into the Environment Effects Statement Process in Victoria* (September 2011) Accessed 10 June 2012 at <http://www.parliament.vic.gov.au/images/stories/committees/enrc/FINAL_EES_Report_30_August_2011.pdf> **20** Parliament of Victoria, *Victorian Government Response to the Report of the Environment and Natural Resources Committee on its Inquiry into the Environment Effects Statement Process in Victoria,* (March 2012) at 1. Accessed 10 June 2012 at <http://www.parliament.vic.gov.au/images/stories/committees/enrc/EES/Govt_Response_to_the_ENRC_Inquiry_into_the_Environment_Effects_Statement_Process_in_Victoria_1_March_2012.pdf> **21** Department of Sustainability, Environment, Water, Population and Communities (Cth) *Great Barrier Reef Strategic Assessment Fact Sheet,* (June 2012) Accessed 18 July 2012 at <http://www.environment.gov.au/epbc/notices/assessments/pubs/gbr-strategic-assessment-factsheet.pdf> **22** However, the Council of Australian Governments (COAG) has agreed to investigate the issue.

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