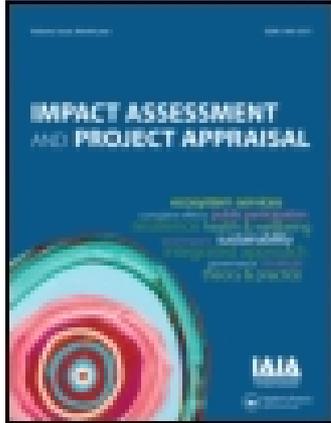


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The inefficiency of environmental impact assessment: reality or myth?

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Professional practice

The inefficiency of environmental impact assessment: reality or myth?

Garry Middle and Isaac Middle

This professional practice report discusses the results of a study into the timeliness/efficiency of the Western Australian environmental impact assessment (EIA) process. Whilst few quantitative data exist on this issue, criticism of the EIA process for being too long and costly is a constant theme. We considered 88 completed EIAs. Times for the six key phases of the EIA process were reported, with the longest phase being the production of the environmental impact statement. Data were not available to examine the time taken for each of the three discrete steps that make up this phase, although some questions were posed as the basis for follow-up work. A key question that emerged from looking at the times of this phase and the next two longest phases is how important is scoping in determining any unforeseen delays in EIAs? The importance of EIA effectiveness was noted but not included in this study.

Keywords: timeliness, efficiency, EIA, scoping

MANY TENSIONS SURROUND THE practice of environmental impact assessment (EIA), not the least of which is the tension between timeliness (efficiency) and effectiveness. On one hand, many practitioners stress the need for EIA to be thorough and deliberative to ensure the quality of the overall EIA decision-making (Stookes, 2003), whilst others see environmental regulation, including the EIA process, as being unnecessarily lengthy and an economic burden on companies (Annandale and Taplin, 2003). Snell and Cowell (2006: 361) noted the following in relation to EIA and the land use planning system:

the planning system has been a site of conflict between those that wish to streamline the system

to reduce perceived burdens on economic growth, and those that would extend the capacity of the system to promote environmental sustainability.

Tensions associated with scoping (the process where the environmental impacts that are to be subject to assessment in an EIA are identified (Glasson *et al*, 2005: 91)), are particularly strong where the competing 'rationales' of 'environmental precaution and decision-making efficiency' are played out (Snell and Cowell, 2006: 359). There is, however, an argument that these two rationales are compatible where:

Failure to adequately scope an EIA can lead to a situation where excessive resources are expended on minor impacts, leading to voluminous EISs [environmental impact statements] that cover an unnecessarily wide range of impacts in far too much depth ... If too little attention is given to a potentially significant impact then the perceived objectivity and legitimacy of the assessment may be reduced and delays can ensue

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while the issue is subsequently addressed. (Wood *et al.*, 2006: 222)

EIA in Western Australia (WA) is under similar pressure to be more efficient and timely. The State Government recently initiated a comprehensive review of the approvals processes based on concerns about timeliness and unnecessary delays. Also, the main environmental agency in WA, the Environmental Protection Authority (EPA) recently completed a review of its EIA processes (EPA, 2009). The review was, in part, initiated in response to pressure to provide more 'timely' advice.

As part of the overall review, the WA Minister for Mines and Petroleum established a stakeholder group to provide advice on the overall project approvals process in WA (including EIA). The group's final advice noted that:

We can no longer boast of our approval system being the best in Australia. It has deteriorated to where it is criticised for taking too long, being too costly, too bureaucratic, 'process driven' rather than being focused on outcomes, and not always representing the objectives of the elected government. (Industry Working Group, 2009: i)

This debate has deepened in WA as governments, both state and national, seek to address the global financial crisis by fast-tracking approvals for major resource proposals. As well, the Commonwealth Government has embarked on ambitious infrastructure building programs to provide an additional boost to local economic activity, and pressure will continue to fast-track EIAs for these proposals.

The problem for EIA practitioners is that this debate is based as much on perception as reality. There is very little data available on EIA timelines, which makes it easy for critics of the EIA process to claim that EIA is both long and costly. There is an urgent need for better research in the area. This professional practice report presents the results of a study into the timeliness of the WA EIA process.

Background

This paper has its origins in a recent conference held by the Forum of Federations in Ottawa, Canada, titled 'Environmental Assessment in Federations: Current Dynamics and Emerging Issues'. One of us was invited to prepare an Australian academic perspective. The initial research involved contacting Australian EIA practitioners who are members of the International Association of Impact Assessment (IAIA). They were asked to identify what they thought were the key emerging issues in EIA in Australia. 96 individuals were emailed with only 16 responses received (16.7% response rate). These responses were tabulated and the following four key issues emerged:

- Need for strategic assessments and examination of alternatives;
- Timeliness and cost pressures;
- Increased number of Commonwealth EIAs, and that these EIAs come late in the decision-making process; and
- Independence of EIA being challenged — politicisation of EIA.

Given the current emphasis in WA on the EIA process, with efficiency being a key issue, it was decided to investigate the timeliness of EIA in WA. As a first step, the data in support of the Industry Working Group report were examined. No quantitative data on timeliness were used in support of that report; instead certain case studies were used where timeliness was an issue. In the absence of robust data on EIA timelines, any claim about the efficiency of the approvals processes cannot be substantiated. To address this lack of data, a detailed examination of the timeliness of the WA EIA process was carried out, as described below.

Methodology

All of the EIAs completed since 2000 in WA were examined and the published timelines for the various steps in the process were recorded and tabulated. Six key phases or steps in the EIA process were identified, each of which had published timelines:

- Phase 1 — the time taken for the proponent to produce its EIS once the EPA had determined that a formal EIA is required.
- Phase 2 — the EIA public review period.
- Phase 3 — the time taken for the proponent to respond to public submissions on the EIS.
- Phase 4 — the time taken for the EPA to complete its assessment and publish its report once the proponent's response to public submissions had been completed and received by the EPA.
- Phase 5 — the time taken to determine any appeals on the EPA's assessment (not all EPA assessments were appealed).
- Phase 6 — the time taken to set the conditions following the determination of any appeals.

There are two broad types of EIAs in WA:

- Quick EIAs, where the assessment process is shortened by combining the first four phases of EA into one step; and
- Full EIAs, where all the key phases of EIA are carried out sequentially.

Quick EIAs are generally used for proposals that have few environmental issues and limited public interest. It would be expected, therefore, that these

assessments would not be complex, not raise many community concerns, and hence can be carried out relatively quickly. The first four phases are combined through an informal arrangement between the EPA and the proponent. A proposal is identified by the EPA as a candidate for a quick EIA in the pre-referral discussions between the proponent and officers for the EPA. Based on this understanding, the decision to carry out the EIA is not formally made, but the proponent is required to consult with the affected community, often using an EIS document, to respond to community concerns, and then to refer all relevant information and documentation to the EPA for consideration after the consultation process. The EPA then carries out its assessment and writes its report. Once this is complete, the EPA releases its report at the same time it announces that the proposal is to be formally assessed. As can be seen, the informal nature of this assessment process makes it extremely difficult to identify the time taken for each step. In fact, these phases do not actually exist in the same way as for full EIAs, as the EPA only formally determines that an EIA is required (part of Phase 1) when it releases its report (Phase 4). For these reasons, times for quick EIAs are analysed separately from the full EIAs.

A total of 88 EIAs were included in this study. Of these, 45 were quick EIAs and 43 full EIAs.

Results

Overall timeliness

First, the total time taken to complete each assessment was determined, which was:

- For quick EIAs, the time from initial referral to the EPA to when the conditions were finally published; and
- For full EIAs, the time from when the EPA formally decided to carry out an assessment to when the conditions were finally published.

Average times were used here as an approximate gauge of overall timeliness. The average times for each EIA type are as follows:

- Quick EIAs — 410 days; and
- Full EIAs — 890 days.

Averages often mask important details in the data, so the data were examined more closely to identify the range of times. Figure 1 shows the results of this analysis, using 100-day groupings (with the exception that the three projects taking more than 2,000 days are grouped into one category). The times for quick and full EIAs are shown separately.

Figure 1 suggests that the full EIAs can be grouped into three broad types: a group of 29 that are more typical EIAs taking less than 1,000 days, another group of ten taking between 1,000 and 1,500 days, and a final group of four taking over 1,500 days (being 1,555, 2,392, 2,611 and 3,091 days). Using these groups, the average times are:

- Less than 1,000 days — 567 days (29 projects);
- Between 1,000 and 1,500 days — 1,217 days (10 projects); and
- Over 1,500 days — 2,412 days (4 projects).

The average for the first broad group compares favourably with the quick EIAs (567 days compared to 410 days), being 38% longer on average.

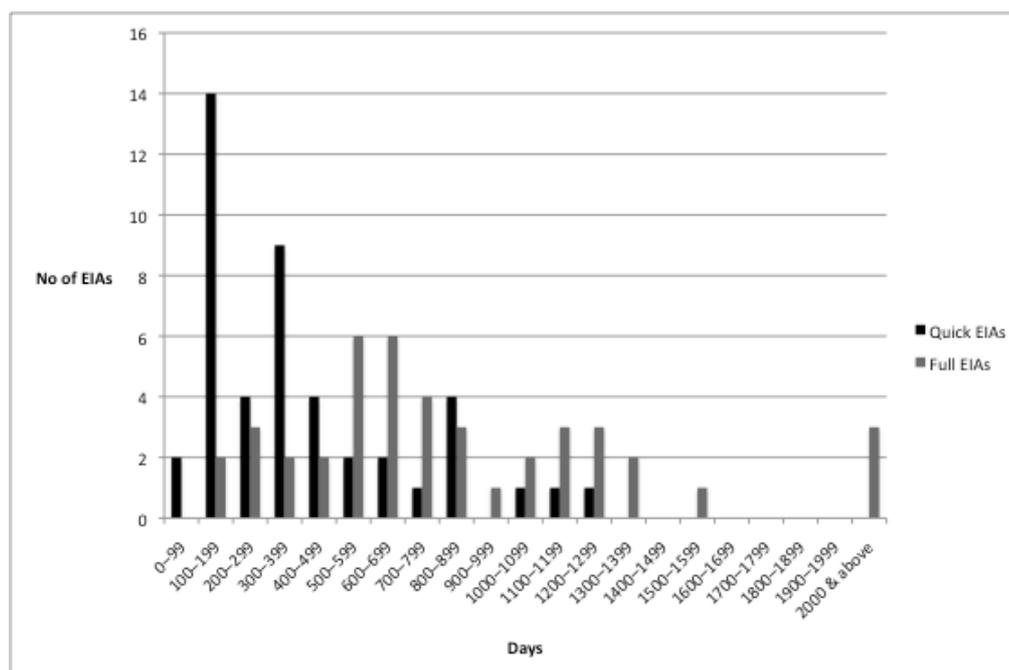


Figure 1. Time taken to complete EIAs

Timelines of each phase — full EIAs only

The above data, whilst useful, only give an overview of the timeliness story. Analysis of the times for each of the six phases reveals a more complex picture. The comparative timeliness of each of the six phases was determined based on average times. There were some anomalies in the data that had to be taken into account in calculating the average times for each phase.

First, for two proposals, the conditions were finalised on the same day that the appeals against the EPA report were determined. In effect this means that the time for condition setting is recorded as zero. Whilst this is not strictly true — consultation for these conditions occurred during the appeal period — for consistency, these zero times for condition setting were included in the averages. In practice, for most proposals, some consultation over the conditions occurs during the appeals period, although the nature and extent will vary considerably depending on the project. In effect, then, this final phase is not the actual time taken to consult and finalise the conditions, but is the time taken to consult and finalise the conditions after the appeals have been determined.

Second, one proposal did not proceed to completion following determination of the appeals. This was a proposal from a government agency, and the government decided not to proceed with it following determination of the appeals for broader socio-economic reasons. This proposal was not included in the calculations for the average times of Phase 6. Finally, the EPA reports of several proposals were not subject to appeal, and so these proposals were not included in the calculations for average times for Phase 5.

Removing some proposals from the calculations of two of the phases creates a small methodological problem in that the sum of the average times for all the phases will be slightly different from the overall

average times. The decision was made to use the total of the average times in calculating the percentages of time taken by each phase.

Figures 2 and 3 show these results for the full EIAs. Figure 2 shows the data in days, whereas Figure 3 shows percentages of total time.

Next, the analysis was repeated for each of the broad types of full EIA based on time taken: those taking less than 1,000 days, those taking between 1,000 and 1,500 days, and those taking over 1,500 days. The results in actual days taken are shown in Figure 4, and for comparative purposes the percentages are shown as a bar graph in Figure 5.

Timelines of each phase — quick EIAs

Figure 6 shows the data for the three phases for quick EIAs. As noted above, phases 1–4 are merged into one overall phase and it is not possible to differentiate separate timelines.

For comparative purposes, the data for full EIAs were re-examined by combining the first four phases into one phase to match the quick EIAs. Figures 7 and 8 show this data. Figure 7 shows the actual time taken in days whereas Figure 8 shows the phases as a percentage of overall time taken.

Discussion

Overview

A number of observations about the data are made and discussed in some detail below, under the following headings:

- Availability of baseline data;
- The EIS phase;
- The phases involving the public and their submissions;
- The EPA assessment phase;

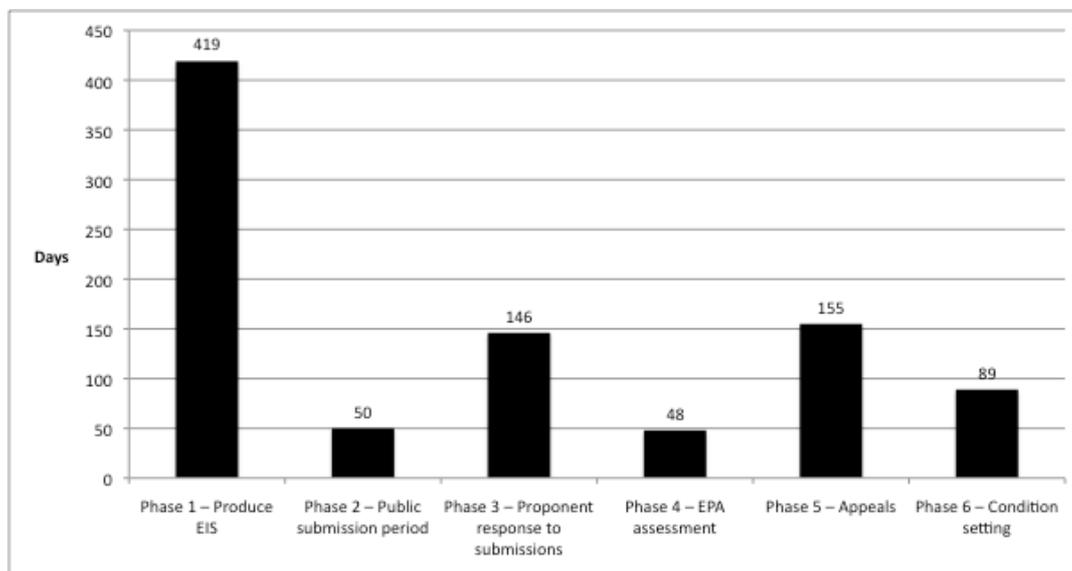


Figure 2. Average times for each phase of full EIAs (days)

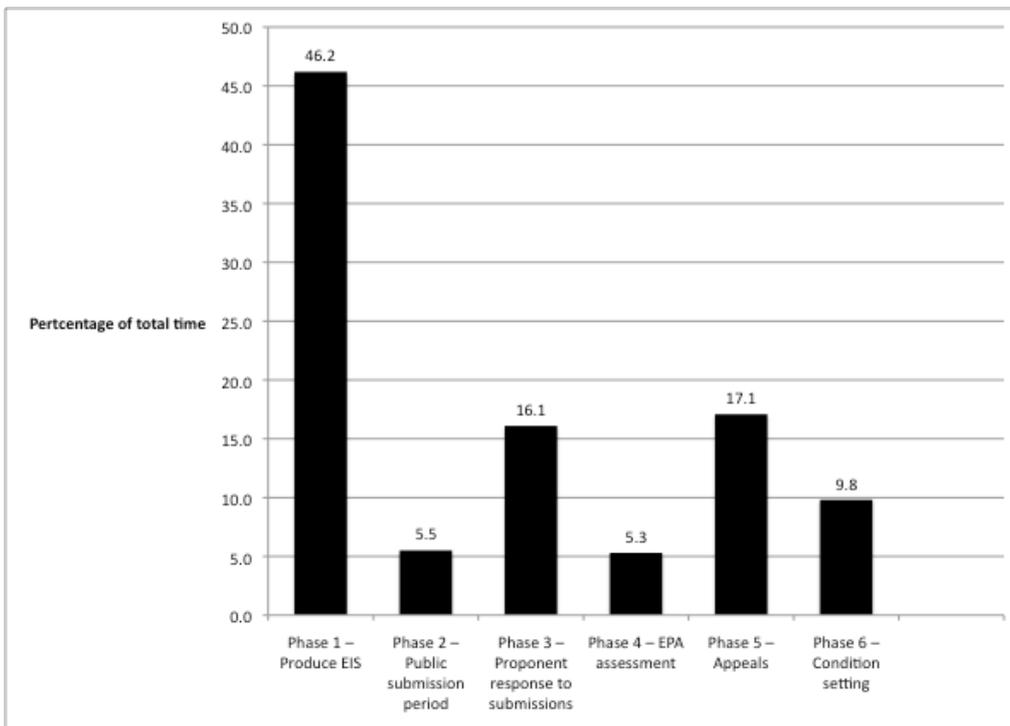


Figure 3. Percentage of time taken for each phase — full EIAs

- The quick EIAs; and
- Appeals.

Availability of baseline data

As noted above, there has been consistent criticism of the timeliness of the WA EIA process; however, there is little published data and no accepted benchmarking for what should be considered a timely EIA. Even the EPA itself, in reviewing its EIA process noted that:

Proponents have raised a lack of confidence and certainty with EIA process timelines

consistently as an area of key concern. Unnecessary delays can have direct financial consequences for the proponent and the state, and can also reduce overall confidence in a project. (EPA, 2009: 22)

It went on to recommend that ‘agreed’ timelines be set for key steps in the EIA process, which seems to suggest that these target timelines will be agreed between the EPA and proponents on a case by case basis. It is also hard to set the performance of the WA EPA in a national or international perspective, as few published data exist. One recent study

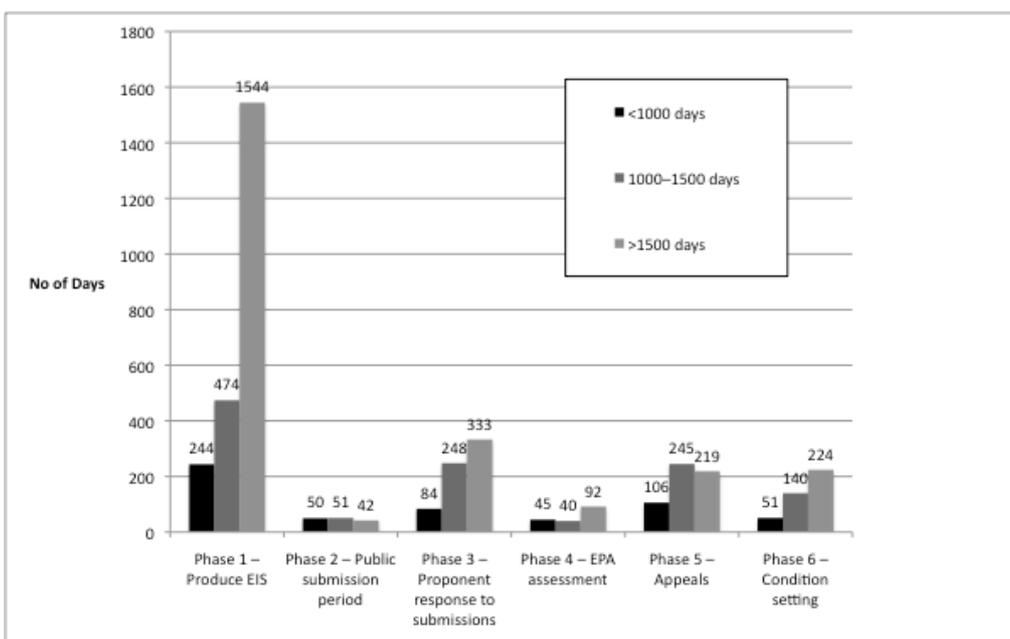


Figure 4. Comparison of average time for each phase for the three broad full EIA types

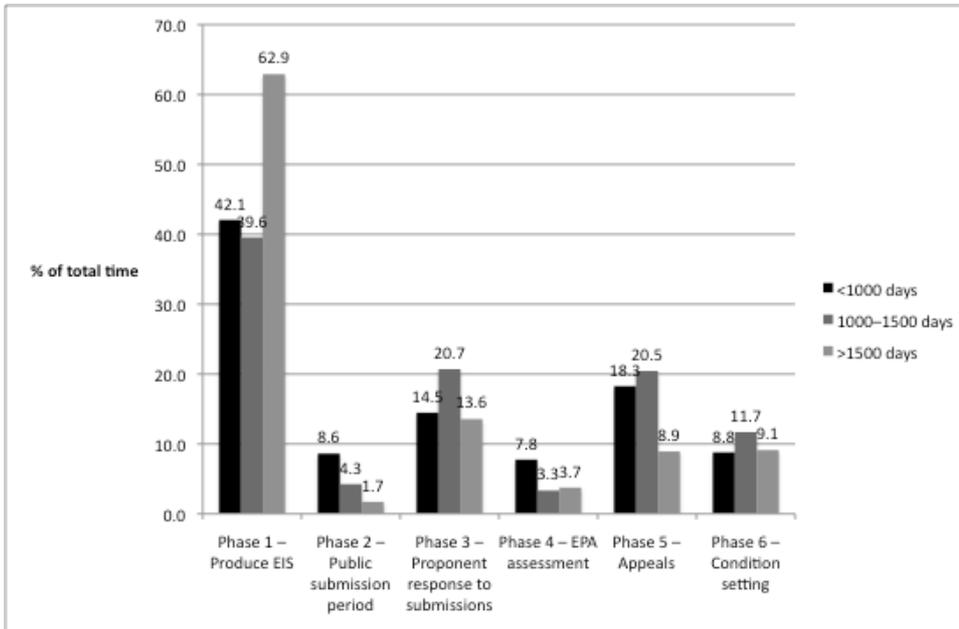


Figure 5. Comparison of percentage of time for each phase for the three broad full EIA types

reviewed the timelines of the UK strategic environmental assessment process, but it did not use published data on timelines but relied on estimates provide by respondents to a survey (Therivel and Walsh, 2006).

It is therefore suggested that the data presented here for the full EIAs taking less than 1,000 days (567 days on average) provides a useful starting point for setting a workable benchmark. More work on this issue is required involving analysis of similar data from other jurisdictions.

The EIS phase

Figures 2–5 clearly show that the preparation of the EIS is the most lengthy phase in the EIA process,

taking about 40% of the total time on average, but reaching 65% of the time for the four EIAs taking over 1,500 days. There are three key tasks that need to be carried out during this time: scoping, data collection and EIS writing. This study was unable to differentiate the times taken for each of these tasks, and it is likely that a detailed analysis would reveal some useful information about what is going on during this phase on the EIA process. Some important questions can be asked about this phase of the EIA process.

First, how much of this time is taken up on scoping? As noted above, scoping is important in defining the extent of work required for the EIAs. If scoping is not focused, excessive work and research can be undertaken on minor impacts, leading to large

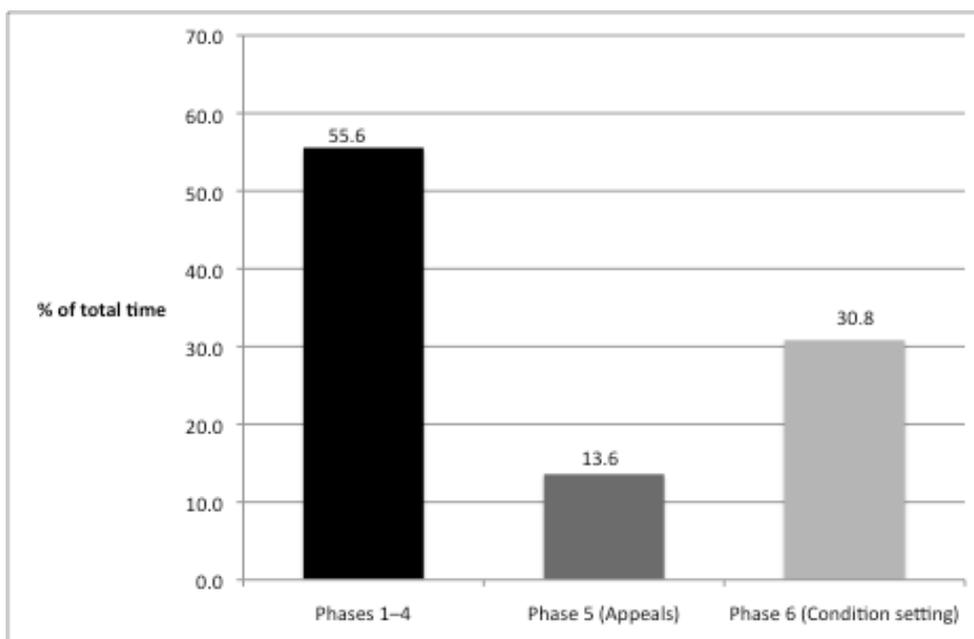


Figure 6. Percentage of time taken for each phase — quick EIAs

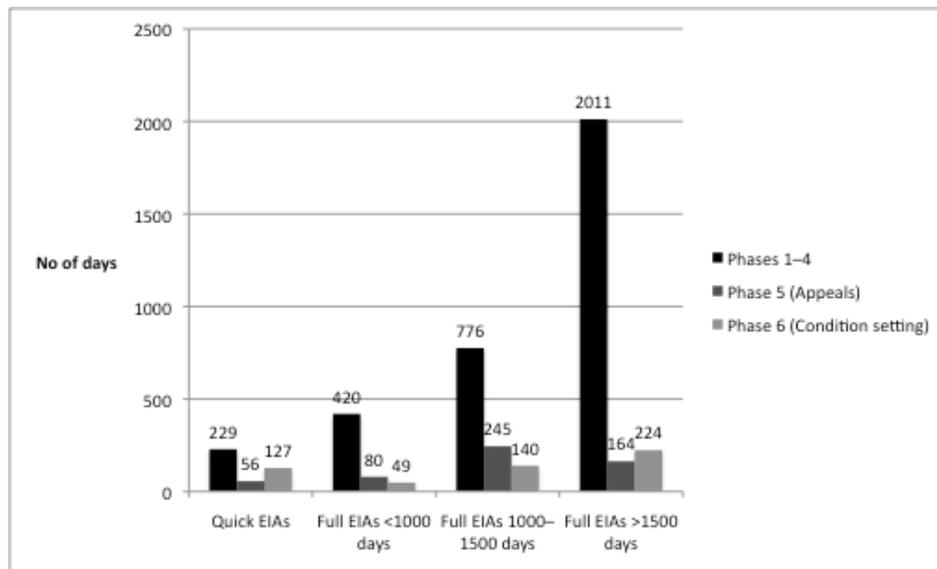


Figure 7. Comparison of average time for the three quick EIAs phases for all EIA types

EISs and lengthy preparation times for the EISs. If scoping is rushed, there is a danger that not enough attention is given to all of the potentially significant impacts. This could lessen the legitimacy of the assessment and lead to delays later on in the process when concern over these impacts emerges in the public phases of the EIA process. Clearly, unfocused scoping can lead to delays in the EIS preparation phase of the EIA, and rushed scoping can cause delays in later phases.

Second, are some delays in the EIS preparation phase due to a lack of existing baseline data upon which to base decision-making in EIA? It maybe that, for some projects affecting poorly studied environments, there is limited or no baseline data and it needs to be collected during this phase to enable a proper assessment to be carried out. Many projects covered in this study are in remote locations, as Figures 9 and 10 demonstrate. Figure 9 summarises the population distribution in Australia, and Figure 10 shows the

location of one of the key resources, natural gas, the proposed extraction of which is the subject of several of the EIAs covered in this study. The locations of the other key resource, iron ore, are also well isolated from population centres, located in the central and north of WA: the proposed extractions of these resources were also the subject of EIAs covered in this study. Clearly, most of WA's population is found in the south-west corner, centring on its capital Perth. Figure 9 does not, however, show the smaller towns and settlements that occur along the rest of the coastline north and east of the main population centres, notably those that service the resource proposals in the north of the state.

Australia, like most nations with large areas of land that are sparsely populated, carries out the majority of environmental studies on the environments that are nearest to the major population centres. This is in part because these areas are under most threat from human impacts, but also because these areas are the most

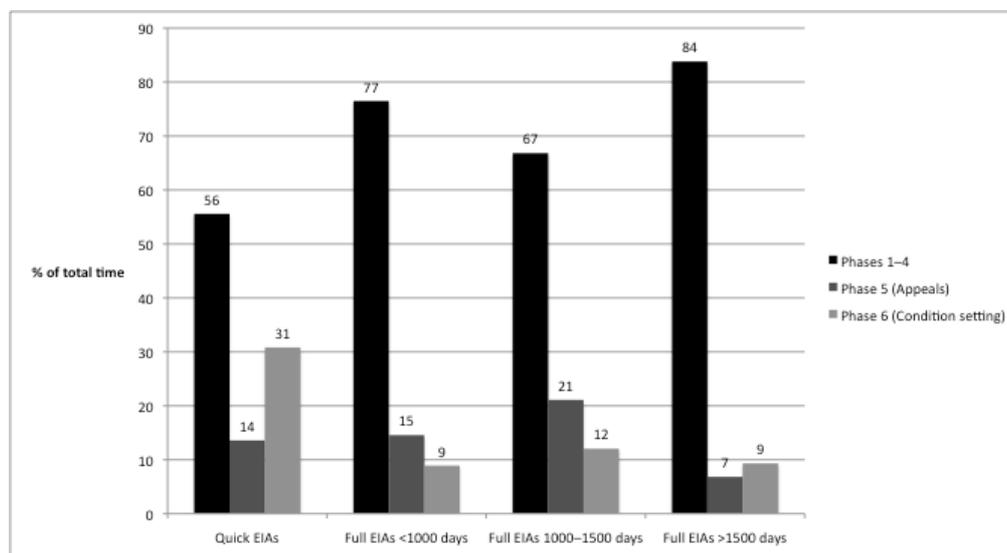


Figure 8. Comparison of percentage of total time taken for the three quick EIAs phases for all EIA types

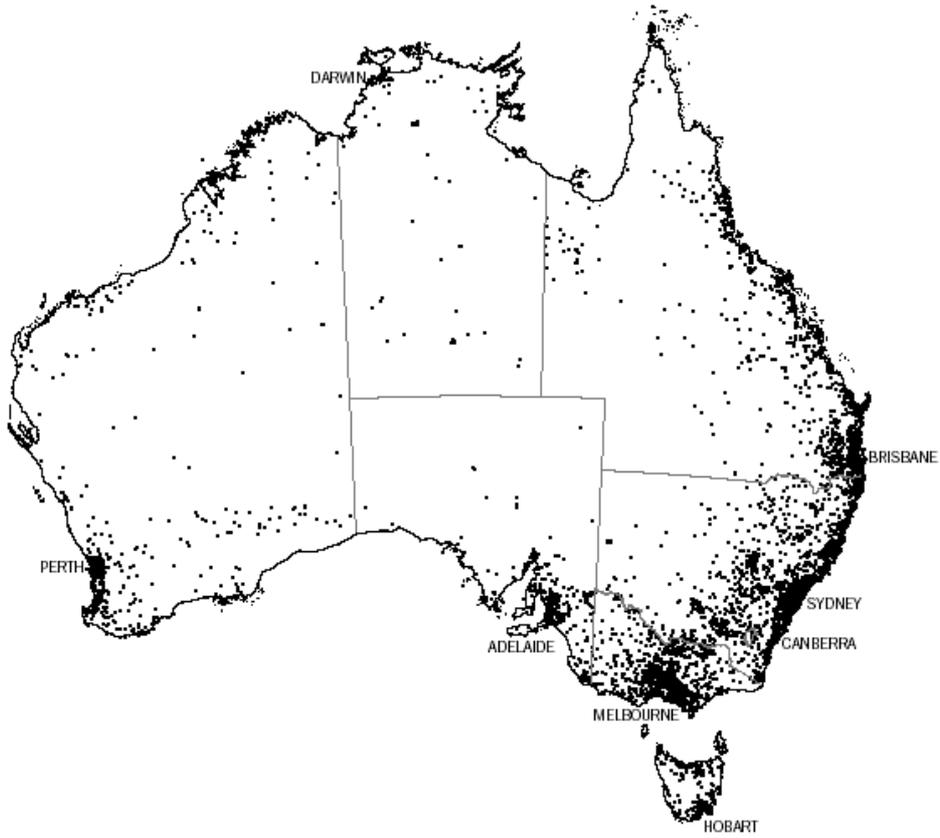
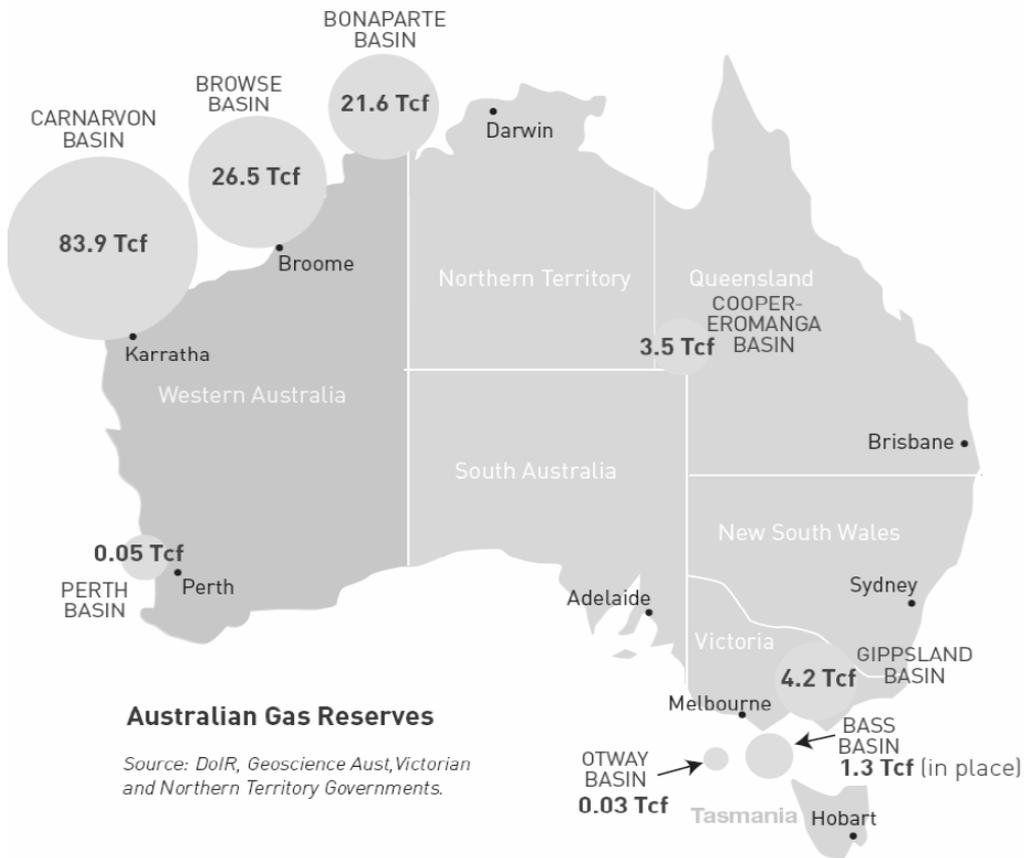


Figure 9. Population distribution in Australia

Source: Australian Bureau of Statistics Year Book

<<http://www.yprl.vic.gov.au/cdroms/yearbook2002/cd/wcd00001/wcd0011d.htm>>



Australian Gas Reserves

Source: DoIR, Geoscience Aust, Victorian and Northern Territory Governments.

Figure 10. Location of the major natural gas fields

Source: Department of Minerals and Energy

valued and contested areas, and thus become the focus of most scientific studies. This lack of baseline data often leads to high levels of uncertainty in predicting impacts during EIAs and reliance on modelling to predict impacts. As a result, decisions on acceptability are risk-based and the precautionary principle gets expressed in terms of adaptability of management responses rather than waiting until sufficient information has become available to complete the EIA. The dilemma for the EPA is to determine at what point sufficient data is available so that the level of uncertainty about predicting impacts becomes acceptable. In these cases, much of the time taken in these phases of the EIA relates to establishing acceptable levels of uncertainty.

The final question is how much of the time in this phase is simply the proponent delaying producing the EIS because of internal reasons not related to scoping, data collection and uncertainty. Clearly, a proper debate about timeliness would be informed with detailed information about what is actually happening in this phase of the EIA process.

The phases involving the public and their submissions

There are two phases referred to here: the public review period and the phase where the proponent responds to submissions. The public review period phase is consistently less than 10% of the overall time for a full EIA. This is primarily because this period is set at the start of the assessment based on the level of assessment, and is rarely varied. This is the only phase where the time is set at the start of the process. The next phase — the proponent response to submissions — is related to the public review period phase, and is, generally, the third longest phase. There is merit in studying this phase in more detail, and a key issue that should be addressed for those projects where this phase is long relates to whether the original scoping was inadequate and whether new issues emerged that required further work during this phase.

The EPA assessment phase

The time taken by the EPA to complete its assessment is remarkably short (consistently the second shortest phase), and relatively consistent in terms of the actual length of time taken irrespective of the total length of time for the EIA. This suggests that most of the issues are addressed and negotiated during the previous phases, allowing the EPA to quickly assess each proposal and conclude its assessment.

Quick EIAs

The most significant feature of the quick EIA is the relatively high proportion of time taken in the condition setting process compared to full EIAs (Figure

8). This may simply reflect the fact that condition setting has a relatively consistent timeframe irrespective of the complexity of the assessment, as suggested by Figure 7 (i.e. the overall average times of assessments for quick EIAs are much shorter than full EIAs).

Appeals

Figure 5 suggests that the appeals phase is, overall, the second longest phase, in particular for those ten proposals taking between 1,000 and 1,500 days. This phase has two clear steps:

- The investigation period where the independent Appeals Convenor seeks information from the appellant, proponent and any other relevant agency or expert and then provides advice to the Minister for the Environment.
- The Minister's consideration, where the Minister for the Environment considers the advice of the Appeals Convenor and any other advice before the appeal is determined.

The times for these two steps have not been differentiated here.

A key issue, which is almost identical to that raised above when considering public submissions, relates to whether the relatively long time taken here is because the original scoping was inadequate and new issues emerged in appeals that required further work.

Conclusion

In the absence of data on what can be considered timely EIAs, the data presented here on the full EIAs taking less than 1,000 days are a useful starting point. The average time taken for these EIAs was 567 days. The most time-hungry phase of the process is the time taken to produce the EIS, where the percentage of time taken for this phase ranges from around 45% for the shorter EIAs to around 65% for those taking over 1,500 days. This phase consists of three discreet steps: scoping, data collection and the final production of the EIS. A more detailed study into this phase would reveal some useful information about the key factors that cause unnecessary delays, in particular for those EIAs with very long times for completion.

A theme that emerged when looking at the next two most lengthy phases — the time taken for the proponent to respond to public submissions, and the appeals phase — related to the adequacy of the original scoping and whether any unforeseen delays in EIAs are as a result of inadequate scoping. It may be that a more detailed examination of the data would reveal that excessive time is taken with over-cautious scoping of issues, or that delays are caused in the phases following the release of the EIS due to inadequate scoping in the first place. This area of research will be explored in a follow-up study.

Finally, the focus of this study has been on efficiency of the EIA process and no attention has been given to effectiveness. Achieving effective environmental outcomes is one of the aims of EIA, and the complete story about timeliness of EIA should also consider the relationship between length of time taken to complete an EIA and effective outcomes. As noted in the IAIA's 1996 study on effectiveness in EIA: 'A concern with effectiveness is a fundamental theme of EA theory and practice.' (Sadler, 1996: ii). The possibility of linking effectiveness to efficiency will also be examined in the next phase of this work.

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